**FORENSIC AUDIT AND PERFORMANCE OF SELECTED AGRIBUSINESS ENTERPRISES IN OYO STATE, NIGERIA**

**BY**

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**(20PGDA000103)**

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**Award of Master of Science Degree in Accounting**

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# **DECLARATION**

I, (Janet Olajumoke AJIBOYE), a M.Sc student in the Accounting and Finance Department, Landmark University, Omu-Aran, hereby declare that this thesis entitled *“****Forensic Audit and Performance of Selected Agribusiness Enterprises in Oyo State, Nigeria”***, submitted by me is based on my original work. Any material(s) obtained from other source or work done by any other persons or institutions have been duly acknowledged.

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Signature & Date

# **CERTIFICATION**

This is to certify that this thesis has been read and approved as meeting the requirements of the Department of (***Accounting and Finance***), Landmark University Omu-Aran, Kwara State, Nigeria for the Award of ***(M.Sc Accounting).***

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# **DEDICATION**

This research is dedicated to the Almighty God, the one that reign supreme in the affairs of men. The one who made everything beautiful in its time. The One whose wisdom passes all understanding.

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# **ABSTRACT**

This study examines the relevance of forensic audit and performance of selected agribusiness enterprises in Oyo state, Nigeria. Cross-sectional data were used for this study. A purposive sampling procedure was employed to select 73 respondents for the study. The analytical tools used in the study are Descriptive Statistics, Probit Model and Multivariate Regression. The result from the descriptive analysis revealed that the majority of the auditors were between the age of 35-44 years. Most of them were male (74%) with 88% B.Sc./HND degree. Almost 18% of the auditors has ICAN/ACCA professional qualifications while 12% had MSc. Degree. It is also observed that most of the auditors, (64%) had auditing experience between 6 and 10 years. It is also noted that majority (64%) of the selected agribusiness enterprises were medium scale between 20- 99 number of employees. Agro-allied industries were the major (44%) agribusiness enterprise in the study area. Analytical proficiency, critical thinking, auditor’s independence, understanding of the business goal, training and development of auditors were the core competency skill possessed by the respondent. The Probit model revealed that age of enterprise, size of enterprise, nature of business, corporate policy real annual revenue, real annual labor productivity and ownership status has positive and significant relationship with the choice of using a forensic auditor, which means that any additional increase in any of these significant variable inputs will result in the probability of using a forensic auditor in the selected agribusiness enterprises. The estimated response parameters for the perceived factors that determines the performance of forensic and non-forensic auditor were found to be religion, conscience, fear of sanction, motivation, environmental factor and feedback. The Probit model revealed that age of enterprise, size of enterprise, nature of business, corporate policy real annum revenue, real annual labor productivity and ownership status has positive and significant relationship with the choice of using a forensic auditor, which means that any additional increase in any of these significant variable inputs will result in the probability of using a forensic auditor in the selected agribusiness enterprises. capital structure (CS1, CS2), firm size (FZ1) and growth rate (GR) has significant relationship with return on asset (ROA) while capital structure (CS2,) firm size (FZ1, FZ2) and infrastructure equipment and technology (IET) has significant relationship with return on equity (ROE). The result of the analysis also provides an insight that capital structure (CS2, CS3), firm size (FMZ) and total asset, infrastructure equipment technology (IET) and financial management capacity (FMC) has positive relationship with the performance of the enterprises. The implication of this results implies that potential adaptive measures that can be taken to increase the overall performance of the selected enterprise include, improving the growth rate (GR), maximizing the total assets (FZ2), maintaining infrastructural equipment and technology (IET) and improve the financial management capacity (FMC).

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**CHAPTER ONE**

# 1.0 INTRODUCTION

## 1.1 Background to the Study

Forensic audit otherwise known as extortion review or investigative accounting is a fusion of the science of crime as well as accounting (Okoye and Gbegi, 2013). Forensic accounting, is an interdisciplinary field involving the utilization of specified accounting procedures in the investigation of financial statements or asymmetries. It entails knowledge from other disciplines such as economics, financial analysis, business, public policy, auditing, and private or civil law. Business reports, financial evidences and findings emanating from the analysis of forensic auditors can be used in legal proceedings. Forensic auditors are usually appointed for matters such as insolvency cases, bankruptcy, corporate fraud, business valuations, and other economic crimes or crimes against property (Damilola and Oloinsola, J. 2007).

Forensic auditing has become special field that deals with data arrangement that is intended for use as proof, principally for legitimate intents. Forensic accountants look into and report financial misrepresentation and unprofessional dealings including resources, appraise misfortunes, extortion, harms, and embezzlement; and simplify intricate monetary exchanges. Generally, the obligation of forensic auditing is a specification for determining how cash is spent, how it was disbursed, and for what purpose. In some cases, agribusiness firms may incur major financial failure, lawsuits, and bankruptcy as a result of accounting fraud requiring falsification of financial statements to suggest excessive performance. Although accounting fraud may have short-term economic benefits, the consequences for culpable firms include declining financial performance, bankruptcy, and massive fines (Okoye and Gbegi, 2013).

When it comes to auditing, many organizations consider it as simply as statutory requirement for getting its finances examined by a certified accountant to ensure compliance. However, this type of audit is one of the many other types of audits that many organizations would undergo. Forensic audit is one among such which involves an examination of the past financial of an entity to detect any illegal action, manipulation in the book of accounts, siphoning of funds etc. The forensic audit begins with suspicious and doubt and end with the embarking on investigation procedure either to confirm any case of mismanagement or dispel any form of suspicion.

Forensic auditing is an independent, detailed and scientific approach of reviewing an entity’s financial statement in order to determine its correctness, absence of material misstatement and essentially to provide evidence(s) that can be used in legal proceeding (Nguyen, 2018). A wide range of investigative operations are covered by forensic audits. A forensic [audit](https://www.investopedia.com/terms/a/audit.asp) is frequently carried out to charge a party for embezzlement, [fraud](https://www.investopedia.com/terms/f/fraud.asp)s or other financial crimes. While carrying out a forensic audit, the auditor may be called as an expert witness during court proceedings. Instances other than financial fraud may also be the subject of forensic audits, such as disputes relating to business closures, bankruptcy filings and divorces (Zeitun and Tian, 2007).

Agribusiness is the business sector comprising commercial farming-related operations and farming itself. It entails every procedure needed for sending agricultural goods to market, viz. production, processing, and distribution. It treats the various facets of producing agricultural goods as a combined system.

Firm performance reflects a company’s ability to use both human and material resources to accomplish its goals (Iyoha, 2011). In addition, Truong and Tran (2009) opines that firm performance should think about how efficient it is to use business tools in the course of the processes of production and consumption.

Return on assets (ROA), return on equity (ROE), return on investment (ROI) are common indicators of firm performance. These accounting performance metrics for firms, stand for financial ratios derived from income statements and balance sheets that have been used by several researchers such as Mehran (2015).

Therefore, the research attempts at filling up a vent by examining the effect of forensic auditing on the performance of quoted agribusiness enterprises in Oyo state, Nigeria.

## 1.2 Statement of the Research Problem

The root of failure of agribusinesses in Nigeria is poor financial management and advanced financial inadequacies which has caused a grave danger on the business investors, government and the general public (Eyisi and Agbaeze, 2019).

 Business owners of numerous enterprises were perturbed over the inefficiencies of their financial audit report because the number of fraud incidents has increased alarmingly in most public and private organization in Nigerian (Mgbame and Chijoke‐Mgbame, 2011). This scenario is becoming the norms, and is adversely affecting the expected performance of major private and public organization (Olukowade, E. and Balogun E, 2015).

As a result, there exists a widespread hope that forensic auditing can help stop wave of financial fraud experienced in agribusiness firms. This research is particularly pertinent for agribusiness firm characterized with weak enforcement mechanisms and poor infrastructure for audits; whose performance has remained questionable in recent years due to increasing cases of corporate and failures scandals (Iyoha, 2011; Kantudu and Samaila, 2015).

Furthermore, various studies have opined more investigation in this area at both national and organizational levels, especially where forensic auditing has not been accessed effectively (Endaya and Hanefah, 2016; Mihert and Yismaw, 2007). Therefore, this study intends to evaluate the forensic auditing and performance of quoted agribusiness in Oyo state, Nigeria.

## 1.3 Research Questions

Stemming from the above research problem, this study sought responses to the under listed questions:

1. What is level of effectiveness of forensic and non-forensic auditor’s involvement in agribusiness enterprises?
2. What are the determinant of usage of forensic and non-forensic auditor on agribusiness enterprise?
3. What are the determinant of the performance of forensic and non-forensic auditors in the study area?
4. What is the performance of selected agribusiness enterprises in Oyo state?

## 1.4 Objectives of the Study

The major aim of this research work was to evaluate the effect of forensic audit on the financial performance of agribusiness enterprises in Oyo state, Nigeria. Other specific objectives of the study are to:

1. examine the level of effectiveness of forensic and non-forensic auditor’s involvement in agribusiness enterprises
2. analyze the determinant of usage of forensic and non-forensic auditor on agribusiness enterprise.
3. evaluate the determinant of the performance of forensic and non-forensic auditors in the study area.
4. measure the performance of selected agribusiness enterprise in Oyo state.

##  1.5 Hypotheses of the study

The study tested the following hypothesis stated in null form.

**H01**: There is no significant relationship between the effectiveness of forensic and non-forensic auditors in agribusiness enterprise.

**H02:** There is no significant relationship between usage of forensic auditors and non-forensic auditors in the study area.

**H03**: There is no significant relationship between performance of forensic auditor and non-forensic auditors.

**H04**: There is no significant relationship between firm variables and their performance indicator

## 1.6 Scope of the Study

This study was designed to discuss the effect of forensic audits on the financial performance of selected agribusiness enterprises. The research was restricted to the selection of agribusiness enterprises like Poultry farms, Feed mills, agrochemical industries, and Agricultural input suppliers.

## 1.7 Significance of the study

This study has notable benefits in enlightening agribusiness stakeholder on forensic audit as the application of investigative mentality and financial skills to pending problems, carried out in accordance with the laws of evidence. It is a field that integrates financial competence, thorough awareness of corporate reality, fraud knowledge, an understanding legal system in financial management (Bologna and Lindquist, 2007). Forensic auditing is the practice of using investigative and accounting skill to assist in a legal matter as regards to financial mismanagement (Nguyen, 2018). Litigation-related engagements are described in a specialized area of accounting. Therefore, forensic auditing can be viewed as a component of accounting practices that is appropriate for legal scrutiny fraud or mismanagement and provides the highest level of assurance of profitability (Apostolou, Hassell and Webber, 2014).

It will also be of great benefit to the agribusiness enterprises as the effective job of forensic auditors will assist in identifying corporate crimes and mismanagement in a firm. It will also help the investors in agriculture to know the financial position of the enterprises and It will act as a resource for upcoming researchers for further studies on the subject matter.

## 1.8 Definition of Terms

**Performance:** According to Cambridge English Dictionary, performance is defined as an economic category that measures how well businesses use their material and human resources to meet their goals.

**Forensic Audit:** The term “forensic audit was coined by ACFE, 2010, forensic auditing is the application of accounting knowledge and investigative skills to identify and resolve legal economic issues. It is the science of using accounting as a tool to identify and develop a proof of money flow. These tools and/or techniques, skills, and knowledge can be invaluable for fraud and forensic accounting investigators.”

**Agribusiness:** relates to businesses that are involved in agriculture or that make agricultural inputs.

Agribusiness is a term used to describe enterprises and companies that are involved in producing and processing food and other agricultural products. Agribusiness also refers to businesses that market and distribute agricultural products. These companies include retailers, processors, wholesalers, warehouses, etc. Any company that engages in producing, distributing of food, safety and marketing is involved in agribusiness.

**CHAPTER TW0**

# 2.0 LITERATURE REVIEW

## 2.1 Conceptual Framework

The Institute of Forensic Accountancy (IFA) of Nigeria has described forensic auditing as a practice of accounting as a specialized practice which explains engagements that ensues from expected conflicts or legal cases. Forensic auditing in line with Webster dictionary refers to “belonging to, utilized in or fitting to courts to judicature or to public discussion and debate.” The term forensic auditing can be used synonymously. Bigger accounting firms in all, along with many boutique and medium-sized businesses, have a specialist forensic accounting department. Other sub-specializations may exist within these groups; for instance, certain forensic accountants can only focus on personal injury claims, insurance claims, royalty audit or fraud construction (Mehran, 2015).

The area of accounting known as forensic auditing offers analysis that is appropriate for courts, which will serve as the foundation for debate, discussion and ultimately conflict settlement. (Okoye and Gbegi, 2013).

Moreover, forensic auditing is the process of applying specialized skills to the documentation of financial transactions with the goal of establishing an efficient administrative proceeding. It also includes the use of investigative skills, accounting and auditing to aid in legal matters. It is made up of two main parts viz.

1. Litigation assistance and service, which acknowledged the accountant’s role as a seasoned consultant.
2. Investigation service that makes use of the expertise of a forensic auditor and may call for potentially unique testimony.

Nonetheless, since forensic auditing offers an accounting principle which is appropriate for business liquidity and aid to avoid any conflicts may occur inside the organization, it differs from the outdated debit and credit accounting (Mohammed, 2008). Due to the obligations associated with the combination of accounting, investigation skills and auditing, forensic accountants have a special type of job. A forensic auditing is clearly a genuine investigator with all these skills who is trained above the figures and addresses the situation’s business reality (Wallace, 2019)

A forensic audit examines legalities by combining the methods of property Value for Money (VFM) audit that governs financial and investigative audits. The goal is to determine whether genuine business value is evident in the financial statements or not, and to determine whether any fraud has occurred during examination. Forensic accountants are a special class of financial experts, who carry out forensic audits that includes certified fraud investigators and individuals with a certified professional experience with an experience in investigating mismanagement, criminology/ sociology, accounting or loss prevention who are Certified Public Accountant (CPAs), Certified Fraud Examiner (CFEs) or chattered accountants. Beginning with all the accounts, capital, assets, inventories and other economic components, forensic audits determine how they should all interact.

For example, if an auditor notices that a company generates $10 million in revenue annually, he makes the assumption that the inventories, profits, new capital, cash, taxes, checks and payroll how they should interact. For instance, the accountant might note that in some instances there is a systematic overlap between specific figures and not over count. Once he had gathered all of the stated figures (as well as caveats), he would come up with a model of how income statement should read on each side. The statement will be deliver to the business management once it is finished, and then documented as proof, however its fullness and objectivity are unquestionably important. The summary of the findings is the most beneficial feature of a forensic audit report.

Accountancy has created an accurate lexicon to harbor the intricacies of the highly technical field of forensic. Fortunately, forensic chartered accountants are knowledgeable in both finance and criminal law, which enables them to convert audit findings into terms that the prosecutor using them to create a case can understand.

Forensic accounting ensued from crime activity, particularly economic crimes. Economic and financial crime is an undesired reality that has grown into a norm in many business enterprises, affecting all nations and sector of the economy without any indication of abating. The number of recorded incidences of fraud and corruption has increased significantly during the past decades. This is made worse by lack of the capabilities required to appropriate audit reports to proper investigations. Facts from criminal justice and law enforcement agencies, the degree of success for connections in corruption and fraud cases is often unsatisfactory. The cause was lack of expertise and knowledge on the part of prosecuting authorities, necessary to conduct effective investigations and prosecutions of cases involving fraud and corruption.

The typical employer of a forensic accountant is a big company or firm, but they can as well work in public practice or for banks, insurance firms, governments, police forces, or other organizations. Such a firm would employ the forensic auditor to investigate, summarize, examine, interpret, and present complex financial and company information such that it is understandable and appropriately supported. One who works as a forensic auditor can facilitate cooperation by doing the following:

1. Investigate accounting: A forensic accountant evaluates the company's factual position while carrying out investigative accounting tasks and offers a potential sequence of advice. A forensic auditor also helps with asset protection or recovery. They can also collaborate with other professionals like forensic document examiners, private investigators and consulting engineers. Similar to this, the forensic accountant can help with recovery in either a civil lawsuit or a criminal case.
2. Litigation support accounting: This has to do with presenting and interpreting numerous aspects relevant to aiding a current event and evaluate a suspicious litigation. A forensic auditor with competence in this area may examine the pertinent records to evaluate profit or loss. To present the evidence in a professional, succinct manner, a forensic auditor is required to create a report for the use of criminal investigators.
3. Shareholders and partnership disputes: These contains tasks that call for a flawed study of many years' worth of accounting records to settle issues like shareholder and partner disputes over benefits and compensation.
4. Personal injury claims: Here, a forensic auditor will be requested to estimate the economic losses caused by the accident.
5. Business interruption: This entails going over the insurance policy’s specifics, for example, to look into the coverage concerns and the best way to determine the loss in areas like employee deceptive claims, property damages and business interruptions.
6. Fraud investigations: Tracing funds, recovery, and identifying assets are all tasks that forensic accountants typically conduct in cases of employee fraud.
7. Matrimonial disputes: To do this, a forensic accountant must track down, identify, and assess properties including those brought on by non-competition agreement breaches as well as those resulting from patent infringement, product liability, construction claims or contract disputes.
8. Professional negligence: Either from a hi-tech standpoint, a forensic auditor looks into contract violation among business partners
9. Mediation and arbitration: In order for people and businesses to resolve conflicts with the least amount of interruption and time, a forensic auditor may be employed to participate in resolving dispute among business owners.

The focus of forensic auditing is on both the legal framework that permitted the observation of financial transactions to be appropriate for the purpose of demonstrating accountability. Forensic accountants are often chartered accountants who focus on the kinds of situations where such evidence is required. They are tasked with finding and analyzing evidence of both typical and anomalous transactions on the accounting system, as well as how these transactions affect the accounts, inventories, and their existence. Therefore, it is essential that forensic accountants first comprehend standard accounting practices and procedures while keeping in mind that they are first and foremost chartered accountants.

According to Okoye and Gbegi (2013), Forensic implies something that is "fit for use in a court of law," An experienced Forensic auditor is expected to work to this standard. The main facets of forensic auditing are dispute resolution and investigation of financial misappropriation. A special area in accounting is forensic auditing which covers engagements that are the consequence of existing or expected conflicts or litigation. Forensic accountants typically have to work to this standard and potential outcome. Adept evidence from forensic accountants, sometimes known as investigative or forensic auditors, is frequently required at the final trial. Lingaraja et al, (2015) asserts that economic damages estimates may apply to financial forensic activities, regardless of whether they result from a tort or a contract breach.

While defining forensic audit, Degboro and Olofinsola (2007) stated that forensic audit involves the use of criminology approaches and integration of accounting investigative activities to identify any wrongdoing. Joshi (2013) saw forensic auditing as utilizing knowledge and particular skills from specialists to find proofs of economic transactions. In the words of Okoye and Akamobi (2009), forensic auditing combines two key words: “forensic with auditing” the term forensic means to be used for a law court, auditing is the system of evaluating, documenting, verifying and summarizing financial and corporate operations while also reporting the outcomes therefrom. The idea of forensic audit is fairly recent thus, a formal definition has not yet been adopted as. Forensic auditing was viewed as an accounting study that help in legalities that serve as the foundation for discourse and resolution of conflict (Okoye & Akamobi, 2009).

American Institute of Certified Public Accountants (AICPA) has also defined Forensic auditing as the use of services involving the specialized knowledge and investigative skill of certified and professional accountants. The practitioner's expertise in economic, audit, taxation, accounting and other abilities can be used in forensic accounting services (AICPA 2012). Adegbie, and Fakile (2012). concluded that forensic auditing offers litigation support services, or assistance of an accounting character in relation to ongoing or past legal proceedings in the areas of assessing economic loss brought on by contract breaches and quantifying economic damages.

Forensic accountants aid in the success of cases and the receipt of settlements, therefore litigation support services have a significant impact on the client-attorney relationship. The combination of investigation skills, auditing, and accounting is termed forensic accounting (Zysman, 2004). Simply put, providing the highest level of confidence and possessing the now-accepted meaning that was reached in a scientific way, forensic accounting is auditing that is appropriate for legal scrutiny (Crumbley, 2016).

According to Association of Certified Fraud Examiners (ACFE, 2010) forensic auditing is an act of using knowledge and skills in establishing profit losses, property or damage, income, estimating internal controls, frauds and other situations that require the integration of accounting skills into the legal system. So, forensic auditing is the process of using accounting principles, investigation procedures and auditing methods to resolve legal issues.

### 2.2.1 Advantages and Disadvantages of Forensic Auditing

1. Forensic auditing increases control mechanisms, safeguarding the company from financial crimes, potentially catastrophic one-time incidents that could endanger its survival.
2. Forensic auditing is crucial for businesses that are being scrutinized by regulatory bodies and can even be invaluable in ensuring compliance with regulations. As an instance in this case, forensic auditing can be effective in guiding businesses to make sure that their anti-money laundering procedures can effectively safeguard businesses.
3. Forensic auditing can help deter firms against suffering long-term reputational harm from the media attention brought on by insider offences. Additionally, forensic accounting offers a reliable foundation of verifiable data that can be used as a means of settling disputes and in court if the victim demand legal recourse.
4. By uncovering wasteful processes, forensic auditing can boost efficiency.
5. By increasing openness and integrity in how resources are being used, across private and governmental organizations, forensic auditing can support in detecting and recording of possible conflicts of interest for executives.

### 2.2.2 Disadvantages of Forensic Auditing

1. An improperly run forensic auditing could take up too much managerial time causing an undesirable detour for the company.
2. Under some conditions, the audit plan might have to be expanded, requiring budget increase. Forensic auditing can have a broad reach across the firm.
3. Proactive forensic auditing may be perceived by some personnel as an insult on their moral character instead of an avenue to enhance profitability systems of the company.

## 2.3 Incidence of Fraud

There may be some connection between the issue with our financial system and this fraudulent behavior, thus there may be some contributing aspects. The elements consist of:

1. Malpractices
2. Not changing representatives or staff members frequently enough.
3. Inadequate training of staff.

According to Santos and Brito (2012). Fraud is a negative economic process that needs to be thoroughly addressed. He was very explicit that for any profit making establishment to survive, before recruiting, there has to be reliable leadership and mentally healthy employees.

In the past, fraudulent activities caused the collapse of numerous organizations, to which the government has taken action by establishing an agency known as the Economic and financial crime commission (EFCC). The agency is known as a surveillance for financial institutions, organizations, and the government. It was said in a paper delivered some time ago that financial institutions and businesses that seek to make profit have always been a target for fraudsters; financial institutions are having trouble staying ahead of fraudsters in this day and age due to technological improvements and surge in organized crime. Fraud is when someone uses deceit to their benefit to gain an unfair or unlawful financial advantage. Most organizations are today being consumed by fraud, which has spread like a pandemic sickness and transcends all boundaries of geopolitics, race, ideology, and economic progress Ogutu and Ngahu (2016).

In particular, Nigeria, wherein official corruption is the norm, is considered as having a core issue with corruption and fraud Abor, (2005). Due to these, the need for advanced auditing and accounting methods, such as those offered by forensic accounting in reducing crime, resolving and identifying along with dishonest and inventive accounting strategies known as window dressing in accounting, has been gradually increasing. It was formerly believed that the fundamental purposes of traditional auditing and accounting were the identification of fraud and white-collar crimes. Auditors were expected to protect against fraud through periodic audits. Unfortunately, the ineffectiveness of conventional audits in reducing the threat of corruption and white-collar crimes is igniting interest in forensic auditing procedures (Akhidime and Ugbale, 2014).

In detecting financial crime, forensic accounting is thought to encompass all other investigation-related fields. In order to successfully investigate and prevent those who engage in criminal activity, it is imperative to add forensic accounting to the arsenal of instruments available. Financial crime is getting more advanced (Moduga et al, 2013). It is also anticipated is that forensic auditing can provide some relief from the conventional accounting and auditing systems.

Aguolu (2012) ascertain that the incidence of terrorism, fraud, crimes, misfeasance and corruption is not only on the rise, but also present in every aspect of our society and the entire world, hence forensic auditing services is inevitable.

2.5 **Causes of Fraud in Organizations that requires forensic Auditing**

Institutional elements and environmental factors were used by Ogidefa (2008) to group the causes of fraud.

**Institutional Factors**

According to Ogidefa (2008), Institutional factors are elements that can be linked to the institution's internal environment which include the following:

**Technological Complexity**

Technological advancements have been noted as a factor that encourages fraud. Okoye et al, 2013, asserted that half of all cases of fraud are accidentally found and that fraud is frequently skillfully concealed

**Employee Disaffection**

Because of internal control, there are now more employers who feel threatened and might as a result become potential criminals. A poll reveals that Nigerian bank employees felt misunderstood and underappreciated as a result of the significant restructuring and re-engineering they underwent, so they tried to impress the wiser boss.

**Indifference of Internal Control**

Recommendation of Internal control has been a strong defense against managerial or staff fraud, according to criminal statistics (Enofe et al, 2013) noted that before fraudulent act can materialize, a valuable thing must be worth stealing, and that when internal control systems are weak, opportunities for crime to occur arise and fraud is possible.

**Poor Remuneration**

When compensation (pay) packages do not reflect the current economic situation, workers will more opportunistic in their pursuit of additional income, which could result in rampant corruption and asset stealing.

## 2.6 Firm Performance

Performance of firm is a measure of the capacity of firms to employ both human and material resources in achieving its objectives ([Le, 2005](https://www.koreascience.or.kr/article/JAKO202112748674972.page#ref-5)). How efficiently business tools are applied during the manufacturing and consumption processes is different factor in determining firm performance. The performance of a firm demonstrates the correlation among the outcomes findings and the input resources used during an enterprise's business activities ([Truong and Tran, 2009](https://www.koreascience.or.kr/article/JAKO202112748674972.page#ref-27)).

Return on assets (ROA), Return on equity (ROE), and Return on investment (ROI) are prominent metrics to measure firm performance. Financial ratios derived from income statements that have been employed by numerous scholars, including Mehran (2015) are represented by these accounting indicators of corporate success.

Abor (2005) examines the correlation between financial stability and performance of some selected enterprises in Ghana, where firm profitabilty is assessed by Return on Equity (ROE), using financial data of 20 listed firms. In their study, Ozkul and Pamukc (2012) used EPS and ROE as the variables for evaluate firm performance using a sample of 143 electronic firms listed on Taiwan’s stock market from 1999–2004. Panel data analysis was employed by Saeedi and Mahmoodi (2011) with a sample of 320 listed companies on Tehran stock exchange (Iran). Return of asset (ROA), Return on Equity (ROE), Earning Per Share (EPS) and Tobin' Q are used to evaluate a company's performance.

## 2.7 Internal Determinants of Firm Performance

In a study on factors affecting company performance and market value of organizations. Amman-Jordan Stock Exchange encompassing 16 unique business fields within the non-financial sector from 1989 to 2003 was conducted by Zeitun and Tian (2007). The study ROA as the dependent variable to represent firm performance, while the independent variables comprise of business risk, income tax, firm size, fixed assets percentage, capital structure and financial leverage. The findings opined that debt ratio does have the significant impact on a firm performance, although growth in tax rate, firm size and total assets all have favorable effects. Since they make such large fixed asset investments without seeing a sufficient improvement in the performance of the firm, businesses with high proportion of fixed assets was observed to have low performance. Some industries like real estate, education, petrochemical and chemical and some essential product companies, return on equity has a substantial effect on their performance.

To evaluating the performance of thirty non-financial companies listed between 2001 and 2007 on the Nigerian Stock Exchange, a study was conducted by Onaolapo and Kajola (2010). The OLS regression model is used in the authors' quantitative research techniques. The study's findings indicate that business lines and the following variables: age of the organization, size of assets, growth rate of assets, proportion of fixed assets, asset turnover, debt ratio, have varying degrees of impact on a company performance. Asset turnover has a positive impact on firm performance whereas debt ratio and fixed assets show a decline on performance. The success of a company is significantly influenced by some economics factors, especially in the sector such as chemical, alcohol, computer office equipment, beverage, printing and tobacco company. The authors offer several panaceas to improve the performance of businesses based on the findings of their research.

Pouraghajan and Malekian (2012) examined how capital structure affects business turnover using a sample of 400 companies from twelve (12) different industries that were listed on the Tehran Stock Exchange between 2006 and 2010. Return on Asset (ROA) and Return on Equity (ROE) were used as the dependent variables to measure business performance, were identified by the authors using a qualitative research method together with quantitative methodologies. Growth rate, business size (assets), asset turnover, percentage of tangible assets, firm age and debt ratio are the independent factors. Findings of the study indicate a negative relationship between firm performance and debt ratio. Growth rate, firm structure, firm size and turnover indicates a positive relationship with the firm performance.

Additionally, the study discovers that a big quantity of debt will cause a decline in a firm's performance while an increase in asset efficiency will boost it. One explanation offered by experts is that big businesses possess the market power and can charge more and make more money. When firm hits their equilibrium point, a rise in quantity of goods lowers the cost of good. Based on their capacity, they are able to bargain with suppliers over prices. Large companies have more market experience, which gives them an advantage over small and medium businesses when it comes to embracing and adapting to change. They stand a higher possibility of making up for unintentional losses. Larger enterprises will, for instance, be at a lower risk than small firms when the market is experiencing severe volatility. Large-scale businesses also have the benefit of favorable financial conditions. Credit sources are frequently difficult for small businesses to reach. They cannot demand the massive amounts of finance; therefore, larger firms may not experience severe capital limitations. Lastly, due to their size and exceptional capacity for utilizing the outcomes of research, huge companies have an advantage in R&D.

## 2.8 Concepts of Agribusiness

According to the literature on agribusiness, there was tremendous expansion at the close of the 20th century amid the agricultural sector. Agribusiness describes a farmer's ability to adapt, give up outdated practices, and move into a new stage of agriculture. Many scholars have conducted a numerous regional studies published in notable journal at the wake of the 20th. These strategies demonstrated that family farms possess the same entrepreneurial qualities as other enterprises and significantly aided in the integration of the agricultural sector into small business. The understanding of the changes that takes place in the agricultural industry and the assessment of the potential of agriculture in a modernize way were the goals of agribusiness. The primary goal was to extend the nexus between the farm system and other economic systems. Numerous studies show that this goal has not been well accomplished, particularly in Nigeria. (Alsos et al., (2018). At the wake of the 20th century, a different genre of literature evolved (McElwee and Warren, 2001; McElwee and Robson, 2005; McElwee, 2008; McElwee et al., 2016). They maintain that farmer’s peasant ability has gone beyond small perspective by introducing the concept of entrepreneurship to help the farm meet new problems that arose from food insecurity. Agribusiness is considered as an attitude and a collection of business strategies for maximizing profit. Although the arrangement of the agribusiness surround farmer way of life, his perspective and understanding of his business status quo. The context of agribusiness has become imperative by international organizations such as World Trade Organization, and the European Union. They pump a measure of sustainability doses into agriculture and open international market for agricultural produce.

If aggressive evaluation and monitoring are used, the many ways seen in agricultural companies show that a number of viewpoints of agribusiness performance are feasible and valuable to acquire a global and diverse understanding of farmers' entrepreneurial concerns.

## 2.9 Multidimensional Approach for Firm Performance Evaluation

One of the firm performance indicator was model by multidimensional approach which may have shown the lists of determinants that have been identified as factor that determining business economic state as shown in figure 1.



Figure 1. Firm Performance indicator

Source: Adapted from various related literature including Selvam (2016)

Firm Performance is stated as company capacity for financial success. The left over after a business pays all cost of production is termed profit, including expenses related to the production of a product, along with additional expenses related to running its daily operations. The company's goal is to increase its existing stakeholders' wealth (Selvam, 2016). A business is said to be financially stable if its turnover please investors. The stability of business can be represented by market value and growth indices (Vasanth et al, 2015a). Market value, growth and profitability are three factors that work best together. Market value has to do with the current market price of company product. Like stock in a corporation, a market valuation of the financial asset is necessary. The term "market value" is frequently used to describe market capitalization a which is calculated by dividing the number of shares outstanding by the stock price at the time.

Market Value represents the evaluation and anticipation of performance of enterprises in the long run. Effective risk mitigation and profit maximizing are made possible by the diversification strategy (Lingaraja et al., 2015). Thus, an important consideration is a company's market valuation as well as the capability of forecasting stock patterns using data that has been made publicly available. Investors in general and those who are involved with publicly traded companies should both be aware of information related to stock returns. Market anomalies help the investors to gain from market movements. The indices of financial reports and other necessary information on the stock market explain how to maximize shareholder and investor value through better business operation (Tušek, B. (2015). Growth performance is defined as an increase in size and financial status over time. Growth happens at a point of maturation or when there an obvious change in returns on equity or Investment.

Larger organizational size can lead to market strength and economies of scale, which will improve their performance going forward. Tušek (2015) pointed out that Economic growth is significantly impacted by the growth of financial markets. The stock indices represent a benchmark for evaluating the stock performance included in that index, in addition to serving as market movement indicator (Selvam 2016). Employee satisfaction simply means the degree to which employees are happy with their job descriptions, working conditions, and management interactions.

Investments in human resources strategies are directly tied to employees’ happiness. Having a unified group tends to increase a company's worth. (Harter et al., 2012). Customer satisfaction measures how well company goods and services meet or exceed a customer utility. In the corporate world, customer’s satisfaction is regarded as performance indicator.

Selvam, (2016) emphasized that it is necessary to assess a company efficiency from other perspectives, i.e. employee and customer happiness. Customers desire that companies deliver expected goods and services that will satisfy their immediate need. The customer is the center of attention for business improvement (Selvam, 2016). The companies must comprehend customer’s needs, prevent flaws and improve the perception of the services quality, in a market where competition is fierce, and ensure value addition to their product. Customer satisfaction raises willingness-to-pay and a company creates value as a result (Barney and Clark, 2007). An analytical tool known as environmental performance indicator is used to compare different firms within an industry with regard to specific environmental features.

The decline of environmental quality has been regarded as a pressing concern, the world over. Increasing number of companies is one major cause of increasing pollution and quick depletion of environmental resources (Vasanth et al., 2015a). To better serve the needs of the customers, organizational structures must be modified. The chosen activities that contribute to the satisfaction of various stakeholder groups include ethical advertising, improved product quality and safety net. (Agle *et al*., 1999). The concept of business performance is built on meeting the needs of the stakeholders. Information on the environment would undoubtedly aid businesses in making internal and external decisions (Vasanth, et al., 2015a). It is crucial a corporation dedicate a percentage of its increased profits from corporate operations to environmental conservation. Environmental audit is one of the most efficient methods of a company's environmental management system because it aids in minimizing environmental operations. The effective implementation of an institution's mission into practice in accordance with recognized social values is a proper definition of a social performance. In other words, bringing to limelight an organization's social mission is the goal of social performance. A company must carefully and purposefully manage its social performance in the same way that it controls its financial performance if it is to attain high social performance.

Shleifer and Vishay (2007) described Corporate Governance as “the ways in which, suppliers to finance to corporations, assure themselves of getting a return on their investment”. World Bank reported in 2009 submitted that Internal and external corporate governance are the two mechanisms that make up corporate governance. The board of directors uses internal corporate governance to keep an eye on senior management while prioritizing the interests of the shareholders. As opposed to internal corporate governance, external corporate governance uses external regulations and force to control and monitor manager’s behavior, involving multiple parties like financial institution, debtors, lawyers, accountants and suppliers.

Several viewpoints on the role and obligations of firm have been offered by research on corporate social performance. Ferguson and Olofsson (2011) contended that making profit is business's social obligation. He separates business from society, as many neoclassical economists do, and labels social responsibility as an essentially disruptive idea. In the exploration study of Saeedi and Mahmoodi, (2011) on corporate social responsibility and financial performance relationship, they indicated the dominance of positive relationships. They claim that profitable businesses are more inclined to share more social and environmental data than underperforming ones.

It is clear that all the nine factors are grouped into two as described in figure 2. The performance indicator covers three variables such as market value, growth and performance, while strategic performance includes six variables like social performance, employee satisfaction, environmental performance, customer’s satisfaction, corporate governance and auditing. Additionally, each dimension is represented by a specific set of indicators and symbolizes a different aspect of the company's total performance.



Figure 2. Grouping of Determinants for Firm Performance

Source: Adapted from various related studies including M. Selvam (2016).

Table1 shows the nine performance indicators. This figure can be increased by taking into account additional pertinent company performance factors.

Table 1: Dimension and Firm Performance Indicator

Dimension Sample Indicators

1. Profitability Return on Assets (ROA), Return on Investment (ROI), Net

Income/Revenues (NI/R), Return on Equity (ROE), Economic Value Added (EVA)

1. Market Value Performance Earnings Per Share, Change in Stock, Dividend Yield,

Stock Price volatility, Market Value Added, Tobin’s Q

1. Growth Performance Market Share Growth, Net Revenue Growth, Net Income Growth, Number of Employees Growth
2. Employee Satisfaction Turn-Over, Investment in Employee Development and Training,

Wage and Reward Policy, Career Plans, Organization Climates

1. Customer Satisfaction Mix of Products and Services, Number of Complaints,

Repurchase rate, New Customer Retention, Number of New Products/Services Launched.

1. Environmental Performance Number of Projects to Improve/ Recover the Environment, Level of Energy Intensity, Use of Recyclable Materials, Recycle Level and Reuse of Residue, Volume of Energy Consumption, Number of Environmental Lawsuits
2. Environment Audit Performance Environmental Policy, Environmental Audit Reports and Environmental Review
3. Corporate Governance Board Size, Board Independence, Outside Directors, Insider Ownership
4. Social Performance Employment of Minority, Number of Social and Cultural Projects, Number of Lawsuits file by Employee, Customer and Regulatory Agencies

Source: Adapted from various studies including (Santos and Brito, 2012)

Based on the indicators found for each dimension, the ratios were arrived at. The list of ratios may grow further if the other pertinent dimensions are included.

The ability of an organization, corporation, firm, or enterprise to turn a profit from all of its business operations is said to be profitability. It demonstrates how efficiently the management can generate profits by utilizing all the resources offered by the market. A great number of scientists give their definition of profitability. According to Harward and Upton, profitability refers to an investment capacity to generate a profit from its utilization. Harward Upton, (1961), Hermanson defines, profitability as the ability of an organization to generate revenue, and its failure to, is a loss (Hermanson, 1989). He further submits that profitability is achieved when revenue exceeds cost of input, but bad performance might result when revenue falls short of cost of input. In conclusion therefore, every firm should generate enough revenue to expand over a considerable period.

Every firm, in Modugba's opinion, is concerned about its profitability. Performance measures how effectively a company's management generates revenue by utilizing its available resources. Alternatively put, profitability is the capacity to generate a profit (Modugba, 2013). In addition, Gayathri and Murugesan (2014) corroborate that one of the key instruments for every enterprise's efficiency performance is performance. Gnanasooriyar claims that profitability is a measure of efficiency and is guides management to achieve greater levels of efficiency.

Some authors define a profitability ratio as a net result and as a class of financial metrics. Brigham, Gapenski, and Ehrhardt consider that performance rates are the net operating outcome of the combined effects of debt management, asset management and liquidity, and profitability is the net result of managerial decisions and numerous policies. (Brigham, Gapenski and Ehrhardt, (1999). Popoola clarified profitability ratio measures the quantity of output derived from using a certain amount of an asset. According to the scientist, in an ideal business environment, the only metric required for any economic being is performance. (Popoola et al, 2013). With regards to theoretical literature, the primary goal of financial management is to increase owners' income and overall business performance.

An evaluation of a business performance is critical to understand how it operates, and how to increase its success. The study of firm performance has been greatly benefited from the contributions of many academics. For instance, Popoola et al. has provided a unique guide to give farmers' organizational representatives a general understanding of performance analysis in Southern Africa. (Popoola, 2013). The specialized literature acknowledges the significance of performance analysis at the enterprise level. Based on the literature review presented above, the following conclusion about the definition of performance concept can be extracted: A business must operate under profitable conditions in order to be successful, which calls for revenue to exceed cost-related activities. In conclusion, it can be claimed that all the ideas discussed above are necessary for ensuring the economic entity's commercial success. Performance is determined by achieving favorable outcomes when comparing the financial impacts with the financial effort required (Popoola et al, 2013). Ferguson and Olofsson have mentioned, profitability is the hallmark for any business in the long run. The researchers claim that almost every action taken by a business that seeks to make profit can be classified as either an operational activity, an investment activity or financing activity. A business that excels in these three areas will succeed overall. Ferguson and Olofsson (2011). Performance is crucial to the survival and development of businesses, and it should be improved in order to make profits, cut costs, and prevent risk. Therefore, the research on the factors influencing a company’s performance has great essence.

## 2.10 Factors affecting firm’s Performance

The firm effect and structure-conduct performance (SCP) models are two schools of competing models of company performance that are available in modern literature (Stierwald, 2009). The SCP model, founded by Bain in 1951, explains the relationship between market structure, corporate behavior, and performance. The market structure dictates company performance and behavior in the SCP model (Slade, 2003), while in the effect model, Market structure results from how enterprises and their profits are distributed. According to the SCP paradigm, there are particular causal relationships between performance, conduct and market structure (Tsvuura, 2014). In other words, market structure dictates behavior, and behavior dictates performance.

All elements that have an impact on the volume and quality of an enterprise's revenue, whether directly or indirectly, are grouped together as factors influencing business performance. The elements are undeniably real, and numerous academics have studied them. While some studies have concentrated on the performance of a particular nation, others are looking at the variables influencing business performance across a panel of nations.

## 2.11 External Environmental Factors

The external environment can be used to refine and concentrate on the sector that each company operates, as believed by many experts. The development of businesses is impacted by certain macroeconomic policies, market conditions, rules and regulations and other external environments. Adam Smith in "Wealth of Nations" develops the "the two hands" theory: the hand of the government and the hand of the market. Additionally, the macroeconomic-specific factors represent the country's overall macroeconomic and market dynamics. Industrial environment macroeconomic and Government variables make up the bulk of the external environmental factors.

According to Endaya, who has analyzed the determinants affecting a bank’s performance, events outside of the banks' purview and sphere of influence are represented by the external determinants. The social environments, economic, political, technological, and legal in which the company operates are determined by the external environment. (Endaya et al. 2011).

Gul, 2009 has explored the effect of bank-specific characteristics and macroeconomic indicators on banks' performance in Pakistan over the period 2005-2009. Both internal and external factors are taken into consideration while determining bank performance.

**2.12**  **Macroeconomic Elements**

Macroeconomic factors may have numerous effects on how well a company performs. The three primary variables are inflation, interest rates, and economic growth. Some academics claims that a rise in economic growth can boost business performance. GDP is a measure of economic growth, which positively impacts performance. According to Kantudu, who has tried to evaluate the long run relationship of macro-economic and bank-specific factors and how they affect the performance of financial institution in Turkey from 1998 to 2011, given the banking industry’s sensitivity to the state of the economy, the Gross Domestic Product have a favorable impact on performance. Banks may easily collect existing loans and extend new ones as the real sector expands (Kantudu et al. 2015).

 Gallet, O. (2010) further studies that acknowledge the significance of market expansion on banking performance. According to Gallet these regulatory measures have assisted in minimizing banks' exposure to swings in the real estate market because bank lending is directly connected to economic growth and volatility in property prices Gallet, (2010). In their study of performance of Islamic banks, Bashir and Hassan came to the conclusion that a favorable macroeconomic context appears to generate larger profitability. The performance measures are greatly impacted by the increasing GDP growth (Bashir and Hassan, 2003).

Mohamed et al, 2012 asserts that inflation has an impact on every aspect of a nation's economy based on theoretical literature. Regression and correlation analysis were used to analyze 55 food-related enterprises from 2006 to 2011 in order to evaluate factors that affect firm performance, such as inflation, leverage and liquidity. According to the study's findings, each of these factors improves business performance positively. (Mohamed et al, 2012). According to Bolgna and Linguist (2016). research, whether or not inflation is anticipated will determine how it affects bank performance. If the bank's management fully anticipates the pace of inflation, the bank can alter interest rates accordingly to boost revenues more quickly than costs, which should impact performance positively. In other words, the interest rate serves to restrain inflation since customers feel discouraged when product prices rise (Bolgna and Linguist (2016).

##

## 2.3 Theoretical Framework

In this study, three theories—the assurance theory, the reliability theory, and the stakeholder theory were discussed. The study is hinged on Stakeholder’s theory which holds that “the purpose of any company is or should be the flourishing of the company and all its key stakeholders (Freeman, 2004).

### 2.3.1 Stakeholder Theory

Stakeholder theory was developed by Lan Mitroff (1983), in his book Stakeholders of the Organizational mind. The Stakeholder Theory is founded on the premise that there are other actors having an interest in a company's decisions and activities in addition to shareholders. Groups and people who gain from, suffer harm from, or have their rights upheld or violated by corporate actions are considered stakeholders. Suppliers, employees, creditors, customers, and the general public are stakeholders in addition to shareholders. According to the stakeholder theory, businesses have a social obligation to take into account the interests of all parties impacted by their decisions. Anyone who will be impacted by business actions should be taken into account by management in addition to its shareholders. The thriving of any firm is or should be the goal of the company and all of its key stakeholders defines the stakeholder view, contrary to the classical view (Freeman, 2004). The challenge of taking into account absentee stakeholders like potential victims or future generations, as well as silent stakeholders, like the natural environment, is one of the issues with stakeholder theory (Ogutu et al, 2016). Since the natural environment is not a human group or community like we are, the majority of definitions of stakeholders often define them as groups or people, making it impossible to recognize the natural environment as a stakeholder. For instance, consumers or employees (Buchholz, 2004). Phillips and Reichart (2000) debate that only humans can be viewed as organizational stakeholders, while attempts to include the natural environment as stakeholders are criticized.

### 2.3.2 Reliability Theory

Simply put, reliability theory describes the likelihood that a system will perform as predicted over a certain period of time (ROSC. (2011)). Its primary purpose was to aid maritime and life insurance companies in the nineteenth century in calculating profitable rates to charge their clients. Based to the reliability theory, audit control is made up of interconnected components which needs to have a clear definition of what success is. The reliability of a component is the probability of the component success rate. Additionally, there are only two possible values for the reliability of the complete internal control system: success and failure.

The professional literature has discussed the applicability of Reliability Theory to the assessment of internal control systems but unfortunately, no applications that make use of the substantial theory of reliability have been reported. A more reliable method for evaluating the impact of an internal control system on income risk may be provided by comparison with historical performance data for the organization or those of other firms, allowing more rational time and effort allocation for the auditor following the process formulation and system reliability estimations.

According to Mihert and Yismaw (2007). it is the responsibility of firm management to ensure that these systems are accurate. Mihert et al (2007) also adds that It is judgmental in nature for management and external auditors to evaluate the internal control system. However, agribusiness have not been able to adopt the internal control systems due to lack of understanding, complexities of behavioral system modeling, the absence of reality and ineffectiveness in terms of cost.

### 2.3.3 The Assurance Theory

The five attestation services that make up the assurance theory: attestation services on information technology, review of financial statements, audit of internal control over financial reporting and additional attestation services that may be used for a variety of subject matters. A public accountant's opinion regarding the reliability of a written assertion that belongs to a different party is expressed as an assurance service. (Nguyen, 2018). An assurance service is a professional, independent service that analyzes financial information using current forensic accounting techniques to improve the quality of information for decision makers. Business owners look for assurance services to help increase the accuracy and applicability of the information that forms the basis of their decisions. Bennett and Franzel (2013) highlighted that, Attestation services is one of assurance service that auditors offer. In the course of providing attestation services, the auditor delivers a report regarding the reliability of a claim made by a different party that is intended to provide a reasonable level of assurance regarding the financial statement. Another study examined, specific subject matter information in prospectuses such as pro forma financial information, greenhouse gas, internal control and reporting on sustainability. The reliability, credibility and quality of sustainability reports can be increased through external assurance Santos and Brito (2012)

## 2.4 Empirical Review

White-collar crime investigation techniques are examined and evaluated by Enofe et al (2013). They also offer a broad hypothesis on the socioeconomic, organizational, and behavioral characteristics of those who commit it. In order to analyze the methodology of fraud exams, it assesses a number of internal investigation reports. Theoretical reflection on practice improvements for fraud examiners can be supported by empirical investigations. Modugu and Anyaduba (2013) conducted a study on empirical examination of forensic auditing and financial fraud in Nigeria using a survey research approach. Primary data were employed in the investigation, which used a straightforward random sampling methodology. Using forensic research, it was possible to produce accounting analyses that demonstrated the extent of financial fraud in Nigeria. In a research conducted in 2013 on forensic accounting education as a cure-all for reducing fraudulent activities in Nigeria, Dada et al (2013). Their study focused on determining the degree of knowledge of forensic methods and their applicability in identifying financial fraud in Nigeria among the personnel of the Nigerian Economic and Financial Crime Commission. The study came to its conclusion by concluding that there the association between forensic auditing and the investigation and identification of fraudulent operations. However, it was also found that forensic accounting had not been used, particularly by Nigeria's top anti-corruption agency, the EFCC.

Recently, forensic audit of the Nigerian Stock Exchange (NSE) according to Nwaze (2012) as cited in Olukowade and Balogun (2015), the audit result revealed that there exist pockets of shady character, especially in expense accounts of the agency that were discovered during the statutory audit (Olukowade & Balogun, 2015). Gbadamosi (2008) found that forensic accountants had a better likelihood than traditional auditors of spotting significant amounts of fraud. All of these techniques, however, are less focused on identifying and describing the financial behaviors unique to fraud firms and more focused on individual.

According to an empirical study by Akhidime and Ekatah (2014) the field is still in its infancy in Nigeria and the majority of people there appear to believe there is no difference between forensic auditing and other auditing services. According to 2012 research by Ekechukwu et al on forensic accounting in Nigeria, there is a poor degree of knowledge about forensic auditing among people, particularly the stake holders. According to Enofe et al (2013), forensic accounting is practiced and developed significantly less frequently in developing nations like Nigeria.

In Kogi State, Nigeria, Okoye and Gbegi (2013) showed that while the senior employees and top management were aware of forensic auditing but relatively few members have not heard about it. Although the study of forensic auditing is still very young and not yet received adequate recognition in Nigeria, according to Ogutu and Ngahu (2016) it has the potential or necessary components to have a beneficial influence on the caliber of income statement. This finding would imply that people are more likely to engage forensic accounting services if they believe that doing so will reduce their risk of harm, even if this has not been empirically verified. The findings of a research by Kasum (2009) on the applicability of forensic auditing to financial crimes in developing nations show countries require the services of forensic auditing more than developed economies, particularly in the public sector. A 2017 empirical research by Ogbeide et al observed a strong relationship between forensic auditing and fraudulent behaviors in Nigerian public sector. According to their research and conclusions, the agents in charge of managing the institution should be compelled by stakeholder pressure to utilize forensic accounting services to determine the scope and severity of frauds and corruption that have been committed. According to a report by Dada, Owolabi, and Okwu (2013), forensic auditing services are favorably associated to the investigation and detection of fraudulent activities, but they have not been used in those processes, particularly by key anti-corruption authorities in Nigeria, this may be because, in the past, individuals did not completely understand the apparent advantages and dangers of using forensic auditing services to identify and stop fraud. Strangely enough, the accounting auditors consistently assert that their role is to report on whether the financial statements present a genuine picture of the situation for and as of a certain time rather than to look into the extent of fraud perpetrated within an organization. In their study, Singleton et al. (2006) covered forensic accounting and fraud audits. Despite emphasizing fraud auditing and the fundamentals of forensic auditing, they focused on topics like the auditor’s duty of care, red flags and protection from fraud and control, and forensic accounting with the consideration of expert testimony in their discussion of fraud protection. Forensic auditors, attorneys, academics in the subject of accounting focused of an empirical research. From a different angle, Boritz et al. (2008) looked at the relative benefits of enlisting fraud specialists during planning stage to help auditors establish an audit plan that would successfully discover fraud or mismanagement of fund. They discovered that including the fraud specialists into the risk assessment process yields superior outcomes versus merely talking with them by outlining general risk assessments and soliciting feedback. Only 141 of the 517 possible respondents who were given a structured questionnaire by Gottschalk (2010) completed it, and those 141 replies were then used for analysis using descriptive statistics. The findings show that control is the most crucial strategy for preventing and managing fraud. Some survey participants, however, think that influence is more significant when it comes to moral standards and other policies. Using forensic accounting services to identify fraud was studied by Ekechukwu et al (2018). Twenty-four banks in Port Harcourt, the capital of Rivers State, were given a well-designed questionnaire with three sections, and this information was used to collect the primary data. Using both primary and secondary sources, Okoye (2011) examined FA for his research. Staff members of five chosen ministries in the Kogi area were given 370 questionnaires to complete.

According to the study's findings by Okoye et al. (2019), stakeholders mostly concur that FA is successful in preventing, improving financial reporting and maintaining the integrity of internal controls. The formulation and testing of three assumptions led to the discovery that FA accounting significantly affects fraud detection. The research showed that the government should improve the nation's legal, educational, and political systems to create an atmosphere that will allow forensic auditing profession to thrive. The relevance of forensic auditing skills and techniques in Nigerian economic and financial crime investigation were investigated by Adeniyi, S.I and Adebayo (2014) in a research. Data collection techniques included the use of surveys and a co-relational design. The study's conclusions showed that professional judgments, abilities, and methods have a favorable influence on fraud detection and prevention while court procedure delays have a negative influence on the same. In their study to evaluate the function of FA in preventing financial crimes, Enofe and Utomen (2015) used a survey research design methodology. The study's population was the workers of certain banks. Multiple Regression Analysis was used to evaluate the assumptions of Ordinary Least Square. The results show that FA is a powerful tool for combating the threat of financial crimes in Nigeria's major financial industries. Aduwo (2016) came to the conclusion that forensic auditing has a significant impact on lowering financial misappropriation in corporate companies by applying expert judgements, audits, legal processes, and accounting abilities to battle the threat of company liquidation. In an investigation to evaluate the efficacy of forensic services in Nigerian business organizations, Okunbor and Obaretin (2010) concluded that business organizations in Nigeria may effectively prohibit fraudulent behavior by using forensic accounting services.

 From these evidences, it is clear that several studies have been conducted to determine the effectiveness of forensic auditing in Nigerian business environment. However, this research aims to investigates the effectiveness of forensic auditors and performance of selected agribusiness firms.

## 2.5 Gap in Literature

There have been several Studies on forensic auditing, Enofe, Omagbon and Ehigiator (2015), Alabdullah, Alfadhl, Yahya and Rabi (2013) and others examined the impact of forensic audit on corporate and financial accounting fraud. However, most of the researchers have not been able to estimate the effectiveness of forensic auditors and their contributions to the overall performance of agribusiness enterprises using an empirical evidence from the most relevant stakeholders. This study however, examined the relationship between selected firm performance indicators with respect to the observed characteristics and effectiveness of the auditors. and all determinants of forensic accounting.

The nexus between forensic auditors and agribusiness performance in this study showcased an underutilization of available professionals towards achieving the business objectives.

**CHAPTER THREE**

# 3.0 METHODOLOGY

## 3.1 The Study Area

This research work was conducted in Oyo state, Southwest, Nigeria. The state is one of the three states created out of the former western states of Nigeria in 1976. Oyo state consists of thirty-three (33) local government areas.

 The state has gently sloping lowland in the south that rises to a plateau of around 40 meters in height. Rivers that run north to south from the uplands provide good drainage for the state. The tropical climate of Oyo state comprises dry and wet seasons as well as a comparatively high humidity level. The rainy season start in April until October and dry season runs from November to March. Almost the entire year, the average daily temperature is between C (F) and C (F). In the north, dense woodland gives way to grassland that is dotted with trees. Several government farm settlements may be found in Lalupon, Ilora, Akufo, Sepeteri, Iresaadu, Ogbomoso, Ijaiye, and Ipapo.

Fisheries and aquaculture, agro-allied, feed mills, animal farms, and other conventional agribusiness operations are most prevalent in Oyo State, where agricultural activities adhere to the traditional mixed cropping pattern.

## 3.2 Sampling Technique and Sample Size

The respondents for this study was selected using the purposeful sampling technique since this is the viable option when there are few primary data sources that can contribute to the survey. The targeted sample population for this research work were the auditors of agribusiness enterprises in Oyo state. To achieve this the broad objective, a sample of 82 agribusiness enterprises were selected but 73 respondents. Out of the selected enterprises 58 uses accounting auditors while only 15 uses forensic auditors. The sum of seventy-three participants were in the study. Purposive sampling was used in this study's primary data collection process.

## 3.3 Method of Data collection and Research instrument

Both primary and secondary data were utilized in this study. A well-designed questionnaire was employed to gather primary data. The questionnaire covers the socio-economics characteristics of the forensic auditors and the demographic characteristics of the enterprises. The secondary data on Return on Asset (ROA), Return on Equity (ROE) and Return on Investment (RIV) etc. was sourced from the financial statement of each agribusiness enterprises where auditors were located through the help of Institute of Agribusiness Management of Nigeria.

## 3.4 Method of data Analysis

Using descriptive statistics like chart, percentage, table, mean, frequency etc., Objectives I and II were described. Objective III was achieved through the use of Probit regression analysis. Using a Probit model, dependent variable can only have two possible values of either yes or no. The purpose of the model is to categorize the probability outcome of the existence of usage of forensic auditors by agribusiness owners.

while objective IV was analyzed using Multivariate Regression (MVREG) Analysis. Wilcoxon sign rank and Mann–Whitney test was used check for differences between the perceived factor that determines the performance of both forensic and non-forensic auditors.

## 3.5 Model Specification

###  Probit Model

Probit models were also employed. These models merely compute the probability of being or not being into a category using the cumulative Gaussian normal distribution instead of the logistic function:



Y\* = is the latent variable that defines the usage of forensic auditor in agribusiness firms.

Y\* is linked with the observed level of usage such that;

 y = 1(usage) if y\*> 0,

and y = 0 (Non usage) if y\*$\leq $ 0

the level of level of usage of forensic auditors will be determined using the average mean score.

X1= Age of enterprise (Years)/ year of establishment

X2= Size of enterprise (Number of employees)

X3= Nature of business (agro allied=1, feed mill=2, livestock=3, others=0

X4= Access to info. Tech (Yes =1, No=0)

X5 = Training of auditor (Yes =1, No= 0)

X6 = Cooperate policy (Yes=1, No=0)

X7= Real Annual Revenue (N)

X8 = Annual employ. Growth (Number of additional work force)

X9 = Real annual labor productivity

X10 = Past Incidence of fraud (Yes = 1, No =0)

X11 = Decline in profit (N value)

X12 = Misappropriation of fund (Yes=1, No =0)

X13 = Ownership status (Government =1, Private = 2)

*b1 – b13* = Coefficients variables

*b0* = Constant or intercept term

*u*= Error term

In this study, Probit model is preferred because it has the lowest diagnostic test, except the pseudo R2 (McFadden) which has the greatest value.

### Multivariate Regression Analysis

The relationship between the dependent variables and the independence variables can be expressed mathematically as follows:



Multivariate regression is a beneficial statistical method to evaluate the linear relationships between several independent and dependent variables (Mansouri E, Feizi F, Rad AJ, Arian M & Remote, 2018). Therefore, it is the multiple regression expansion with an equal number of equations as the number of response variables. One advantage of using multivariate analysis is that the type 1 error can be determined, and it does not cover the number of variables.

 Consequently, this method is applied in this study. The linear regression model can be

expressed as follows:



The complete model can be represented as follows



Where were the dependent variable ( Firm performance Indices using profit indicators; ROA, ROE and RIV)

are the independent variables

ROA: Return on assets measured by profit after tax/total asset

ROE: Return on Equity measured by profit after tax/ total equity

RIV: The Return on Investment (ROI) is computed by dividing the investment's profit by its cost.

### Independent Variables

1. Capital structure measured by short term debts divided by total liability (CS1), Debts divided by total assets (CS2) and Debts divided by total equity (CS3).
2. Firm size measured by total revenue in a year (FZ1) and Total assets in a year (FZ2)
3. Infrastructure equipment and technology measured by fixed asset ratio divided by total asset (IET).
4. Growth rate measured by net revenue growth i.e. sales in previous year- sales in the following year divided by sales in the last financial year (GR).
5. Financial management capacity measured by payables turnover ratio i.e gross revenue divided by average payables (FMC).

**CHAPTER FOUR**

# 4.0 RESULTS AND DISCUSSION

This chapter discusses the results of the study. The research findings and implications of the observations were also discussed. The results of the study were interpreted and discussed based on the specific objectives.

## 4.1 Socioeconomic and Demographic Characteristic of Auditors and Agribusiness Enterprises

This section presents the results of the data analyzed and discussion obtained. The summary descriptive analysis considered were age, education, year of experience among others.

Table 2: Demographic composition and Characteristics of respondent

|  |  |  |
| --- | --- | --- |
| **Demographic Variables** | **Frequency** | **%** |
| **Auditing Services** **Gender of Auditor** | Forensic auditorNon Forensic AuditorContract (Auditor)MaleFemale  | 1527315419 | 2137427426 |
| **Age of Auditor (Years)** | 25 – 34 | 9 | 12.3 |
| 35 – 44 | 37 | 50.7 |
| 45 – 54 | 16 | 21.9 |
| 55 – 64 | 11 | 15.1 |
| **Age of business (years)** | ≤5 | 6 | 8.2 |
| 6 – 10>10 | 5413 | 7417.8 |
| **Education level**  | HND/BSC | 64 | 87.7 |
| ACCA/ICAN | 13 | 17.8 |
| M.Sc. | 9 | 12.3 |
| Ph.D. | - | - |
| **Years of Experience (Years)** | ≤5 | 2 | 2.7 |
| 6 – 10 | 47 | 64.4 |
| 11 – 15 | 18 | 24.7 |
| **No of Employees** | 5 – 19(Small) | 19 | 26 |
| 20 – 99 (Medium) | 47 | 64.4 |
| 100+ (Large) | 7 | 9.6 |
| Fishery & Aquaculture | 7 | 9.6 |
| **Nature of Business****Total** | Agro-allied | 32 | 43.8 |
| Feed Mills | 14 | 19.2 |
| Agric. Equip & Mach. | 4 | 5.5 |
| Livestock farm | 10 | 13.7 |
| Agric. Coop | 6 | 8.2 |
|  |  |
|  | **73** | **100** |

Source: Field survey, 2022

A total number of seventy-three (73) respondents completed the survey questionnaire design as stated in table 2, 21% were professional forensic auditors of agribusiness enterprises, 37 % were accountant who also doubled as auditors, while 42% uses auditing services in contract term. Only twenty agribusiness enterprises engage forensic auditors among the selected agribusiness enterprises. The approximately 74 percent of the sample comprised of male while 26% were female. Fifty-one (51) percent were between the age of 35-44 years, 88 percent were having HND/BSc degree, 18 percent had ICAN or ACCA while only 12 percent possess Master’s degree. Almost 65 percent were having experience with either business forensics auditing or accounting auditing.

It is also observed that majority (74%) of the agribusiness enterprises were established more than ten years ago.

The result is in consonant with that of Nto et al. (2011) and Chinelo (2011) who also reveals similar findings that decisions of some businesses may depend on firms’ experience and longevity. The number of employees were conceptualized by the size of the business enterprise i.e. small, medium and large scale agribusiness enterprise. Sixty-four (64) percent of the selected agribusiness enterprises were medium scale who had between 20-99 number of employees. This result is in line with a-priori expectation as an extant review of literature revealed that it is this category of businesses that the ones that rule the corporate world, not only in Nigeria, but throughout Africa, and is the category of businesses that suffers the most difficulties. (Fernet, 2016). It is also worthy of that that majority of agribusiness enterprise in Oyo state, Nigeria were agro-allied (44%) followed by feed mills (19%) and livestock (14%). This is attributed to the wealth of varied but advantageous ecological and climatic conditions of the state, and huge agricultural land mass estimated to be about 28,000 sq. km and soil structures that facilitates the production of a range of vegetables, fruits, tree and arable crops that encourages agro-allied industries to strife well in the study area. The number of feed mills can also be attributed to the total number of livestock farmers in the study area. The result is also in line with Ajiboye et al (2018), who opined that highest number of livestock farms in South west, can be find in Ogun and Oyo state, Nigeria.

## 4.2 Summary of Competency Skill of the Respondent

Table 3: Summary of competency skill chosen by the respondent

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Competency skill | Very poorFreq. (% ) | Below averageFreq. (%) | AverageFreq. (%) | Above averageFreq. (%) | ExcellentFreq. (%) | Mean(Std.Dev) | Rank |
| Auditor’s Independence | 7(9.5) | 11(15.1) | 22(30.1) | 17(23.3) | 41(56.2) | 3.23(0.72) | 3rd  |
| Training & development | 4(5.5) | 12(16.4) | 19(26) | 37(50.9) | 43(58.9) | 3.08(0.83) | 5th  |
| Implementation of Corporate policy | 8(11) | 11(15.1) | 13(17.8) | 19(26) | 31(42.5) | 2.16(0.92) | 11th  |
| Access to Information Technology | 6(8.2) | 4(5.5) | 9(12.3) | 40(54.8) | 54(74) | 2.94(0.99) | 7th  |
| Identify key issues | - | - | 6(8.2) | 37(50.7) | 45(61.6) | 2.93(0.86) | 8th  |
| Investigative ability | 4(5.5) | 11(15.1) | 38(52.1) | 41(56.2) | 27(37) | 2.82(0.89) | 9th  |
| Legal skills | - | - | 18(24.7) | 32(43.8) | 41(56.2) | 2.62(0.81) | 10th  |
| Understanding of business goal | - | - | 34(46.6) | 37(50.7) | 44(60.3) | 3.17(0.87) | 4th  |
| Critical thinking | - | 17(23.3) | 34(46.6) | 47(64.4) | 52(71.2) | 3.42(0.91) | 2nd  |
| Unstructured problem solving | - | 9(12.3) | 28(38.4) | 39(53.4) | 41(56.2) | 3.01(0.85) | 6th  |
| Analytical proficiency | 5(6.8) | 11(15.1) | 27(37) | 42(57.5) | 53(72.6) | 3.53(0.98) | 1st  |

Source: Computed from field survey data, 2022

Using a 5-point Likert scale, competency was rated very poor, below average, average, above average and excellent in table 3.

The summary results of the competency skill reveals that 41 (56%) of the auditors carry out their work freely in an objective manner without any conflict of interest in performing their assigned audit duties while 59% of the auditors engaged in training and development in one way or the other.

Furthermore, 43% of the respondent were excellent in implementation of corporate policy which ensure that the business operates at maximum efficiency. Majority (74%) of the respondent have access to information technology. Information technology builds a strong communication networks for a company, administers databases, safeguards data and information and helps the auditors to troubleshoot challenges with their mobile devices or computers, or does a variety of other work to guarantee the efficiency and security of corporate information. Having professional help is said to ease the challenges of business owners to focus on operating concerns, that is connected to the respondent excellence (62%) in understanding key issues in business of business challenges which include hiring the right people, developing a customer base, building a brand, etc. Most of the respondent (56%) were above average in investigative ability which is required to gather data and generate conclusions to reveal important facts.

In addition, most of the auditors (56%) have excellent knowledge in legal issues, while 60% fully understand the business goals. Critical thinking (71%) is of high standard among the respondents, while most of them (56%) have unstructured problem solving ability. Unstructured issues are novel and rare in nature. When the issues first occur, they could be difficult to identify but can be identified by the auditors.

Analytical skills in this context refer to the ability of auditors to collect and analyze information, solve problems, and make decisions. Possessing these skills was identified as excellent among the respondent in the area of study.

Stemming from the study’s findings, Table 3 reveals the descriptive statistics for the competency skill, which includes the overall means and standard deviations. Additionally, it is worth mentioning that the most crucial skills for forensic auditors, are those with the highest mean (µ) and low standard deviations, while the least vital skills needed for effective discharge of duties, are those with low mean (µ) but high standard deviations. The findings of this research reveals that the skills and competencies rated as the most crucial were analytical proficiency (Mean = 3.53), critical thinking (Mean = 3.42), auditor’s independence (Mean = 3.23), understanding of business goals (Mean = 3.17) and training & development (Mean = 3.08).

## 4.3 Results of Probit Regression Analysis

As shown in Table 4 below, the usage of forensic auditor was analyzed using probit regression model. Age of agribusiness enterprise, size of enterprise, nature of enterprise and corporate policy were 1% significant level, ownership status was 5% significant level while real annual revenue and real annual labor productivity were significant at 10% level.

Table 4: Probit Regression on usage of Forensic Auditors in Agribusiness Enterprises

Forensic audit Co-efficient Standard Error Z P>|Z|

Constant 0.9532 21.112 0.05 0.964

Age of enterprise 0.1112\*\*\* 0.0009 12.3 0.000

Size of enterprise 0.3905\*\*\* 0.0346 11.5 0.000

Nature of enterprise 1.2179\*\*\* 0.0250 4.84 0.000

Access to info. Tech .00045 0.0079 0.06 0.954

Training of auditor 0.0585` 0.1812 -0.32 0.747

Cooperate policy 0.2187\*\*\* 0 0553 3.94 0.000

Real Annual Revenue 0.1673\* 0.1001 1.67 0.090

Annual employ. Growth 4.7475 3.1622 1.50 0.133

Real annual labor productivity 0.0863\* 0.0436 1.98 0.050

Past Incidence of fraud -0.0076 0.4139 -0.02 0.985

Decline in profit -0.0222 0.0828 -0.27 0.789

Misappropriation of fund 0.2095 0.3426 0.61 0.542

Ownership status 0.0863\*\* 0.0430 2.00 0.050

Number of observation 73

Log likelihood -5.0724

LR chi2(10) 74.66

Prob > chi2 0.0000

Pseudo R2 0.8804

Source: Computed from Field Survey Data, 2022. \*\*\* implies 1% level of significant while \*\* implies 5% level of significant and \* implies 10% level of significant.

This connotes that if age of enterprise increases by one unit, it will probably lead to 0.11 chances of using a forensic auditor in the enterprise. According to FAO (2018), the ability of young and experienced businesses to successfully navigate the business environment may vary without the involvement of external auditor.

Size of enterprise also shows a significant importance in the usage of a forensic auditor. As size of enterprise increases, the likelihood of using a forensic auditor increases by 0.390. Statistics have it that size of enterprise is very effective in raising the level of employment of a nation moreover, Fernet, (2016) equally corroborates that enterprise size is cardinal in catalyzing the economy. Nature of agribusiness enterprise was seen to influence the usage of forensic auditor. It is observed that the nature on this context (fishery, aquaculture, feed mill, Agricultural equipment & machinery, livestock and agricultural cooperative) increases the chance of selecting a forensic auditor. This is also in line with the result of real annual revenue, an additional increase in real annual revenue will likely increases the employment of a forensic auditor. Corporate policy is one of the requirement that is also like to influence the usage of forensic auditor among the selected agribusiness enterprises. A 1% increase in corporate policy implementation will likely increase the usage of forensic auditor by 0.218.

Furthermore, real annual labor productivity is also likely to increases the usage of forensic auditor by the enterprises. The result also showed that the medium scale enterprises have the best performance in terms of annual labor productivity because even though they have narrow target they continue to benefit from expanding their clientele which indirectly leads to more sales (International Labor Organization, 2011). Real annual income derives from sales of produce over a fiscal year whereas yearly labor productivity is computed by dividing sales by the number of full-time permanent employees. Similarly, growth in yearly employment is the change in full time employment recorded during the current fiscal from a previous period.

Ownership status also have a great significant in the usage of forensic auditors as revealed by the finding that the probability of using a forensic auditor is a function of whether the enterprise is owned by an individual or by government. This concurs with Mansouri et al. (2018) who reported that majority (70%) of all successful operational businesses in Nigeria are concerted mainly private-owned, while about 4% are government-owned.

The Prob>chi2 of 0.0000 indicate the probability of obtaining the null hypothesis which was true in this case. In other words, the usage of forensic auditors was indicated by the significant independence variable with the likelihood of 50.7% chance of occurrence. The value of pseudo R2 (88%) indicates the level at which the model better predicts the outcome.

## 4.4 Factor determining the performance of both forensic and non-forensic auditors

A five point Likert scale measurement was presented in a cross-tabular form in order to examine respondent’s feedback on factors that determine the performance of both forensic and non-forensic auditor was represented in table 5.

Table 5: Perceived factors determining the performance of forensic and non-forensic auditor

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Religion Factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 4 | 5 | 8 | 1 | 2 | 20 |
| Non-forensic auditor | 9 | 24 | 13 | 6 | 1 | 53 |
| Total  | 13 | 29 | 21 | 17 | 3 | 73 |
|  |  |  | Mean = 3.17 | Std. Dev= 1.042 | Min=1 | Max=5 |
|  |  Conscience Factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 5 | 9 | 3 | 3 | - | 20 |
| Non-forensic auditor | 12 | 17 | 15 | 6 | 3 | 53 |
| Total  | 17 | 26 | 18 | 9 | 3 | 73 |
|  |  |  | Mean = 3.72 | Std. Dev= 0.626 | Min= 1 | Max = 5 |
|  | Gender factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | - | - | 2 | 7 | 11 | 20 |
| Non-forensic auditor | - | - | 12 | 15 | 26 | 53 |
| Total  | - | - | 14 | 22 | 37 | 73 |
|  |  |  | Mean = 1.73 | Std. Dev = .0652 | Min = 1 | Max = 5 |
|  | Age factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 1 | 8 | 2 | 9 | - | 20 |
| Non-forensic auditor | 1 | 7 | 14 | 18 | 13 | 53 |
| Total  | 2 | 15 | 16 | 27 | 13 | 73 |
|  |  |  | Mean =2.02 | Std. Dev =0.752 | Min = 1 | Max = 4 |
|  | Fear of sanction factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 2 | 16 | 1 | 1 | - | 20 |
| Non-forensic auditor | 15 | 22 | 13 | 2 | 1 | 53 |
| Total  | 17 | 38 | 14 | 3 | 1 | 73 |
|  |  |  | Mean =3.82 | Std. Dev =0.882 | Min =1 | Max = 5 |
|  | Motivation factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 16 | 2 | 2 | - | - | 20 |
| Non-forensic auditor | 18 | 21 | 14 | - | - | 53 |
| Total  | 34 | 23 | 16 | - | - | 73 |
|  |  |  | Mean =4.81 | Std. Dev= 0.818 | Min= 1 | Max =5 |
|  | Environmental factor |  |  |  |  |  |
|  | Powerfulinfluence  | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 2 | 4 | 1 | 1 | 12 | 20 |
| Non-forensic auditor | 5 | 9 | 3 | 7 | 32 | 53 |
| Total  | 7 | 13 | 4 | 8 | 44 | 73 |
|  |  |  | Mean = 4.01 | Std. Dev = 0.822 | Min = 1 | Max = 5 |
|  | Feedback factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 12 | 4 | 4 | - | - | 20 |
| Non-forensic auditor | 31 | 12 | 10 | - | - | 53 |
| Total  | 43 | 16 | 14 | - | - | 73 |
|  |  |  | Mean = 4.22 | Std. Dev = 0.911 | Min = 1 | Max =5 |
|  | Knowledge structure factor |  |  |  |  |  |
|  | PowerfulInfluence | Great influence | Some influence | Little influence | No influence | Total |
| Forensic auditor | 9 | 6 | 3 | 2 | - | 20 |
| Non-forensic auditor | 28 | 11 | 9 | 5 | - | 53 |
| Total  | 37 | 17 | 12 | 7 | - | 73 |
|  |  |  | Mean = 3.91 | Std. Dev =0.822 | Min = 1 | Max= 5 |

Source: Field Survey, 2022

The results imply that both groups of auditors perceived religion has at least little influence on their performance with the mean of 3.17. On the premise of conscience, the results connote that in the two groups of respondents, most of them (20 FA and 50 NFA) perceived conscience has an undoubtful influence (Mean= 3.72) on their performance. With regard to the influence of gender, the results reveals that no groups of respondent performance as influence by gender. The mean score of gender factor response = 1.73 which suggest there is little or no influence of gender in the performance of the auditors. Age is observed to have an average influence (Mean = 2.02) on the performance of the respondents. The respondent response on factors of fear of sanction by the employers has a mean of 3.82, which signify a high rank determinant of good performance by the auditors. Motivation factor also play an important role on the performance rate of the selected auditor with mean of 4.81 which is the most importance factor influencing the performance of the respondents in the area of study. Identifiable elements within the cultural, economic, demographic, physical or political environment which is summarizes as environmental factor is also observed to have significant influence (Mean = 4.01) on the performance of the selected auditors. Information provided by client which is known as feedback has a considerable impact (Mean = 4.22) on the performance of the respondents. Knowledge sharing or structure is also observed to be tremendous factor that determined the performance of the auditors in the selected agribusiness enterprises.

## 4.5 Test of hypothesis

Table 6: Perceived factors and Auditors performance

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Test statistics  |  |  |  |  |  |  |  |  |  |
|  | Religion  | Conscience | Gender  | Age  | Fear of sanction | Motivation  | Envir. Factor | Feedback | knowledge |
| Mann Whitney U test  | 1817 | 2575 | 2122 | 2240 | 2441 | 2568 | 2768 | 2840 | 2041 |
| Wilcoxon test | 5707 | 5185 | 5292 | 5018 | 5496 | 5295 | 5960 | 5090 | 5815 |
| Z | -0.158 | -.0116 | -0.522 | -0.172 | -0.577 | -0.126 | -0.218 | -0.118 | -2.001 |
| Asymp. Sig.(2 tailed) | 0.372 | 0.628 | 0.906 | 0.115 | 0.004\* | 0.029\* | 0.218 | 2.001 | 0.057\* |

Group variable: Auditor’s status; P<0.05

Source: Field Survey, 2022

From the perceived factor analysis, it is important to infer and generalize on the findings of the analysis using Mann–Whitney U test and Wilcoxon signed rank for hypotheses testing of relationship between the performance of forensic auditor and non-forensic auditor in the study area. The tests were aided in place of the t-test reason being that the non-parametric data did not meet all the conditions for parametric data. As represented in table 6, with the exception of fear of sanction (0.004, P< 0.05), motivation (0.029, P >0.05) and knowledge (0.057, P>0.05) the p-values for religion (0.37, P>0 .05), conscience (0.628, P >0 .05), age (0.115, P>0.05), environmental factor (0.218, P >0 .05) and feedback (2.001, P>0.05) reveals no significant difference in the factors determining the performance of forensic auditors and non-forensic auditors in the study area. The test result indicates no distinct difference in the performance of the two groups of auditors observed in this study.

## 4.6 Descriptive statistics of the performance variables

Table 7: Summary Descriptive statistics of the performance variables

|  |
| --- |
| Dependent variables |
| Variable  | Observation | Mean | Std. Dev. | Min | Max |
| ROA | 73 | 0.098 | 0.106 | 0.017 | 0.513 |
| ROE | 73 | 0.238 | 0.178 | 0.121 | 0.518 |
| RIV | 73 | 0.375 | 0.539 | 0.616 | 1.021 |
| Independent variables |
| CS1 | 73 | 0.781 | 0.190 | 0.336 | 0.1 |
| CS2 | 73 | 0.341 | 0.118 | 0.012 | 0.771 |
| CS3 | 73 | 1.843 | 0.742 | 0.0219 | 1284233 |
| FZ1 | 73 | 347954.5 | 158651.2 | 2 | 15505320 |
| FZ2 | 73 | 420675.7 | 127559.5 | 57190 | 107900 |
| IET | 73 | 0.364 | 0.112 | 0.0878 | 1.878 |
| GR | 73 | 0.0655 | 0.232 | 1 | 168121.15 |
| FMC | 73 | 412.105 | 255345.81 | 1 | 155 |

Source: Data analysis, 2022

The common familiar variables to capture profitability as one of the indicator depicting firm performance were Return on Investment (ROI), return on assets (ROA) and return on Equity (ROE) as summarized in table 7. These business performance indicators represent financial ratios derived from income statements and balance sheets of the selected agribusiness enterprises in Oyo state from 2015-2020.

## 4.7 Results of Multivariate regression

Table 8: Multivariate Regression for ROA, ROE & ROI

|  |  |  |  |
| --- | --- | --- | --- |
|  | ROA | ROE | ROI |
| Variable |  |  |  |
| Constant  | 0.524\*\*\*(0.104) | 0.573\*\*(0.266) | -1.284(1.301) |
| CS1 | -0.229\*(0.124) | 0.039(0.125) | 0.364(7.406) |
| CS2 | -0.127\*\*\*(0.021) | -0.755\*\*\*(0.058) | 0.464\*\*\*(0.0351) |
| CS3 | 0.00047(0.0052) | 0.088(0.131) | 0.035\*(1.0209) |
| FZ1 | -0.325\*\*\*(0.0055) | -0.073) \*(0.044) | 0.529\*\*\*(0.128) |
| FZ2 | 0.0062(0.0043) | 0.532\*\*\*(0.076) | 0.0426\*\*\*(0.0145) |
| IET | 0.026(0.037) | 0.302\*\*\*(0.0152) | 0.0391\*\*\*(0.0135) |
| GR | 0.065\*\*\*(0.018) | 0.0054(0.0425) | 0.0103(0.0499) |
| FMC | -0.000341(0.00547) | 0.0814(0.0533) | 0.027\*\*(0.0154) |
| RMSE | 784458.2 | 455826.7 | 44110.78 |
| R-Square | 0.9662 | 0.9914 | 0.9837 |
| F | 321.78 | 1299.46 | 680.95 |
| P | 0.0000 | 0.0000 | 0.0000 |

In parenthesis is standard error, \* represent 10% significance level, \*\* represent 5% significant level and \*\*\* represent 1% significant level.

The result of the multivariate regression is represented in table 8. The adjusted R2 of all the three explained variables suggest the variance of the explained variables (ROA, ROE and ROI) is explicable by 96%, 99% and 98 % influence of the independent variable respectively.

It is also observed that CS1, CS2, FZ1 and GR were significant in the ROA model which implies that every unit increase in short term debt over total liability will decrease return on asset by 0.229 while a unit increase in debt divided by total assets (CS2) will also negate rate of return on asset by 0.127.

Additional unit of Firm size (FZ1) measured by total revenue is observed to decrease the overall return on assets by 0.325 and return of equity by 0.073 respectively while a unit increase in Growth Rate (GR) will increase ROA by 0.065.

The result of Return on Equity (ROE) was observed to be influenced significantly by CS2, FZ1, FZ2 and IET. All the significant variables possess a positive relationship with return on equity except CS2. A unit increase in CS2, CS3, FZ2, IET and FMC was also observed to increase the return on investment.

ROA and ROE are negatively affected by the capital structure factor’s short-term debt-to-total-liabilities ratio (CS1). The observed variable debt to total assets ratio (CS2) of the capital structure factor also has a negative effect on ROA. In line with capital structure theory, debt ratio raises firm’s profitability as a result of the benefit derived from paying tax. Nonetheless, the debt ratio has a joint impact. Debt help firms generate more revenue so as to increase profits. But more importantly, if debt is not managed effectively, it may push the firm to bankruptcy.

The results show that the selected agribusiness firms did not utilized debt effectively, the benefits they enjoyed from the debt could not compensate for the costs arising from debts.

It is also observed that bigger firm size, results in lower business performance implying that the enterprises have not developed their efficiency with their size, a significant reduction in ROA and ROE results. Growth Rate (GR) have positive effect on ROA and ROI. More focus in expansion of investment results in more efficient firms, as seen from the result. This is in consonant with Abbasali and Esfandiar (2012), who opined that firm expansion can only be achieved by focusing on its initial investment. The result of financial management capacity (FMC) of the enterprise also confirmed a positive relationship with return on investment (ROI).

Table 9: Result of autocorrelation: Variable Inflation factor (VIF)

|  |  |  |
| --- | --- | --- |
| Variable | VIF | I/VIF |
| CS1 | 8.22 | 0.121614 |
| CS2 | 6.50 | 0.153860 |
| CS3 | 4.85 | 0.205997 |
| FZ1 | 3.45 | 0.290068 |
| FZ2 | 3.03 | 0.330471 |
| IET | 2.88 | 0.347444 |
| GR | 1.80 | 0.554917 |
| FMC | 1.46 | 0.686147 |
| Mean VIF | 4.02 |  |

Source: Data analysis, 2022

Variable Inflation Factor (VIF) checks for the degree of collinearity. As a general principle, a variable with VIF value above 10, possibly need further investigation because it signifies existence of collinearity among the variables. It is therefore established that these explanatory variables are not correlated one to another.

Table 10: Test of heteroscedasticity

|  |  |  |
| --- | --- | --- |
| ROA | ROE | ROI |
| Breusch-pagan/ cook-Weisberg test for heteroscedasticity | Breusch-pagan/ cook-Weisberg test for heteroscedasticity | Breusch-pagan/ cook-Weisberg test for heteroscedasticity |
| H0: Constant variance | H0: Constant variance | H0: Constant variance |
| Variable: fitted value for ROA | Variable: fitted value for ROE | Variable: fitted value for RIV |
| Chi2(1)= 5.76 | Chi2(1)= 12.40 | Chi2(1)= 11.76 |
| Prob > chi2= 0.0164 | Prob > chi2= 0.0004 | Prob > chi2= 0.0128 |

The three dependent variable ROA, ROE and RIV pass the assumption of constant variance called heteroscedasticity test. The test generally revealed no barrier to accurate estimation of the regression coefficients which might requires variable transformation when detected.

Figure 3: Jarque-Bera Normality test



Jarque-Bera normality test: 1.275, chi (2) 0.5287

Jarque-Bera test for normality: H0: Normal

The Jarque-Bera test establishes if the data have kurtosis and skewness that matches a normal distribution. The positive number of Jarque-Bera and its nearest to zero implies that the data have a normal distribution. This results can further be explained in table 11

Table 11: Trivedi and Cameron's decomposition of IM-test

|  |  |  |  |
| --- | --- | --- | --- |
| Source | Chi2 | Df | P |
| Heteroscedasticity | 41.11 | 35 | 0.2204 |
| Skewness | 9.36 | 7 | 0.2279 |
| Kurtosis | 0.55 | 1 | 0.4601 |
| Total | 51.02 | 43 | 0.1875 |

Source: Data Analysis, 2022

If the regression model has significant degree of heteroscedasticity, skewness or kurtosis, then it will be seen to violate the underlying assumption of a regression model and unable to make any inferences on the model results. Therefore, to be sure the model is not violating any of the assumption, IM-test is necessary.

The assumption of normal distribution concerns to our residuals only. The independent and the dependent variables can contain both skewness and kurtosis without affecting the validity of the model.

With the p-value of heteroscedasticity and skewness close to each other, it is concluded that the model does not violate any of the assumption.

## T-test: Paired two sample mean

T-test with unequal variance was used to test the difference between the performance of agribusiness firms using forensic auditors and those without forensic auditors.

Two-sample T-test with unequal variance was used because the number of sample in each group is not the same, not normally distributed and the sample is sufficiently large enough (more than 30).

Table 12: Two sample t-test

|  |  |  |
| --- | --- | --- |
|  | Firm with Forensic auditor | Firms without forensic auditors |
| Mean | 4 | 10.6 |
| Variance  | 8.5 | 28.3 |
| Pearson correlation | 0.322379 |
| Hypothesized Mean Difference | 0 |
| Df | 4 |  |
| t Stat | -2.85077 |  |
| P(T<=t) one-tail | 0.02318 |  |
| t Critical one-tail | 2.131847 |  |
| P(T<=t) two-tail | 0.04636 |  |
| t Critical two-tail | 2.576445 |  |

 Source: Data Analysis, 2022

The t-statistic value of -2.85 is negative because average number of auditor (forensic and non-forensic auditor) in the two firm were less than the other. The tabulated t-value under two tail test is 2.57. Since the calculated t-statistics value of 2.85 (negative sign not withstanding here) is higher than 2.57, significant variation exists in the performance of agribusiness firm with forensic auditor and firm with non-forensic auditor. This finding is in consonance with the findings of Basin, M.L. and Shaikh, J.M., (2013) that forensic auditors perform a significant role in coordinating company efforts in attaining its goals.

**CHAPTER FIVE**

# 5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1 Summary

This research looked at the impact of forensic auditor in the performance of selected agribusiness enterprises in Oyo state, Nigeria. Specifically, the research described the socio-economic and demographic features of the respondent in the study area, examined the competency skill of the respondent, the determinant of usage of forensic auditors, the perceived factors that determined the performance of the auditors and the overall profit performance of the agribusiness enterprises in Oyo state

Primary (cross sectional) data and secondary (five years’ financial statement of the selected agribusiness enterprises) data were used for this research. Primary data were garnered using a well-structured questionnaire, while secondary data were obtained from managers, auditors and owners of the enterprises. The analytical tools that addressed each objective of the study were Descriptive statistics, Probit Regression and Multivariate regression.

The outcome from socio-economic characteristics reports that the most of the auditors are between 35-44 years of age. Most of them were male (74%) with 88% B.Sc/ HND degree. Almost 18% of the auditors has ICAN/ACCA professional qualifications while of 12% had MSc. Degree. It is also observed that most of the auditors, (64%) had auditing experience of between 6 and 10 years. It is also noted that majority (64%) of the selected agribusiness enterprises were medium scale of between 20- 99 number of employees. Agro-allied industries were the major (44%) agribusiness enterprise in the study area.

Analytical proficiency, critical thinking, auditor’s independence, understanding of the business goal, training and development of auditors were the core competency skill possessed by the respondent.

The Probit model revealed that age of enterprise, size of enterprise, nature of business, corporate policy real annum revenue, real annual labor productivity and ownership status possess positive and significant relationship with the choice of using a forensic auditor, which means that any additional increase in any of these significant variable inputs will result in the probability of using a forensic auditor in the selected agribusiness enterprises.

The estimated response parameters for the perceived factors that determines the performance of forensic and non-forensic auditor were found to be religion, conscience, fear of sanction, motivation, environmental factor and feedback.

It is noted that capital structure (CS1, CS2), firm size (FZ1) and growth rate (GR) has significant with return on asset (ROA) while capital structure (CS2,) firm size (FZ1, FZ2) and infrastructure equipment and technology (IET) has significant relationship with return on equity (ROE). Findings from the analysis also provides an insight that capital structure (CS2, CS3), firm size (FMZ) and total asset, infrastructure equipment technology (IET) and financial management capacity (FMC) has positive relationship with the performance of the enterprises. The t-test result indicates a clear level of variation in the performance of enterprise with forensic auditors and those will non-forensic auditing.

## 5.2 Conclusion

In conclusion, usage of forensic auditing is likely to positively affect agribusiness enterprise in, Oyo state, Nigeria as a whole, but the effect their will vary on the nature of enterprise, size of enterprise, and the overall financial management of the enterprise. These results show that the performance of agribusiness enterprise is threatened by an increase poor management of debt, firm size and financial management capacity. The potential adaptive measures that can be taken to increase the overall performance of the selected enterprise include, improving the growth rate (GR), maximizing the total assets (FZ2), maintaining infrastructural equipment and technology (IET) and improve the financial management capacity (FMC). Firm with forensic auditor were likely to perform better because the overriding aim of forensic auditor is to find and eliminating fraud which might be the cause of indebtedness among some of the selected enterprises as revealed by the result from this study. The statistical results indicate the existence of linear relationships between competency score of forensic auditor and non -forensic auditors with no clear distinction.

## 5.3 Recommendations

The following policy recommendations are proffered based on the findings of this research.

1. Agribusiness firms’ performance that can be geared towards the attainment of increase in growth rate which can be formulated by calculating sales in previous year and sales in current year.
2. Increase in firm size is expected to increase the performance, but adverse effect in this case suggest a total overhauling of the employment structure. Some employee might be redundant and might not contribute significant to the growth of the enterprise.
3. All finances should be managed by a well-trained, experienced and trust worthy finance officer to reduce the incidence of mismanagement.
4. Firms without forensic auditor should be encourage to engaged the services of forensic auditors before financial mishap is experience.

## 5.4 Contribution to Knowledge

This research work has been able to identify the level of effectiveness of forensic auditors in discharging their overall duties, the factors that contributed to their effectiveness and how forensic auditing services is being utilized in the case of agribusiness enterprises.

The study also affirmed that usage of forensic auditing is likely to positively affect the performance of agribusiness enterprise as a whole, but the effect may vary on the nature of enterprise, size of enterprise, and the overall financial management of the enterprise. It is however, worthy of note that the performance of agribusiness enterprise as revealed by the study is threatened by an increase poor management of debt, firm size and financial management capacity.

## 5.5 Suggestions for Further Studies

There are several indicators to investigate the performance of any enterprise, but this research work focused on only one performance indicator (profitability) which can be computed by Return on Investment, Net Income Revenue, Return on Equity, Return on Assets and Economic Value Added. Future research should take into account the interaction between agribusiness enterprises and other performance indicator like employee satisfaction, market value, customers’ satisfaction, environmental performance and social performance.

# **REFERENCES**

Abushammala, S. N., Alabdullah, T. T. Y., & Ahmed, E. R. (2015). Causal Relationship between Market Growth and Economic Growth. Comparison Study. European Journal of Business and Management 7(33).

Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. The Journal of Risk Finance, 6(5), 438–445.

Adegbie, F. F & Fakile, A. S. (2012). Economic and financial crime in Nigeria: Forensic accounting as antidote. British Journal of Arts and Social Sciences. Vol. 6(1): 37-50.

Adeniyi, S.I & Adebayo, H.O. (2014), Impact of auditing education on audit education gap in Nigeria. Journalof Forensic and Investigative accounting, 5(1), 274-281.

Aguolu, B.(2012).Forensic Accounting : Issues in Accountancy and Audit Practice in Nigeria. Project. (Unpublished Thesis: University of Nigeria Enugu).

 Akhidime, A.E. & Ugbale-Ekatah. R (2014). The Growing relevance of forensic accounting as tool for combating fraud and corruption: Nigeria experience. Research Journal of Finance and Accounting. USA. (5) 71-77.

Alsos, G.A. and Carter, S. (2006) ‘Multiple business ownership in the Norwegian farm sector: Resource transfer and performance consequences’, Journal of Rural Studies, Vol. 22, No. 3, pp.313–322.

 Alsos, G.A., Carter, S., Ljunggren, E. and Pettersen, L.T. (2003) ‘Farm-based entrepreneurs: what triggers the start-up of new business activities’, Journal of Small Business and Enterprise Development, November, pp.435–443.

Alsos, G.A., Carter, S., Ljunggren, E. and Welter, F. (2011a) ‘Introduction: researching entrepreneurship in agriculture and rural development’, in Alsos, G.A., Carter, S., Ljunggren, E. and Welter, F. (Eds.): The Handbook of Research on Entrepreneurship in Agriculture and Rural Development, pp.1–18, Edward Elgar Publishing Limited, Cheltenham.

Alsos, G.A., Carter, S., Ljunggren, E. and Welter, F. (2011b) The Handbook of Research on Entrepreneurship in Agriculture and Rural Development, Edward Elgar Publishing Limited, Cheltenham.

American Institute of Certified Public Accountants (AICPA) Annual Report (2012).

<https://us.aicpa.org/content/dam/aicpa/about/annualreports/downloadabledocuments/2012-13-aicpa-annual-report-narrative.pdf>

Apostolou, JW Dorminey, JM Hassell, JE Rebele (2014). Journal of Accounting Education 33 (2), 69-127.

Appah, E., & Appiah, Z. K. A. (2010). Fraud and the development of sound financial institutions

in Nigeria. Nigerian Journal of Development and Resources, 1(1).

Association of Certified Fraud Examiners (ACFE, 2010). <https://www.acfe.com/> /media/files/acfe/pdfs/rttn-2010.ashx

Barbara Apostolou, Jack W Dorminey, John M Hassell, Stephanie F Watson (2015). Accounting Education Literature Review. Journal of Accounting Education. Page 107-161.

Barney, J., & Clark, D. N. (2007). Resource-Based Theory. New York: Oxford.

Bennett, M. and Franzel, S. (2013) ‘Can organic and resource-conserving agriculture improve

livelihoods? A synthesis’, International Journal of Agricultural Sustainability, Vol. 11, No. 3, pp.193–215.

Bhasin, M.L. and Shaikh, J.M., (2013), “Voluntary Corporate Governance Disclosures in the Annual Reports: An Empirical Study,” International Journal of Managerial & Financial Accounting, Vol. 5, No. 1, pp. 79-105.

B.O. Ajiboye, O.M. Bamiro, A.G. Adeyonu and S.A. Faseyi, 2019. Technical efficiency of battery cage and deep litter systems in poultry production. Int. J. Poult. Sci., 18: 214-222.

Bolgana, G. J. and Robert, J. L. (2016), Fraud Auditing and forensic Accounting John Willey and Sons, New York, NY.

Bolgna, I.G. and Linguist, R .I.(2016). Fraud, Auditing and Forensic Accounting. New York, Wiley and Sons Inc.

Bologna, G.J. and Lindquist (2007). Fraud Auditing and Forensic Accounting: New Tools and Techniques. John Wiley & Sons, UK

Carter, S. (1996) ‘The indigenous rural enterprise characteristics and change in the British farm sector’, Entrepreneurship and Regional Development, Vol. 8, No. 4, pp.345–358.

Carter, S. (1998a) ‘Portfolio entrepreneurship in the farm sector: indigenous growth in rural

areas?’, Entrepreneurship and Regional Development, Vol. 10, No. 1, pp.17–32.

Carter, S. (1998b) ‘The economic potential of portfolio entrepreneurship: enterprise and employment contributions of multiple business ownership’, Journal of Small Business and Enterprise Development, Vol. 5, No. 4, pp.297–306.

Carter, S. (1999) ‘Multiple business ownership in the farm sector: assessing the enterprise and employment contributions of farmers in Cambridgeshire’, Journal of Rural Studies, Vol. 15, No. 4, pp.417–429.

Carter, S. (2001) ‘Multiple business ownership in the farm sector: differentiating monoactive,

diversified and portfolio enterprises’, International Journal of Entrepreneurial Behavior

and Research, Vol. 7, No. 2, pp.43–59. Carter, S. and Rosa, P. (1998) ‘Indigenous rural firms: farm enterprises in the UK’, International Small Business Journal, Vol. 16, No. 4, pp.15–27.

Cressey, D. R. (1953). 'Other People‟s Money: A Study in the Social Psychology of embezelment,' Glencoe, 1II: Free Press.

Crumbley, D. L. (2016). Forensic Accountants: Older You Think. Journal of Forensic Accounting,2(2), pp 181-202.

Dada, S. O., Owolabi, S. A., &Okwu, A. T. (2013): Forensic accounting: A panacea to

alleviation of fraudulent practices in Nigeria. International Journal of Business Management Economics Research, 4(5), 787-792. [9] Degboro, D. &Olofinsola, J. (2007): Forensic accountants and the litigation support engagement. Nigerian Accountant, 40(2), 49-52.

Damilola, D. and Oloinsola, J. (2007). Forensic Accountants and Litigation Support Engagement. The Nigerian AccountantsVo.l 39, No. 4, pp 49-52.

Degboro, D. &Olofinsola, J. (2007): Forensic accountants and the litigation support engagement. Nigerian Accountant, 40(2), 49-52

Duleba A, Olive D. Regression analysis and multivariate analysis. Sem Reprod Med. 1996 May;14(2):139–5

Ekechukwu, Chijioke & Mbah (2018), Effect of forensic accounting on the performance Nigerian banking sector. Working paper.

Endaya, K. A. & Hanefah, M. M. (2016). Internal auditor characteristics, internal audit

effectiveness, and moderating effect of senior management. Journal of Economic and

Administrative Sciences, 32(2), 160–176.

Enofe, A. O., Okpako, P. O., & Atube, E. N. (2013). The Impact of Forensic Accounting on Fraud Detection. European Journal of Business and Management. Vol. 5(16): 61-72.

Enofe, A.O; Okpako, P. O; and Atube, E.N. (2013).The Impact of Forensic Accounting on Fraud Detection. Journal of Business Management. Vol. 5, No. 26.

Eyisi, A.S. and Agbaeze, E.K. (2019), “The role of auditors in corporate governance”, Nigeria journal of banking and finance UNN, Vol. 7 No. 1, March 19-28.

Fitz-Koch, S., Nordqvist, M., Carter, S. and Hunter, E. (2017) ‘Entrepreneurship in the

agricultural sector: a literature review and future research opportunities’, Entrepreneurship Theory and Practice, Vol. 41, No. 1, pp.1–38.

Freeman, R. E. (2004). Strategic Management: A Stakeholders Approach. Boston: Pitman

Ferguson, R. and Olofsson, C. (2011) ‘The development of new ventures in farm businesses’, in Alsos, G.A., Carter, S., Ljunggren, E. and Welter, F. (Eds.): The Handbook of Research on Entrepreneurship in Agriculture and Rural Development, pp.21–37, Edward Elgar Publishing Limited, Cheltenham.

Gallet, O. (2010). Halte aux Fraudes. Guide pour Auditeurs et Dirigeants, 2e édition, dound,

Paris. Issues in Accounting Education.

Gbadamosi, S.T. (2008) "Fraud, it's Nature and Causes in Nigeria Banking Industry" Nigeria . Africana Publishers

Gayathri, M., & Murugesan, S. (2014). Stock Market Reaction during the Global Gayathri, M.,

& Murugesan, S. (2014). Stock Market Reaction during the Global Financial Crisis in India: Fractal Analysis. Asia Pacific Journal of Management Research and Innovation, 10(4), 403-412. <http://dx.doi.org/10.1177/2319510X14553724>.

Harter, J. K., Schmidt, F. L., & Hayes, T. (2012). Business-Unit-Level Relationship between Employee Satisfaction: A Meta-Analysis. Journal of Applied Psychology, 87(2), 268-2

79. <http://dx.doi.org/10.1037//0021-9010.87.2.268>

Heracleous, L., & DeVoge, S. (1998). Bridging the Gap of Relevance: Strategic Management

and Organisational Development, Long Range Planning, 31(5), 742-754

Financial Crisis in India: Fractal Analysis. Asia Pacific Journal of Management Research and Innovation, 10(4), 403-412. http://dx.doi.org/10.1177/2319510X14553724.

Iyoha, F. O. (2011). Quoted companies attributes and the reliability of financial reporting in

Nigeria. ICAN Journal of Accounting and Finance., 1(3), 12–23. www.iiued.ed.press/journal/sds.

Jafar, J. (2011). Forensic Accounting Practice in Nigeria: A New Paradigm for Stakeholders.

Kantudu, A. S., & Samaila, I. A. (2015). Board Characteristics, Independent Audit Committee and Financial Reporting Quality of Oil Marketing Firms: Evidence from Nigeria. Journal of Finance, Accounting and Management, 6(2), 34–50.

Mansouri E, Feizi F, Rad AJ, Arian M. Remote-sensing data processing with the multivariate

regression analysis method for iron mineral re- source potential mapping: a case study in the

Sarvian area, central Iran. Solid Earth. 2018 Mar;9(2):373–84

.

McElwee, G. (2006a) ‘Farmer’s as entrepreneurs: developing competitive skills’, Journal of Developmental Entrepreneurship, Vol. 11, No. 3, pp.187–206. McElwee, G. (2006b)

‘The enterprising farmer: a review of entrepreneurship in agriculture’, Royal Agricultural

Society of England Journal, No. 167, pp.66–75.

McElwee, G. (2006c) ‘The entrepreneurial farmer: A Pandora’s box’, Rural Enterprise and

Management, Vol. 2, No. 2, pp.23–42.

McElwee, G. (2008) ‘A taxonomy of entrepreneurial farmers’, International Journal of Entrepreneurship and Small Business, Vol. 6, No. 3, pp.465–478.

McElwee, G. and Annibal, I. (2009) ‘Business support for farmers: a necessary evil?’, International Journal of Rural Management, Vol. 5, No. 2, pp.175–195.

McElwee, G. and Bosworth, G. (2010) ‘Exploring the strategic skills of farmers across a typology of farm diversification approaches’, Journal of Farm Management, Vol. 13, No. 12, pp.819–838.

McElwee, G. and Robson, A. (2005) ‘Diversifying the farm: opportunities and barriers’, Journal of Rural Research and Policy, Vol. 4, pp.84–96.

McElwee, G. and Smith, R. (2012) ‘Classifying the strategic capability of farmers: a segmentation framework’, International Journal of Entrepreneurial Venturing, Vol. 4, pp.111–131.

 McElwee, G. and Warren, L. (2001) ‘The farmer as entrepreneur: barriers to diversification’, in 26th Annual Symposium on the Marketing Entrepreneurship Academy of Marketing Symposium, University of Kingston, UK.

McElwee, G., Anderson, A. and Vesala, K. (2006a) ‘The strategic farmer: a cheese producer with cold feet?’, Journal of Business Strategy, Vol. 27, pp.65–72.

McElwee, G., Pyysiäinen, J., Anderson, A. and Vesala, K. (2006b) ‘Developing the entrepreneurial skills of farmers; some myths explored’, International Journal of Entrepreneurial Behaviour and Research, Vol. 12, No. 1, pp.21–39.

Mehran, H. (2015). Executive Compensation Structure, Ownership, and Firm Performance.

Journal of Financial Economics, 38, 163–184

Mihert, D.G & Yismaw, A. W. (2007). Internal audit effectiveness: An Ethiopian public sector case study. Managerial Auditing Journal, 22(5), 470–484.

Mgbame, C.O. and Chijoke‐Mgbame, A.M. (2011) Dividend policy and share price volatility: UK

evidence. The Journal of Risk Finance, 12 (1), pp. 57-68.

Mitroff Lan (1983), Stakeholders of the Organizational mind.

Modugu, K. P. & Anyaduba, J. O. (2013). Forensic Accounting and Financial Fraud in Nigeria: An Empirical Approach. International Journal of Business and Social Science Vol. 4(7): 281-289.

Moduga, K. P. and Anyaduba, J. O. (2013). Forensic Accounting and Financial Fraud: An

Empirical Approach. International Journal of Business and Social Science. Vol. 4, No.7; July 2013.

Mohammed, M. (2008). Forensic Accounting; An investigative Approach Retrieved from http//sstn.com.

Lan Mitroff (1983) Stakeholders of the Organizational mind. IOSR Journal of Business and Management. Vol. 1(4) 23-29.

Ngo, C., Nguyen, Q. L. H. T. T., & Nguyen, P. T. (2018). Social Capital and Corporate Performance: Evidence from State Capital Enterprises in Vietnam. Journal of Asian Finance, Economics and Business, 7(6), 409–416. https://doi.org/ 10.13106/jafeb.2020.vol7.no6.409.

Nguyen, T. D. C. (2018). The impact of capital structure on financial performance: The case of Vietnamese service firms. Journal of Science and Technology of Vietnam, 11, 1–5. [Vietnamese].

Nwaze, D. (2012). Due process and accountability: Advance fee fraud (1) Zenith Economic Quarterly. Vol. 8(2): 24-28

Le, T. B. T. (2005). Analysis of firm performance in manufacturing enterprises of Vietnam Coal

Corporation. Master Thesis, National Economics University. [Vietnamese]

Lingaraja, K., Selvam, M., & Vasanth, V (2015). Long Run Dynamic Linkages between Emerging Stock Markets in Asia and a Developed Stock Market (DJIA). Research Journal of Applied Sciences, 10(5), 203-2011. <http://dx.doi.org/10.3923/rjasci.2015.203.211>

Ogbeide, S.O., &Akenbor, C (2017): Influence of forensic accounting on fraud and fraudulent practices in the Nigerian public sector. Journal of Accounting and Management, 4(2), 103- 121.

Ogidefa, I. (2008) "Fraud in Banking System in Nigeria" Lagos. Journal of the Chattered institutes of Bankers of Nigeria. (CIBN). Vol no 3.

Okoye, maimako, jugu & Jat (2017), Principles of fraud investigation and forensic accounting

Ogutu, G. & Ngahu, S. (2016). Application of Forensic Auditing Skills in Fraud Mitigation: A Survey of Accounting Firms in the County Government of Nakuru, Kenya. IOSR Journal

of Business and Management. Vol. 18(4): 73-79

Okoye, E.I., & Gbegi, D.O. (2013). An evaluation of forensic accountants to planning management fraud risk detection procedures. Global Journal of Management and Business Research, 13(1), 1-17.

Okunbor, J.A., &Obaretin, O. (2010): Effectiveness of the application of forensic accounting

services in Nigerian organisations. Journal of Management Sciences, 1(1), 171-184.

Popoola, O. M. J., Che-Ahmad, A., Samsudin, R. S., Rushami, Z. Y. (2013), Impact of task performance fraud risk assessment on forensic skills and mindsets: Experience from Nigeria. International Journal of Business and Social Sciences. Vol. 5(9): 216-224.

Olukowade, E. and Balogun, E. (2015). Relevance of Forensic Detection and Prevention of Fraud

in Nigeria. Historical Research Letter. ISSN 2224-3178(paper) ISSN 2225-0964(online). Vol. 23. No.2, 2015. www.iiste. Org.

Onaolapo, A. A., & Kajola, S. O. (2010). Capital structure and firm performance: Evidence from Nigeria. European Journal of Economics, Finance and Administrative Sciences, 25, 70–82

Onuorah, C. A. & Ebimobowei, A. (2012). Fraudulent Activities and Forensic Accounting

Services of Banks in Port Harcourt Nigeria. Asian Journal of Business Management 4(2): 124-129.

Ozkul, F. U., & Pamukc¸ A. (2012). Fraud detection and Forensic Accounting, Istanbul, Turkey.

Pouraghajan, A., & Malekian, E. (2012). The Relationship between Capital Structure and Firm

Performance Evaluation Measures: Evidence from the Tehran Stock Exchange. International Journal of Business and Commerce, 1(9), 166–181.

ROSC. (2011). Report on the observance of standard and codes (Nigeria), accounting and

auditing Published June 6, 2011, by a team of the World Bank.

Rønning, L. and Kolvereid, L. (2006) ‘Income diversification in Norwegian farm households: reassessing pluriactivity’, International Small Business Journal, Vol. 24, No. 4, pp.405 420.

Saeedi, A., & Mahmoodi, I. (2011). Capital structure and firm performance: Evidence from Iranian Companies. International Research Journal of Finance and Economics, 70(11), 20–29.

Santos, J.B., & Brito, L.A.L. (2012). Toward a Subjective Measurement Model for Firm Performance. Brazillian Administration Review, 9(6), 95-117.

Selvam, M. (1989 & 1990). Social Objectives of Public Transport Undertakings. Journal of Annamali University. Part-A Humanity, 35 & 36, 199-225.

Selvam, M. (2016). Service Efficiency of Pallavan Transport Corporation Limited in Madras (Chennai) City. Lambert Academic Publishing, ISBN: 978-3-659-89572-2.

Singleton, T. W. & Singleton, A. J. (2010). Fraud Auditing and Forensic Accounting, 4th Edition, John Wiley & Sons, New Jersey.

Truong, B. T., & Tran, D. K. N. (2009). Financial analysis Text book, University of Danang Vietnamese.

Truong, D. D., Nguyen, H., & Duong, T. Q. L. (2020). Factors Influencing Balanced Scorecard Application in Evaluating the Performance of Tourist Firms. Journal of Asian Finance, Economics and Business,7(5), 217–224.<https://doiorg/10.13106/jafeb.2020.vol7.no5.217>.

Tušek, B. (2015). The influence of the audit committee on the internal audit operations in the system of corporate governance – evidence from Croatia. Economic Research Ekonomska Istraživanja, 28(1), 187–203.

Vasanth, V., Selvam, M., & Lingaraja, K. (2015a). Impact of Firms‟ Profitability on Environmental Performance: Evidence from Companies in India. Mediterranean Journal of Social Sciences, 6(1), 109-119. <http://dx.doi.org/10.5901/mjss.2015.v6n1p109>.

Vesala, H.T. and Vesala, K.M. (2010) ‘Entrepreneurs and producers: identities of Finnish farmers in, 2001 and, 2006’, Journal of Rural Studies, Vol. 26, No. 1, pp.21–30.

Vesala, K., Peura, J. and McElwee, G. (2007) ‘The split entrepreneurial identity of the farmer’,

Journal of Small Business and Enterprise Development, Vol. 14, No. 1, pp.48–63.

Wallace, A. (2019). The Role of Forensic Accounting. Retrieved from http!//www.google.com

Zeitun, R., & Tian, G. G. (2007): Capital structure and corporate performance: evidence from

Jordan. Australasian Accounting Business and Finance Journal, 1(4), 40–61.

Zysman, A., (2004): Forensic accounting demystified. World investigators network standard practice for investigative and forensic accounting engagement? Canadian Institute of Chartered Accountants

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