



FORENSIC ACCOUNTING AND FINANCIAL PERFORMANCE OF TERTIARY INSTITUTIONS IN PORT HARCOURT, RIVERS STATE

Akinyemi, Babajide Oloyode
University of Port Harcourt Business School
Babzto4real@Yahoo.Com

Eke, Haniel Okorafor (Ph.D)
Department of Port Marketing University of Port Harcourt
haniel.eke@uniport.edu.ng

ABSTRACT

The issue of fraud has become an omen that is wide spreading in almost all the institutions of the nation; curtailing this ugly menace has proven abortive, it rather keeps growing even among the younger generation of today. Primarily, the paper aims to investigate the nexus between forensic accounting and its tools on financial performance of tertiary institutions in Port Harcourt, Rivers State; its objectives specifically look to: examine the association between forensic auditing and financial performance of tertiary institutions in Port Harcourt, Rivers State and to determine the affiliation between data mining and financial performance of tertiary institutions in Port Harcourt, Rivers State. Fraud preventive theory was used as the underpinning for the paper. The population of the study comprised of the three main universities Port Harcourt aspect of Rivers State in Nigeria; thus, they University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education and sample determined using a judgmental sampling of the non-probability sampling method. Product moment correlation coefficient was used for the analysis, and it was done under the help of Statistical Package for Social Sciences (SPSS) version 23. The findings revealed that forensic auditing has a solid substantial connection and affirmatively correlates with financial performance at a $r = 0.904$ and a $P_v = 0.000$, and that data mining has a weak insubstantial connection and adversely correlates with financial performance at a $r = -0.212$ and a $P_v = 0.964$. The authors recommended that management of tertiary institutions should emphasize and enhance use of forensic measures as this will enable them improve on net profit margin. They also recommended that the management should ensure that the institution adapts to new technological changes taking place in the world to ensure that they have a well-structured system to accommodate these changes.

KEY WORDS

Data Mining, Forensic
Auditing, Forensic
Accounting, Financial
Performance

Introduction

In Nigeria, the issue of fraud has become an omen that is wide spreading in almost all the institutions of the nation; curtailing this ugly menace has proven abortive, it rather keeps growing even among the younger generation of today. On this ground, several calls have been made by all and sundry in both public and private sectors on the use forensic method of accounting as a way of checkmating some of the excesses to ensure that funds are used for their original purposes without any form of leakage. Excellent corporate governance permitted by quality fiscal oversight or management is a sine qua non for the seamless functioning of an organisation that has been bastardised by lack of adequate internal control, poor financial disclosure, and ineffective auditing, which is why it has been said that in all financial quarters, the primary root causes of all troubles are bungling and ineffective corporate governance (Clement & Comfort, 2018). According to Bhasin (2016), the origin and expansion of forensic accounting can be traced back to the prevalence of financial frauds; the role of the forensic accountant, who is tasked with preventing and resolving such crimes, entails auditing, accounting, and investigation. Implementing laws, regulations, and codes of conduct in accounting is crucial for ensuring massive corporate governance through enhanced board performance in the financial organisations of any nation (Okeke, Ezeilo, Nwobodo, & Ofor, 2022; Zia, 2016). According to Bhasin (2013), forensic accountants add substantial value to corporate governance by creating an atmosphere that promotes the detection and elimination of fraud, the thorough investigation of suspicious activities, and open lines of communication.

According to Grubo, Risti, and Simeunovi (2013), forensic accountants are those accountants who acquire accounting, auditing, and forensic skills or expertise that aids in dealing with fraudulent issues; this means that the forensic accountant (or accountants) may be asked to provide additional expert support, advice, and substantiations on an ongoing court hearing and may be referred to as a litigation accountant (Clement & Comfort, 2018). That's why forensic accountants are so crucial to improving business practises all around. Forensic accounting, a hybrid of forensic science and accounting, is sometimes known as investigative accounting or a fraud audit, according to Okoye and Gbegi (2013). What this phrase means in the context of forensic science is the application of natural law to human law. Forensic scientists are often called upon to provide expert testimony in court as examiners and interpreters of evidence and facts. Since accounting science is being referred to, we may assume that monetary data and issues will be the primary focus of the investigation and interpretation.

Conceptualization between forensic advertising and financial performance has gained increasing attention from scholars; for example, (Ogutu & Ngahu, 2016; Adesina et al., 2020; Okorie et al., 2020); however, none did this conceptualization putting the universities in Port Harcourt, Rivers State as their area of study. Thus, this is identified gap in the study.

Statement of the Problem

Phony practices in a business bank or other public settings is said to have adverse effect the reasonability, execution, maintainability and notoriety of advertisements as well as poor performance of the tertiary institutions mostly with regards to accounting presentation and management of the public funds. Swindle in almost every public sector like the universities have exhibited a lasting challenge to the administration and controllers alike; managing an account misrepresentation has continued to pose as a worrying issue to different parties with interests in the system. It is believed that fraudulent practices have debilitated against free-flowing and adequate running of the institutions in the Nigerian

economy, thereby leading to shortages of funds and smooth management of the institutions. Just as with banks, fraud is a problem to various stakeholders; firstly, it shrinks the profitability of a university/government at different levels and this may result to reduced public value emanating out of low dividends to shareholders. Worst of it, it may threaten the going concern of the government and this has the ability to impact adversely on shareholder wealth. Going further, the major problem with forensic accounting is that no study has been able to proffer lasting solution to fraud detection and control. On this backdrop, the problem here is to ascertain the growing relevance of forensic accounting and its tools on financial performance tertiary institutions in Port Harcourt, Rivers State

Theoretical Frameworks

Fraud Preventative Theory

Forensic lawsuit support, as defined by Akintoye (2008), is a service provided by public institutions such as universities to parties involved in, or anticipating, litigation, or to those seeking a more accurate representation of, economic issues associated to, such proceedings. Legal disputes are the primary emphasis, and it can help decide disputes and help solve or settle them, even before they reach courtrooms, by addressing difficulties related to the qualification of economic damages experienced by parties involved in legal disputes.

Ajzen and Fishbein (1980) argue that intentions are the most important factor in determining the success or failure of any planned behaviour, and that a thorough understanding of the causes of intentions yields practical insights into the behaviour. As a result, the theory of fraud prevention was developed to lessen the likelihood that anyone would intentionally commit fraud. It is the duty of the school administration to its stakeholders, as stated by Goosen, Pampallis, Van der Merwe, and Mdluli (1999), to maintain and present accurate records of all transactions done against that were performed at the institution.

Primarily, the paper aims to investigate the nexus between forensic accounting and its tools on financial performance of tertiary institutions in Port Harcourt, Rivers State; its objectives specifically look to:

- i. Investigate the connection between forensic auditing and the financial success of universities in Port Harcourt, Rivers State.
- ii. Analyse the connection between data mining and the economic success of universities in Port Harcourt, Rivers State

Research Hypotheses

H₀₁: In Port Harcourt, Rivers State, there is no statistically substantial correlation between forensic audit and financial outcomes for universities.

H₀₁: In Port Harcourt, Rivers State, there is no statistically substantial correlation between data mining and the economic success of universities

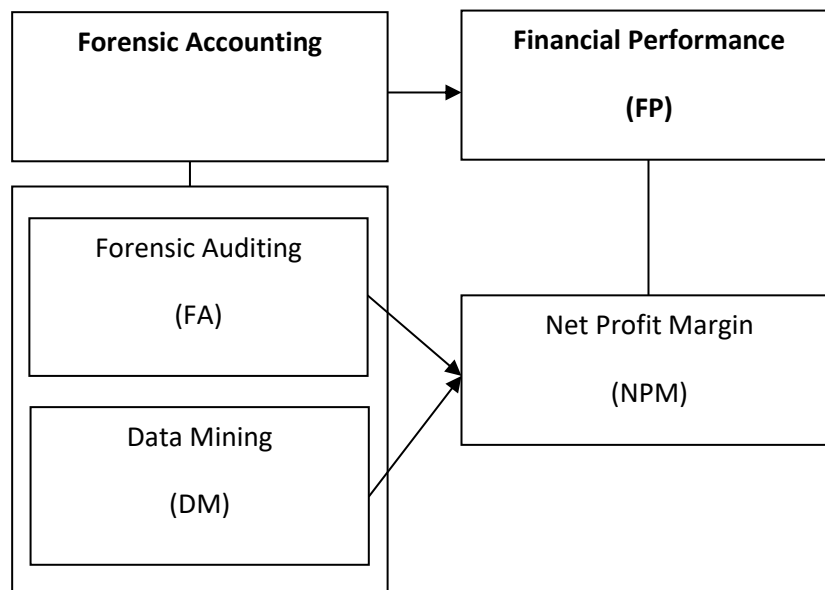


Fig. 1: Conceptualizing the connection between forensic accounting and financial performance

Source: Adesina et al. (2020); Olaoye and Olanipekun (2018)

Literature Review

Forensic Accounting

The word "forensic" originates from the Latin word "forum," which means "of, relating to, or associated with" the law or the judicial system. Forensic science can be broadly defined as "the application of scientific knowledge to legal problems" (Okeke et al., 2022). The field of forensic science is commonly linked to police work. Forensic accounting, defined as "the use of scientific methods to resolve issues raised in criminal or civil litigation," was introduced to the field of accounting to provide a more trustworthy and evidentiary means of bolstering probes into finances and decreasing or avoiding all forms of monetary misconduct (Modugu&Anyaduba, 2013). Forensic accounting, according to the literature (Krsti, 2009), aims to detect and investigate instances of financial reporting fraud. According to many sources (Zia, 2016; Okeke et al., 2022; Arokiasamy& Cristal, 2009; Dhar& Sarkar, 2010), the area of forensic accounting is distinguished by its unique blend of scientific and quantitative auditing and accountancy skills with analytical and legal procedures, judicial procedures, and computational forensics. Financial, accounting, tax, and auditing expertise are put to use in forensic accounting, which is defined as "the use of such expertise in evaluating, investigating, testing, and analysing matters in civil law, law enforcement, and adjudication" (Zia, 2016). Given their comprehensive understanding of the structure of internal controls and the law (including the relevant statutory and customary legislation, the law of verification, and the law of procedure), forensic accountants play a pivotal role in any organisation, as this idea highlights.

According to Joshi (2003), forensic accounting can be defined as the use of "specialised knowledge and specified skill" to unearth the evidence of economic transactions. Forensic accounting, as defined by Howard and Sheetz (2006), is the practise of providing clear, concise, and factual interpretations and presentations of complex financial matters, often in a legal setting in the role of an expert witness. Its periphery is formed by the use of accounting procedures for the aim of elucidating factual concerns in commercial litigation (Okunbor & Obaretin, 2010). The purpose of a forensic inquiry, according to

Degboro and Olofinsola (2007), is to find evidence to back up a legal case. Forensic accountants employ accounting methods to probe suspected criminal activity and unearth the full scope of the wrongdoing, as well as the perpetrators. According to Okeke et al. (2022), the use of forensic accounting tools is substantial because it helps reduce the number of forged documents in Nigerian banks. This is so because the tools provided by forensic accounting may be used by Nigerian banks to better monitor for and prevent instances of fraud.

When it comes to litigation assistance consulting, expert testimony, and fraud examination, Forensic accounting thrives on the practise of a rigorous method of data gathering and analysis (Odunayo, 2014). According to Wuerges (2011), economic crime and fraud, as well as the need for commercial branch investigators and prosecutors, ensure the continued existence of forensic accountants. According to the author's research (Popoola, Che-Ahmad, Samsudin, &Yussof, 2013), forensic accountants who have the right background can help government agencies and departments with their enforcement, recovery, audit committee, regulation, and financial statement audit teams.

Forensic Auditing

According to Emma et al. (2019), forensic auditors look into all aspects of a financial situation and may even testify as an expert witness in court if fraud is suspected. Forensic auditing is a subset of forensic accounting that deals specifically with disputes and litigation that can be anticipated or based on objective facts (Okeja, 2014).Forensic auditing, as defined by the IFA (Okafor et al., 2022) is "any practise involving the collection, verification, analysis, and reporting of data with the primary aim of collecting evidence to use in a law court."When we talk about forensic auditing, we usually mean an investigation into allegations of malfeasance involving public funds or property. Procedures are designed in such a way that they can be used in administrative, civil, or criminal actions (Cletus &Ironkwe, 2014) regardless of who committed the wrongdoing or when it occurred. According to Grippo and Ibex (2003), forensic audits are more thorough than standard audits, and they typically involve a series of processes designed to determine whether an accusation can be validated and the nature of any additional work that has to be done.

Data Mining

The term "data mining" is used to describe any procedure in which an investigator looks for unusual or unexpected patterns or trends in a dataset. Data mining, also known as a database, is primarily concerned with the software and data files used within an organisation. It is also known as metadata because of its role in exposing information about those files to the public, such as the file's name and the timestamps of its creation and last modification (Ahmed, 2017).

Data mining is the process of searching massive amounts of information, such as that collected by a store's scanners, for correlated products. Both procedures demand extensive sorting of data or in-depth analysis to pinpoint the valuable information. When applied to datasets of a suitable size and quality, data mining technologies can open up novel avenues for economic growth. Predictive information can be found in huge databases by using data mining, which automates the process. By analysing data from previous marketing mailings, data mining can determine which recipients will provide the highest return on investment (CMR Educational Society, 2020–2021).

According Kantardzic (2011), data mining is an effective unearthing of knowledge from outsized amount of data depending on the bases and models, and there is a number of mining databases methods; they include machine learning, neural networks and genetic algorithms

Financial Performance

The term "financial performance" refers to the state of the company's finances throughout time, which includes the acquisition and disbursement of money, as measured by metrics like the percentage of capital that is sufficient, liquidity, leverage, solvency, and profit. It represents the company's ability to manage and control its resources, which means that financial performance deals mainly on attracting extra profits to the firm and having the capacity to see to the effective utilization of the generated funds, all the benefit of the firm and its stakeholders (IAI, 2016). Also, financial performance is expressed in terms of management's ability to maximizing the owners' or wealth of shareholders (Borba, 2005). Assaf (2010) stated that firms pay attention mainly on creating value so as to make best use of their owners' wealth. When financial performance is mentioned, it simply refers to the accomplishment of the company's financial performance for a specific time period, which covers the gathering and allocation of finance measured by capital adequacy, liquidity, solvency, efficiency, leverage and profitability. Organizations that have ability to manage and control its own resources are said to be achieving its financial objectives (Didin, Jusni & Mochamad, 2018).

Forensic Accounting and Financial Performance

In light of the prevalence of fraud around the world, forensic accounting or inquiry has been widely alleged or agreed as a tool that its practitioners can adopt gives ample specific details concerning financial crime (Eliezer & Emmanuel, 2015; Efosa & Kingsley, 2016).

According to Bhasin's (2016) claim, the increasing prevalence of financial frauds and auditing compelled the development of forensic accounting, with the primary responsibilities of forensic accountants being the prevention and detection of accounting and investigation-related frauds. It is agreed upon by Okoye and Gbegi (2013) that forensic accounting, often known as investigative accounting or fraud audit, is the merging of forensic science and accounting. A study by Ekechukwu et al. (2018) found that "the management of an account with erroneous has remained a major concern to diverse partners" because it "reduces the benefits of firms or structures like those of higher learning and might lead to a decreased firm esteem emerging out of low profits to investors" (p. According to Hopwood, Leiner, and Young (2008), "forensic accounting" (also known as "scientific accounting") is the application of accounting principles to the investigation and diagnosis of financial problems in a way that satisfies the standards required by official courts. There are a number of methods that may be used to identify accounting fraud, but due to its increasing popularity, forensic accounting is now considered to be one of the best and most thorough approaches (Ahmed, 2017). In light of this, Okoroyibo and Omoregie (2019) evaluated how forensic accounting improved the efficiency of the Nigerian banking industry. The data analysis showed that forensic audit has a substantial impact on the bottom line for some Nigerian banks. After conducting some tests, it was discovered that forensic audit has a substantial impact on the net profit of Nigerian banks. Similarly, it was shown that forensic audit has a substantial impact on the retained revenue and dividend per share of Nigerian banks. Similarly, Odelabu's (2014) research showed that forensic investigation and forensic litigation played a substantial role in explaining why commercial banks' financial performance fluctuated over time. Since a proactive

forensic accounting practise looks out errors, it has been speculated that most businesses nowadays use forensic accounting services as a means of reversing all financial leakages that create corporate failures in the public sector (Odunayo, 2014). A similar study, conducted by Okafor et al. (2022), found that data mining and computer aided audit techniques had a substantial impact on financial statement fraud at Nigerian deposit money banks.

Empirical Review

Deposit money banks (DMBs) in Nigeria have been plagued by or threatened by financial crimes that have been studied by Adesina, Erin, Ajetunmobi, Ilogho, and Asiriwa (2020) to determine the efficacy of forensic audit in preventing further damage and maintaining DMBs' viability. Twenty-two (22) of the country's deposit money banks (DMBs) were operational at the time of this study, so they used a survey design for their research. The primary data for this paper came from seventeen (17) of these banks, or 77.3%. The findings of the same study, which also employed the Ordinary Least Squares (OLS) method to analyse and test hypotheses, make clear that the involvement of qualified and experienced forensic auditors would not only contribute to the make public and decrease financial frauds in DMBs, but would also lead to much-needed sanity in the banking sector of Nigeria. The author argued that regulatory agencies have a responsibility to mandate, within the bounds of the law, that all DMBs in Nigeria create a specialised forensic department headed by a professional forensic personnel to oversee the establishment and frequent execution of successful and productive internal control, the timely prosecution of fraudsters as criminals to serve as a deterrent to others, and the work out of sufficient education and training opportunities.

Investigations into labour fraud in the Nigerian state of Anambra were the focus of research by Okoye, Nwoye, Akuchi, and Onyema (2020). In their paper, they employed both systematic random sampling and a cross-sectional survey methodology. With a sample size of 250, the authors of this report conducted an in-depth analysis of the investigative, prosecutorial, financial, accounting, and auditing personnel of state anti-corruption agencies. The questionnaire was the primary data collection tool, and descriptive statistics and the Kruskal-Wallis test were used to analyse the information obtained. Their research showed that there is a solid correlation between forensic accounting procedures and public sector fraud detection, but that there is no commonly accepted forensic investigative methodologies for this purpose. They came to the same conclusion, namely that data mining techniques should be completely implemented in Nigeria's public sector fraud detection.

The influence of forensic audit on preventing and detecting fraud in the Nigerian banking system was studied by Uniamigbo, Adeusi, and Amu (2019). The authors of this research tallied up the number of Deposit Money Banks (DMBs) trading on the Nigerian Stock Exchange (NSE) as of December 31, 2016. For their work, they used a secondary data gathering technique by looking at the annual reports of the Nigerian Deposit Insurance Corporations (NDICs) in 2013 and 2016. Their research spans the five (5) years between 2012 and 2016 that they focused on. Regression, pie charts, and tables were used to make sense of the secondary data mining that ensued. According to their findings, forensic auditing has a substantial deterrent effect on the incidence of fraud, the number of employees engaged in bank fraud, and the total amount of money stolen from banks in Nigeria. However, the potential losses created by fraud operations in Nigerian banks are not substantially affected by forensic audits. In order to combat systemic fraud and forgeries, the paper's authors advocated for a more robust implementation of forensic audits by Nigerian banks. Equally important, they argued that forensic audits in the Nigerian

banking sector should place special emphasis on uncovering the scope of fraud and the extent to which employees are complicit in it. At the end of their list of recommendations, they stressed the need of prioritising the well-being and compensation of employees, who they argued were the key to preventing fraud in any organisation, including Nigeria's DMBs.

Using case studies of accounting businesses in Nakuru County, Kenya, Ogutu and Ngahu (2016) investigated how forensic accounting techniques could be used to reduce instances of fraud. The authors of the report remarked that forensic accounting has undergone rapid expansion in recent years, making it a crucial tool in the worldwide pursuit of detecting, preventing, and mitigating economic crime. Fraud triangle and diamond theories provided the basis for their work. Descriptive survey research was also employed, with the sample size cut down to only 25 accounting businesses. For this investigation, the authors used a questionnaire to compile their information. Bar graphs, pie charts, and frequency distribution tables were used to examine the aforementioned data. The results showed that forensic accounting could be useful in a number of contexts, such as fraud investigation and detection; bankruptcy; insolvency and reorganisation; false or misleading financial statements; economic damage calculations; and family law conflicts. It also discussed the qualities necessary for success in the field of forensic accounting, such as analytic and auditing expertise, the ability to investigate and detect fraud, a solid sense of ethics, self-assurance, curiosity, and a healthy dose of scepticism. Researchers were only able to identify potential areas of forensic accountant involvement, and their focus was confined to practice accounting firms.

Methodology

This is an exploratory paper, which empirically examined the connection between forensic accounting and financial performance of tertiary institutions in Port Harcourt, Rivers State. The paper adopted quasi-experimental research approach, and through a cross-sectional survey.

As it implies, there are three main universities Port Harcourt aspect of Rivers State in Nigeria; thus, they University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education Being an accounting and monetary based study, the paper adopted a non-probability sampling approach, and through which a judgmental sampling approach was used to determine the total number of samples; it adopted judgmental because only knowledgeable personnel of the bursary departments of the above institution were qualified to form our respondents. Thus, only fifteen elements from each of the three universities were surveyed using our well structured self-administered copies of the questionnaire, which amounted to forty five (45) respondents for the study. The study aimed to investigate the connection between forensic accounting and financial performance of tertiary institutions in Port Harcourt, Rivers State; therefore, product moment correlation coefficient was used for the analysis.

Results and Discussion

Table 1: Measurement Model: Reliability and Validity for OR, BC, T and A

Construct	Item	Loading	CR	AVE	α
Forensic Auditing	FA1	0.845	0.95	0.80	0.832
	FA2	0.921			
	FA3	0.894			
	FA4	0.911			
	FA5	0.888			

Data Mining	DM1	0.899			
	DM2	0.847	0.94	0.77	0.793
	DM3	0.798			
	DM4	0.901			
	DM5	0.931			
Financial Performance	FP1	0.894			
	FP2	0.911	0.96	0.82	0.817
	FP3	0.944			
	FP4	0.891			
	FP5	0.893			

Source: SMARTPLS Result Output

The factor loadings of the observed variables (statement items) against their underlying (latent) factors ranged from 0.798 to 0.944, as shown in Table 1 of the paper. Since all of these statistics are greater than the recommended cutoff of 0.6, we can safely assume that they accurately measured the relevant latent variables. The CR, AVE, and Cronbach Alpha () values were all also more than the recommended cutoff of 0.5 in every single case. Our data have convergent validity because of all these factors. In accordance with standard practise, we examine the Cronbach Alpha () and Pearson product correlation coefficients between the components to determine the validity of the instrument's ability to discriminate across groups. Forensic auditing, data mining, and financial performance are all measurable via specific statement items in our research instrument, as demonstrated by our examination of these factors.

Table 2:Forensic Auditing and Financial Performance

		Forensic Auditing	Financial Performance
Forensic Auditing	Pearson		
	Correlation	1	.904**
	Sig. (2-tailed)		.000
	N	45	45
Financial Performance	Pearson		
	Correlation	.904**	1
	Sig. (2-tailed)	.000	
	N	45	45

Source: SPSS output, 2023

The first hypothesis was supported by evidence, with a P value of 0.05, suggesting a connection between forensic auditing and financial results. At $r = 0.904$ and $Pv = 0.000$, the correlation coefficient between forensic auditing and monetary success is extremely high and statistically substantial. Increasing forensic auditing was found to have aaffirmative effect on financial performance ($r=0.904$). The findings show that forensic auditing has aaffirmative and substantial effect on financial performance, and thus contributes substantially to the ability of tertiary institutions to preserve and sustain their market position, the level of administrative and academics' operation, and the degree to which they are

dedicated to and have a solid presence of success. Since P_v (0.000) was lower than 0.05, the investigation could not accept the first null hypothesis

Table 3: Data Mining and Financial Performance

		Data Mining	Financial Performance
Data Mining	Pearson	1	-.212**
	Correlation		
	Sig. (2-tailed)		
	N		
Financial Performance	Pearson	-.212**	1
	Correlation		
	Sig. (2-tailed)		
	N		

Source: SPSS output, 2023

Null hypothesis two (H_02) was supported by insubstantial evidence ($P_v > 0.964$) on the correlation between data mining and economic results. At $r = -0.212$ and $P_v = 0.964$, the correlation between data mining and financial success is weak and inconsequential. This finding indicated that a -0.212 change in data mining output resulted in a corresponding -0.212 change in financial output. According to the findings, data mining has a negligible effect on financial performance, which contributes little to tertiary institutions' struggles to remain competitive, their low levels of operation and commitment, and their lacklustre success presence. Thus, the second null hypothesis was accepted due to the P_v (0.964) > 0.05 significance level.

Discussion of Findings

Affirmative substantial connection between forensic auditing and financial performance

First, H_01 attempted to determine whether or not there was a correlation between forensic auditing and the fiscal health of colleges and universities in Port Harcourt, Rivers State. The correlation study showed an affirmative and highly substantial connection ($R=0.904$) between the variables. That there was a substantial correlation between forensic auditing and the financial performance of tertiary institutions in Port Harcourt, Rivers State, was tested, and the probability value (0.000) was lower than the level of significance (95%) of 0.05.

The results back up the claims of earlier researchers that have studied the impact of forensic accounting on the Nigerian banking sector, such as Okoroyibo and Omoregie (2019). Their data analysis revealed that forensic audit had a substantial impact on the return on equity for several Nigerian banks. It was also determined through experimentation that forensic audit has an impact on the net profit that banks in Nigeria report. Like retained earnings, dividends per share at Nigerian banks were shown to increase after a forensic audit. Odelabu's (2014) research showed that forensic inquiry and forensic lawsuits were similarly crucial to understanding the causes and effects of fluctuations in commercial banks' financial performance. Since a proactive forensic accounting practise looks for mistakes, it is thought that most companies today use this service to help prevent business failures in the public sector (Odunayo, 2014).

Adverse insubstantial connection between data mining and financial performance

Hypothesis two (H_{02}) aimed at examine the substantial connection between datamining and financial performance of tertiary institutions in Port Harcourt, Rivers State. This analysis revealed an adverse and weak in substantial connection between the variable ($R = -0.212$). The probability value (0.964) was higher than the level of significance of 0.05 (95%), therefore, H_{02} was accepted, that there was no substantial connection between data mining and financial performance of tertiary institutions in Port Harcourt, Rivers State.

This research contradicts the findings of Okafor et al. (2022), who found that data mining has a substantial impact on the fraudulent use of financial statements at Nigerian deposit money banks and that computer-assisted audit techniques have a similarly large impact on financial statement fraud at Nigerian deposit money banks.

Conclusion

The findings on the dimensions of forensic accounting (forensic auditing and data mining) contribute substantially and insubstantially affirmative and adverse towards achieving financial performance of tertiary institutions in Port Harcourt.

- a. The study concludes that a “solid and affirmative substantial impact” exists between forensic auditing and financial performance of tertiary institutions in Port Harcourt.
- b. The study concludes that a “weak and adverse in substantial impact” exists between data mining and financial performance of tertiary institutions in Port Harcourt.

Recommendations

We propose the following changes based on the study's findings:

- a. A higher net profit margin can be achieved if management at educational institutions prioritises and expands its use of forensic methods.
- b. It is also suggested that the administration make an effort to keep up with the latest technical developments so that the institution may easily incorporate any necessary modifications into its established procedures.
- c. When fraud is discovered, proper sanctions need to be implemented.
- d. To reduce fraud, which has a beneficial impact on organisational performance, the study suggests that tertiary institution management place a greater emphasis on and investment in forensic audits and data mining.
- e. Furthermore, it is recommended that the institution should put in place various types of fraud detection and prevention techniques provide training programmes for employees and educate them on how to detect and prevent frauds.
- f. Also, attractive bonus schemes and incentives should be considered for academic and non-academic staff to reduce if not eliminates employee's opportunity to commit fraud.

References

1. Adesina, K., Erin, O., Ajetunmobi, O., Ilogho, S., & Asiriwa, O. (2020). Does forensic audit fraud control; Evidence from Nigeria deposit money banks. *Bank and Bank System*, 15(2), 214-229.
2. Ahmed, A. I. (2017). The Study of the Effects of Forensic Accounting and Fraud Detection/Prevention for Financial Management Performance in Public Sector in Nigeria: A way forward. *World Wide Journal of Multidisciplinary Research and Development*, 3(12), 107-202.
3. Akintoye, I. R. (2008). The basics of environmental and forensic accounting, Unique Educational Publishers.
4. Arokiasamy, L., & Cristal-Lee, S. (2009). Forensic accounting: public acceptance towards occurrence of fraud detection. *International Journal of Business and Management*, 42(1), 145-160.
5. Assaf Neto, A. (2010). *Finanças corporativas e Valor*. 5 ed. São Paulo: Atlas.
6. Bhasin, M. L. (2013). Integrating corporate governance and forensic accounting: A study of an Asian Country. *International Journal of Management Sciences and Business Research*, 6(1), 31-52.
7. Bhasin, M. L. (2016). Corporate governance and forensic accountants' role: global regulatory action scenario. *International Journal of Accounting Research*, 1(1), 54-86.
8. Borba, P. & Da, R. F. (2005). *Relação entre desempenho social corporativo e desempenho financeiro de empresas no Brasil*. Dissertação de Mestrado em Administração, Universidade de São Paulo, São Paulo, SP, Brasil
9. Clement, O. O., & Comfort, T. O. (2018). Impact of forensic accounting and investigation on corporate governance in Ekiti State. *Journal of Accounting, Business and Finance Research*, 4(1), 28-36.
10. Cletus, O. A., & Ironkwe, U. (2014). Forensic auditing techniques and fraudulent practices of public institutions in Nigeria. *Journal of Modern Accounting and Auditing*, 10(4), 451-459.
11. Degboro, D., & Olofinsola, J. (2007). Forensic accountants and the litigation support engagement. *Niger Account*, 40(2), 49-52.
12. Dhar, P., & Sarkar, A. (2010). Forensic accounting: An accountant's vision. *Vidyasagar University Journal of Commerce*, 15(3), 93-104.
13. Efosa, E. E., & Kingsley, A. O. O. (2016). Forensic accounting and fraud management: evidence from Nigeria. *Igbinedion University Journal of Accounting*, 2(8), 245-308.
14. Ekechukwu, C., Ugwu, T. C., & Mbah, P. C. (2018). Effect of forensic accounting on the performance of Nigerian banking sector. *Journal on Banking Financial Services & Insurance Research*, 8(5), 19-34.
15. Eliezer, O., & Emmanuel, B. (2015). The relevance of forensic accounting in the detection and prevention of fraud in Nigeria. *Historical Research Letter*, 23, 17-20.
16. Emma, O., Adeniyi, S., & Nwankwo, K. N. (2019). Effect of forensic auditing on the financial performance of quoted food & beverage firms In Nigeria. *International Journal of Innovative Finance and Economics Research* 7(4), 21-135. www.seahipaj.org
17. Grubor, G., Ristić, N. & Simeunović, N. (2013). Integrated forensic accounting investigative process model in digital environment. *International Journal of Scientific and Research Publications*, 3(12), 1-9.
18. Howard, S., & Sheetz, M. (2006). *Forensic accounting and fraud investigation for non-experts*. New Jersey: John Wiley and Sons Inc.

19. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 355–360.
20. Joshi, M. S. (2003). Definition of Forensic Accounting. Available at: www.forensicaccounting.com
21. Kantardzic, M. (2011). Data mining: concepts, models, methods, and algorithms. John Wiley & Sons.
22. Krstić, J. (2009). The role of forensic accountants in detecting frauds in financial statements. *Facta universitatis-series: Econ. Org.*, 6(3), 295-302.
23. Modugu, K. P., & Anyaduba, J. O. (2013). Forensic accounting and financial fraud in Nigeria: An empirical approach. *Int. J. Bus. Soc. Sci.*, 4(7), 281-289.
24. Moneva, J. M., & Ortas, E. (2010). Corporate environmental and financial performance: a multivariate approach. *Industrial Management & Data Systems*, 110(2), 193-210
25. Odelabu, A. T. (2014). Effect of forensic accounting on the financial performance of commercial banks on Nigeria. *Research Journal of Finance and Accounting*, 5(8), 103-109.
26. Odunayo, B. A. (2014). Fraudulent financial reporting: The Nigerian Experience; The Clute Institute International Conference; San Antonio Texas, USA 18-30.
27. Odunayo, B. A. (2014). Fraudulent financial reporting: the Nigerian experience. The Clute Institute International Conference; San Antonio Texas, USA 18-30.
28. 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*, 18(4), 73-79.
29. Okafor, O. G., Obiora, F., & Onuora, J. K. J. (2022). Impact of forensic audit and financial statement fraud of deposit money banks in Nigeria. *International Academy Journal of Management, Marketing and Entrepreneurial Studies*, 9(1), 88-98.
30. Okeke, C. S. A. F., Ezeilo, C. B., Nwobodo, A. T., & Ofor, T. N. (2022). Impact of forensic accounting on financial reporting of selected quoted banks in Nigeria. *International Journal of Accounting Research*, 10(6), 271. DOI:10.35248/2472-114X.22.10.271
31. 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.
32. 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.
33. Okoye, E. I., Nwoye, U. J., Akuchi, B. N., & Onyema, A. C. (2020). Effect of forensic investigation techniques in detecting occupational fraud in the public sector: A study of Ministry of Finance, Anambra State. *International Journal of Innovative Finance and Economics Research*, 8(1), 117-124.
34. Okunbor, J., A & Obaretin, O. (2010). Effectiveness of the application of forensic accounting services in Nigerian corporate organisations. *AAU Journal Management Science*, 1(1), 171-184.
35. Olaoye, C. O., & Olanipekun, C. T. (2018). Impact of forensic accounting and investigation on corporate governance in Ekiti State. *Journal of Accounting, Business and Finance Research*, 4(1), 28-36. DOI: 10.20448/2002.41.28.36.

36. 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*, 5(9), 216-224.
37. Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: the role of intangible resources. *Strategic Management Journal*, 31(3), 463- 490.
38. Uniamiogbo, E., Adeusi, A., & Amu, C. (2019). Forensic audit and fraud detection and prevention in the Nigerian banking sector. *Accounting and Taxation Review*, 3(3), 121- 139.
39. Zia, T. A. (2016). Development, delivery and dynamics of a digital forensics subject. *Dig Forensics conf.*, 175.