



## NEW TECHNOLOGY AUDIT TECHNIQUES ON FIRM'S PERFORMANCE: IN SELECTED FIRMS OYO STATE.

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### Cite this article:

Obafemi T. O., Ransomed T. M. (2024), New Technology Audit Techniques on Firm's Performance: In Selected Firms Oyo State.. African Journal of Accounting and Financial Research 7(3), 236-250. DOI: 10.52589/AJAFR-KMQR8JW

### Manuscript History

Received: 20 Jun 2024

Accepted: 22 Aug 2024

Published: 4 Sep 2024

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**ABSTRACT:** *The globe has seen an exponential rise in technical innovation in the last ten years. As a result of technological advancements in computing, which built on the foundations laid by the digital systems created during the Third Industrial Revolution, computers are now able to manipulate and analyze data more quickly and easily, opening up new applications for emerging technologies (Beata, 2018; Schwab, 2016; Veerankutty et al., 2018). When used in a commercial setting, these cutting-edge technologies could increase productivity and effectiveness (Beata, 2018; Schwab, 2016; Veerankutty et al., 2018).*

*In order to provide an assurance service that meets their clients' expectations and to enable them to appropriately address the risks associated with their clients' use of more complex technology, auditors will need to adopt these emerging technologies as more businesses use increasingly sophisticated technology (Alles, 2015; Appelbaum et al., 2017). Many audit firms have turned to emerging technologies to improve audit quality and efficiency in the face of pressures facing the audit profession to improve the quality of its services (Botic, 2018; Harris, 2016) and reduce audit fees (Asthana et al., 2018) despite resource and time constraints (Persellin et al., 2019; Ferguson, 2016; Persellin et al., 2019).*

*The use of new technology audit methodologies has become a crucial tactic for companies looking to improve performance, reduce risks, and stay competitive in the quickly changing business landscape of today (Niaz, 2022). Technology is changing the audit profession, and in order to increase audit quality, efficiency, and effectiveness, businesses are increasingly using cutting-edge technologies and procedures (Lugli & Bertacchini, 2023). The potential for reinventing traditional audit procedures through the integration of new technology audit methodologies lies in the ability for organizations to adjust to shifting stakeholder expectations, regulatory requirements, and market dynamics.*



## INTRODUCTION

The globe has seen an exponential rise in technical innovation in the last ten years. As a result of technological advancements in computing, which built on the foundations laid by the digital systems created during the Third Industrial Revolution, computers are now able to manipulate and analyze data more quickly and easily, opening up new applications for emerging technologies (Beata, 2018; Schwab, 2016; Veerankutty et al., 2018). When used in a commercial setting, these cutting-edge technologies could increase productivity and effectiveness (Beata, 2018; Schwab, 2016; Veerankutty et al., 2018).

In order to provide an assurance service that meets their clients' expectations and to enable them to appropriately address the risks associated with their clients' use of more complex technology, auditors will need to adopt these emerging technologies as more businesses use increasingly sophisticated technology (Alles, 2015; Appelbaum et al., 2017). Many audit firms have turned to emerging technologies to improve audit quality and efficiency in the face of pressures facing the audit profession to improve the quality of its services (Botic, 2018; Harris, 2016) and reduce audit fees (Asthana et al., 2018) despite resource and time constraints (Persellin et al., 2019; Ferguson, 2016; Persellin et al., 2019).

The use of new technology audit methodologies has become a crucial tactic for companies looking to improve performance, reduce risks, and stay competitive in the quickly changing business landscape of today (Niaz, 2022). Technology is changing the audit profession, and in order to increase audit quality, efficiency, and effectiveness, businesses are increasingly using cutting-edge technologies and procedures (Lugli & Bertacchini, 2023). The potential for reinventing traditional audit procedures through the integration of new technology audit methodologies lies in the ability for organizations to adjust to shifting stakeholder expectations, regulatory requirements, and market dynamics.

The effective integration of new methodologies into organizations' current audit practices poses both opportunities and problems, notwithstanding the potential advantages of technology-driven audit projects (Perdana, Lee & Kim, 2023). A number of obstacles, including technological complexity, talent gaps, resource limitations, and opposition to change, have been faced by some organizations that have adopted technology-driven audit solutions in an attempt to improve data analytics capabilities, expedite procedures, and fortify internal controls.

Against this backdrop, this study aims to explore the integration of new technology audit techniques and its implications for firms' performance. By examining the challenges, opportunities, and outcomes associated with technology-driven audit initiatives

### Statement of problem

For businesses looking to improve their performance in the fast-paced business world of today, integrating new technology audit techniques offers both potential and problems (Hu, Chen, Hsu & Tzeng, 2021). While technological improvements promise increased productivity, accuracy, and risk management capabilities, firms may face major challenges in successfully implementing and utilizing these new strategies.

The extant literature (Mizrak, 2023; Aksoy & Gurol, 2021; Afifi, 2020) offers valuable perspectives on the possible advantages of incorporating novel technology audit



methodologies. However, a significant lacuna exists in the empirical research that investigates the particular obstacles that companies face during the implementation phase and pinpoints optimal approaches for triumphant adoption.

Theoretical frameworks and conceptual models that describe the possible effects of technology-driven audit activities on corporate performance are the subject of several studies. Nevertheless, there is a dearth of comprehensive empirical research that looks at the real-world challenges businesses have while incorporating new technology auditing approaches into their current audit procedures and systems.

This knowledge gap makes it more difficult for us to comprehend the unique obstacles, limitations, and complications that businesses face when using technology-driven audit solutions. It also restricts our capacity to recognize practical methods and techniques for resolving these issues and optimizing the advantages of technology-driven audit programs.

In order to close this gap, empirical research on firms' experiences implementing new technology audit techniques is needed. This research should identify the main implementation challenges, devise strategies to overcome these challenges, and evaluate the effect on firm performance. Researchers can help organizations successfully integrate technology-driven audit approaches and achieve positive performance results by drawing on insights from best practices and real-world experiences to develop practical guidelines and recommendations

### **Objectives of the Study**

The general objective of this study is to explore the integration of new technology audit techniques and its implications for firms' performance. However, specific objectives include to:

- i. examine the current landscape of technology audit techniques adoption on firm's performance.
- ii. investigate the technology audit techniques influence on internal control system.
- iii. examine the impact of technology driven-audit on the overall performance of firms.
- iv. examine the challenges firms encounter in integrating new technology audit techniques into their existing audit practices.

### **Scope of the Study**

The study will focus specifically on firms operating within the geographical boundaries of Oyo State, Nigeria. The research will encompass a diverse range of industries to capture variations in technology adoption and performance across sectors. This could include, but not be limited to, finance, manufacturing, services, and technology. The study will consider a specific time frame for the analysis, for example, the last five to ten years. This will help in assessing trends and changes over a relevant period. The research will examine a variety of technology audit techniques, including but not limited to blockchain, data analytics, and cybersecurity technology. The focus will be on understanding the extent of adoption and integration of these techniques in audit processes. The study will investigate the influence of technology audit techniques on internal controls and risk management practices within the selected firms. Firm



performance will be assessed using key indicators such as financial stability, profitability, operational efficiency.

## LITERATURE REVIEW

This section reviews existing literature on technology-driven audit methodologies, focusing on their application, benefits, and challenges. It also explores the relationship between advanced audit techniques and organizational performance.

### Conceptual Review New Technology Audit Technique

According to Mizrak (2023), firms looking to strengthen governance, reduce risks, and enhance overall performance must now include new technology audit methodologies into their operations due to the dynamic nature of modern business. Technological developments such as automation, data analytics, and artificial intelligence are reshaping traditional audit techniques (Aksoy & Gurol, 2021). A summary of some of the most important new technology audit techniques and how they might affect organizational audit procedures can be found in Aksoy & Gurol's article from 2021.

## DATA ANALYTICS

According to Aksoy & Gurol (2021), data analytics entails the methodical analysis of extensive datasets in order to derive significant insights, trends, and anomalies. Data analytics is used by auditors to spot trends, find abnormalities, and evaluate how well internal controls are working. It also helps with increased accuracy, quicker risk detection, and a better ability to spot fraudulent activity (Handoko, Mulyawan, Tanuwijaya & Tanciady, 2020).

Data analytics is essential to improving the audit process because it gives auditors the ability to evaluate vast amounts of data quickly and effectively and derive insightful information from it. Li, Dai, Gershberg, and Vasarhelyi (2018) list a number of ways that data analytics helps with the audit process:

**Risk Assessment:** By searching through massive datasets for anomalies, patterns, or outliers, data analytics assists auditors in locating and evaluating any risks. Auditors can gain insights into business sectors that may be more vulnerable to fraud or misstatements by analyzing historical data.

**Fraud Detection:** Unusual patterns or abnormalities in financial transactions that can point to fraud can be found using sophisticated analytics technologies. Auditors can find anomalies, strange trends, or patterns that could need more research by examining transactional data.

**Process Monitoring:** Data analytics makes it possible to monitor corporate processes continuously, giving auditors the ability to spot deviations from expected norms in real time. This makes it possible for auditors to resolve problems quickly, enhancing the overall efficacy of internal controls.



**Sampling and Testing:** Conventional audit sampling techniques could take a lot of time and might not give a complete picture of the dataset. With the use of data analytics, auditors can examine entire data populations, doing away with the necessity for sampling and producing a financial information.

**Enhanced Efficiency:** By lowering the need for human labor and lowering the possibility of error, automation of regular audit procedures using data analytics technologies enhances efficiency. This allows auditors to concentrate on more intricate analysis and important audit areas, resulting in a more efficient and comprehensive review.

**Trend Analysis:** Using data analytics, auditors can find trends, changes, or noteworthy variations in financial data by doing trend analysis over a number of time periods. Gaining insight into trends helps one evaluate the company's performance and financial health more intelligently.

**Internal Control Evaluation:** By analyzing the consistency and dependability of financial data, auditors use data analytics to determine how effective internal controls are. Key controls are continuously monitored to make sure that any deviations are quickly found and fixed. details.

**Predictive Analytics:** Using past data, predictive analytics models can help auditors anticipate future patterns and possible hazards. With this proactive approach, auditors can foresee difficulties and deal with them before they get out of hand.

**Data Reconciliation:** To uncover inconsistencies and guarantee data integrity, auditors might utilize data analytics to reconcile financial data from multiple systems. Reconciliation procedures that are automated improve accuracy and lower the possibility of mistakes in financial reporting.

### **Blockchain Technology:**

Belchior, Correia, and Vasconcelos (2020) claim that blockchain technology offers a decentralized and secure method of recording and verifying transactions, which has a revolutionary impact on the audit process. Blockchain has an impact on auditing in a number of ways, improving efficiency, dependability, and transparency. Kabir, Sobhani, Mohamed, and Ashrafi (2022) list a number of ways that blockchain technology affects the auditing process:

**Immutable Record-Keeping:** Blockchain technology offers a decentralized ledger in which transactions are permanently and tamper-proof recorded. The blockchain's integrity assures auditors that once a transaction is recorded, it cannot be changed. This feature improves the reliability of financial data.

**Enhanced Transparency:** Since everyone in a blockchain network has access to the same data, the auditing process is more transparent. The efficiency of the audit can be increased by auditors by eliminating the need for lengthy document reviews by using the blockchain to verify transactions.

**Real time Auditing:** Blockchain technology permits continuous and real-time auditing by allowing the ledger to be updated in real time as transactions take place. There is less delay



between the time a transaction occurs and an audit verification since auditors have access to the most recent information.

**Automating with Smart Contracts:** When specific criteria are satisfied, self-executing contracts known as "smart contracts," which have the terms of the agreement entered straight into code, start specified procedures. Smart contracts are subject to auditing, which verifies that they comply with legal and financial commitments. Efficiency is increased and error risk is decreased with automation.

**Fraud Prevention and Detection:** It is more difficult for fraudulent acts to go undetected due to the openness and immutability of blockchain technology. The blockchain allows auditors to track transactions, which facilitates the identification of irregularities and possible fraudulent activity.

**Simplified Confirmation Process:** Blockchain technology can simplify confirmations, a crucial audit step. Auditors can immediately verify transactions on the blockchain, cutting down on confirmation delays and improving audit efficiency, as opposed to depending on third parties to certify transactions.

**Supply Chain Auditing:** Blockchain technology can be used to track and validate the origin of goods and transactions in sectors with intricate supply networks. Blockchain technology can be used by auditors to confirm transaction authenticity and guarantee regulatory compliance during supply chain audits.

**Reduced Audit Trail Complexity:** Complicated audit trails and paperwork are frequently a part of traditional audit procedures. Blockchain makes auditing easier by storing the complete audit trail on a decentralized ledger, which eliminates the need for thorough documentation reviews.

**Inter-organizational Auditing:** Blockchain technology gives auditors access to a distributed, shared ledger for organizations that engage in cooperative operations. When auditors can confirm transactions between several businesses without sacrificing data integrity, cross-organizational auditing becomes more effective and secure.

**Smart Auditing Tools:** By automating some audit processes, auditing tools that make use of blockchain technology can increase the audit process' precision and effectiveness. These instruments are able to examine blockchain transactions, spot anomalies, and give auditors insightful information.

### **Auditing for Cybersecurity**

Lois, Drogalas, Karagiorgos, Thrassou, and Vrontis (2021) assert that cybersecurity auditing has developed into a crucial step in the audit process, especially in a time when companies are depending more and more on digital technologies. Multifaceted in nature, cybersecurity auditing has an impact on the audit process that includes issues of data integrity, overall information security, and the protection of sensitive information (Antunes, Maximiano, Gomes & Pinto, 2021). The following are some ways that cybersecurity auditing affects the audit process:



**Risk Assessment:** An organization's information systems' vulnerabilities and threats are evaluated as part of a cybersecurity audit. Risk assessments are carried out by auditors to find possible vulnerabilities in the cybersecurity framework and to help prioritize audit operations according to risk (Afifi, 2020).

**Data Protection and Privacy:** Cybersecurity audits make sure businesses are adhering to privacy and data protection laws. Auditors assess how well access controls, data encryption, and other security measures are protecting sensitive data (Omotunde & Ahmed, 2023).

**Compliance Verification:** Auditors confirm that cybersecurity regulations and industry-specific standards are being followed. Because serious penalties can be imposed for noncompliance, cybersecurity audits are essential for guaranteeing that legal and regulatory obligations are met.

**Evaluation of Incident Response:** In the event of a security breach, cybersecurity audits evaluate how well an organization's incident response plan works. Auditors examine an organization's capacity for cybersecurity issue detection, response, and recovery.

**Authorization and Authentication Controls:** To make sure that only people with permission can access sensitive systems and data, auditors evaluate how well authorization and authentication processes are working. During cybersecurity audits, multi-factor authentication and role-based access controls are frequently looked at.

**Evaluation of Third-Party Security Measures:** Cybersecurity audits also include an assessment of the security measures put in place by outside companies. Auditors evaluate the risk involved in these partnerships and suppliers' security procedures, and organizations are accountable for these activities.

**Constant Monitoring:** Cybersecurity auditing frequently entails ongoing surveillance of security measures rather than being a one-time occurrence. Organizations can remain attentive against emerging threats and modify their security measures accordingly with the support of this continual assessment.

### Challenges of New Technology Audit Techniques

Technology has completely changed the audit industry, allowing firms to embrace new technology audit approaches that improve audit quality, speed, and effectiveness. Although these methods have many advantages, there are also a number of obstacles that businesses must overcome in order to reach their full potential (Riahi, Saikouk, Gunasekaran & Badraoui, 2021). The main obstacles to the adoption and application of new technology audit methodologies are examined in this literature study, along with solutions to these obstacles.

- i. **Lack of Skilled Personnel:** One of the main obstacles businesses encounter when implementing new technology audit methodologies is the lack of qualified staff who can use cutting-edge technologies in an efficient manner. In order to support technology-driven audit initiatives, Chen et al. (2018)'s research emphasizes the significance of hiring and keeping personnel with experience in cybersecurity, artificial intelligence, and data analytics. However, companies frequently have trouble finding and keeping employees with the necessary technical skills, which leaves audit teams with gaps in their competencies and makes it more difficult to successfully apply technology audit



methodologies. **Absence of Skilled Workers:** One of the main obstacles businesses encounter when implementing new technology auditing methods is the lack of skilled workers who can use cutting-edge technologies in an efficient manner.

In order to support technology-driven audit initiatives, Chen et al. (2018)'s research emphasizes the significance of hiring and keeping personnel with experience in cybersecurity, artificial intelligence, and data analytics. However, companies frequently have trouble finding and keeping employees with the necessary technical skills, which leaves audit teams with gaps in their competencies and makes it more difficult to successfully apply technology audit methodologies.

- ii. **Technological Complexity:** Another big obstacle for businesses is the intricacy of modern technology auditing methods. According to Hall et al. (2019), the successful implementation and operation of modern technologies like artificial intelligence and data analytics necessitate certain knowledge and experience. Inefficiencies and mistakes in audit procedures may arise from firms' inability to comprehend the underlying algorithms, configure software, and evaluate results. In order to successfully integrate technology audit methodologies into audit procedures and improve workers' technical skills, organizations must spend in training and development programs.
- iii. **Integration with Current Systems:** Another challenge for corporations is integrating new technology audit methodologies with their current audit processes and systems. Sharma et al. (2020) found that companies frequently encounter difficulties coordinating technology-driven audit solutions with their legacy IT infrastructure, leading to problems related to interoperability and compatibility. The integration process is further complicated by the absence of defined frameworks and norms for integrating technology audit tools with current systems. To achieve seamless integration and compatibility with current systems, businesses must create strong integration strategies, work with IT teams, and use interoperable audit solutions.
- iv. **Data Security and Privacy Issues:** When using new technology auditing methodologies, organizations face major data security and privacy issues. Businesses need to give cybersecurity and data protection a priority in order to reduce the risk of data breaches and unauthorized access, given the volume and complexity of data being examined during audits. Li et al.'s (2019) research emphasizes how crucial it is to put strong data encryption, access controls, and monitoring systems in place to protect confidential audit data. In order to safeguard stakeholders' right to privacy and reduce the legal and reputational risks connected with data breaches, businesses must also make sure that data protection legislation like the CCPA and GDPR are followed.

### Concept of Audit Report Quality

The auditor's report is an assessment that shows the auditor's opinion on whether a company's financial statements follow GAAP and don't have any material misstatements or errors. Dunakhir (2016) defines the quality of an audit report as the likelihood that a third-party auditor will find and reveal a security breach in the client's accounting system. The final result of an audit is the auditor's report, which needs to be of high quality because different business stakeholders depend on it to make well-informed financial choices concerning the company. It is however, unfortunate that all the regulators and investor's attempts to ensure that audit report





is of good quality in terms of timeliness, sufficient details, and opinion issued remained fruitless and this is evidenced in the demonstration of sabotage and the flaws in the most recent audit report (Akpan & Akpan, 2021).

Financial reports don't always provide precise, accurate, and objective information for a variety of reasons (Knežević, 2015). Because of the possibility of mistakes, omissions, improper application of accounting rules, and, in certain cases, purposeful and premeditated misleading financial reporting, and forensic auditing emerged as a cutting-edge method for fraud detection, avoidance, and defense. Regarding opinions expressed, it is noted that many auditors' reports consistently present accurate and fair assessments, from which an opinion might otherwise be observed. This observation suggests that many material errors may have gone undetected because the fraud was carried out using highly sophisticated ICT tools that exceeded the auditor's level of expertise.

### **Firm's Performance**

The term "firm performance" refers to a multifaceted idea that includes different measures of production, profitability, organizational effectiveness, and competitiveness. A great deal of research has been done to figure out what makes a corporation operate well and how companies manage to expand and succeed over the long term.

### **Theoretical Review**

#### **Resource-Based View (RBV):**

A theoretical viewpoint on firm performance is provided by the resource-based view (RBV), which emphasizes the contribution of internal resources and skills to superior performance and competitive advantage (Barney, 1991). Firms possessing valuable, uncommon, and hard-to-copy resources are better positioned to outperform competitors and gain a lasting competitive advantage, according to the RBV. Research has indicated that intangible assets, such human capital, organizational culture, and innovation capabilities, have a significant impact on how well a corporation performs (Barney, 1991; Penrose, 1959).

#### **Theory of Agency**

Agency theory studies how agency conflicts affect business performance and centers on the connection between principals (shareholders) and agents (managers) in organizations (Jensen & Meckling, 1976). Agency theory states that information asymmetry, diverging aims, and agency costs can all result in conflicts of interest between principals and agents, which can then cause agency difficulties that have an impact on the performance of the organization. In order to reduce agency conflicts and enhance business performance, governance methods including executive compensation, board makeup, and monitoring systems have been studied in this field of study (Fama & Jensen, 1983; Jensen, 1993).

### **Innovation and Entrepreneurship**

Due to their capacity to promote originality, distinctiveness, and market responsiveness, innovation and entrepreneurship are critical drivers of business performance (Schumpeter, 1934). Research and development (R&D) and product innovation have been shown to have a positive correlation with company performance metrics like growth, profitability, and market



share. (Damanpour, 1991; Zahra et al., 2006). Furthermore, according to entrepreneurship theories, recognizing opportunities, taking risks, and having an entrepreneurial mindset all have a significant impact on how well a firm performs (Covin & Slevin, 1989).

### **Empirical Review**

In 2019, Putra and Fito-Mela investigated the connection between earning management and audit quality in Indonesia from both an opportunistic and informative standpoint. The study made use of samples from 615 manufacturing firms that were listed between 2013 and 2017 on the Indonesian Stock Exchange. While discretionary accruals are used to manage earnings, a proxy of the Big Four is used to measure the quality of audits. Logistic regression analysis was employed as the analysis strategy to quantify the association. The study's findings indicate that opportunist earnings management is decreased and informative earnings management is increased when audit quality is high. The outcome is consistent with the auditor's function in lessening knowledge asymmetry between shareholders and managers.

Muotolu, Awotomilusi, et al. (2022) assessed how cloud computing adoption affected Nigeria's accounting processes' effectiveness. In order to do this, Nigerian deposit money banks were given a structured questionnaire by the research. Ordinary least square regression and frequency were used to examine the data. According to the study's findings, cloud computing and Nigeria's accounting practices' effectiveness were significantly positively correlated. Furthermore, the model's other variables demonstrated a noteworthy correlation between technological progress and security effectiveness and the effectiveness of accounting processes in Nigeria. On the other hand, cost-effectiveness showed a strong inverse link.

Onwughai (2022) assessed how corporate organizations' accounting operations would be affected by the use of AI and machine learning technology. A survey questionnaire and qualitative literature review were employed to get data from respondents and go at earlier professional and academic research on the subject. This study showed that while AI will replace the majority of repetitive and programmable accounting tasks, it will also create new avenues for ambitious accounting professionals to pursue careers that go beyond bookkeeping and become more strategic and fulfilling.

The relationship between artificial intelligence (AI) and accountants' approaches to accounting functions was examined by Akinadewo (2021). A structured questionnaire was employed as the research design method in this study. The 205 accountants in the sample size and targeted demographic are experienced in applying systems for accounting and other financial transaction operations. The technique of purposive sampling was employed in order to identify the participants. The analysis's findings showed that accountants' approaches to accounting tasks are significantly improved by artificial intelligence.



## METHODOLOGY:

### Research Design:

The study will adopt the descriptive survey of the correlational type which requires systematic and scientific investigation of data from the sample population.

### Population

The population of this study will consist of audit unit staff of selected firms in Nigeria

### Sampling

A diverse sample of firms across various industries will be selected to ensure the generalizability of the findings. The sample will include only firms that have adopted technology-driven audit techniques.

### Research Instrument

The research instruments that will be used for data collection in this study will be questionnaire.

### Method of Data Analysis

The data that was collected from respondents was analyzed using descriptive statistics. Frequency and percentage will be used to analyze the research questions while the hypotheses will be tested using regression analysis.

## ANALYSIS AND DISCUSSION OF FINDINGS

**Table 1**

<b>Demographic</b>			
<b>Gender</b>	Male	17	54.8%
	Female	14	45.2%
	Total	31	100%
<b>Designation</b>	Management Staff	1	3.2%
	Senior Staff	3	9.7%
	Junior Staff	5	16.1%
	Accountant	4	12.9%
	Auditor	28	19.4%
	Total	31	100%

**Source:** *Field Survey, 2024*

Table 1 above shows the demographic information of the respondents, it shows that male respondents participate more in the study and majority of the respondents are auditors in their respective firms.

**Table 2**

Does your firm conduct regular technology audits?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	25	80.6	80.6	80.6
	No	6	19.4	19.4	100.0
	Total	31	100.0	100.0	

**Source:** Filed Survey, 2024

Table 2 above shows that 25 (80.6%) indicate that their firms conduct regular technology audits, while 6 (19.4%) indicate otherwise. This analysis suggests that respondents' firms conduct regular technology audits.

**Table 3**

How often does your firm perform technology audits?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quarterly	7	22.6	22.6	22.6
	Annually	5	16.1	16.1	38.7
	Biannually	3	9.7	9.7	48.4
	Occasionally	16	51.6	51.6	100.0
	Total	31	100.0	100.0	

**Source:** field Survey, 2024

Table 3 above show that 7 (22.6%) of the respondents indicate that their firms perform technology audits quarterly 5 (16.1%) indicate that it is performed annually 3 (9.7%) indicate that it is performed biannually while 16 (51.6%) indicate that it is performed occasionally. This analysis pictured that technology audits in the sampled firms is performed occasionally.

**Table 4**

Which technology audit techniques does your firm currently utilize?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Penetration testing	4	12.9	12.9	12.9
	Vulnerability scanning	10	32.3	32.3	45.2
	Security assessments	10	32.3	32.3	77.4
	Data analytics anomaly detection	for7	22.6	22.6	100.0
	Total	31	100.0	100.0	

**Source:** Field Survey, 2024



Table 4 above show that 4 (12.9%) of the respondents use penetration testing audit technique, 10 (32.3%) use vulnerability scanning, while 10 (32.3%) use security assessment while 7 (22.6%) use data analytics for anomaly detection.

**Table 5**

Have technology audit techniques helped in identifying weaknesses or gaps in your firm's internal control systems?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	27	87.1	87.1	87.1
No	4	12.9	12.9	100.0
Total	31	100.0	100.0	

**Source:** *Field Survey, 2024*

Table 5 above show that 27 (87.1%) of the respondents indicate that technology audit techniques has helped in identifying weakness in their internal control system, while 4 (12.9%) had a contrary opinion. This analysis indicates that technology audit techniques has helped in identifying weakness in internal control system,

**Table 6**

What are the primary challenges your firm encounters when using technology audit techniques?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Lack of skilled personnel to operate5 technology audit tools	5	16.1	16.1	16.1
Complexity of technology audit15 tools/software	15	48.4	48.4	64.5
Integration issues with existing audit6 processes/systems	6	19.4	19.4	83.9
High costs associated with acquiring4 and implementing technology audit solutions	4	12.9	12.9	96.8
Total	31	100.0	100.0	

**Source:** *field survey, 2024*

Analysis in table 6 revealed that complexity of technology audit tools is the major challenge encounters when using technology audit techniques.

**Table 7**

Have technology-driven audits enhanced the detection of errors, fraud, or irregularities during audits?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	25	80.6	80.6	80.6
No	6	19.4	19.4	100.0
Total	31	100.0	100.0	

**Source:** *Field Survey, 2024*

Table 7 above shows that 25 (80.6%) of the respondents are of the opinion that technology driven audit enhanced the detection of errors, fraud and irregularities during audits while 6 (19.4%) are of the contrary opinion.

**Table 8**

In your opinion, how has the adoption of technology-driven audits influenced the overall performance of your firm?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Improved significantly	24	16.1	16.1	16.1
Improved moderately	6	48.4	48.4	64.5
No significant <sup>1</sup> change		19.4	19.4	83.9
Total	31	100.0	100.0	

**Source:** *Field Survey, 2024*

Table 8 above indicates that based on the respondents opinion, adoption of technology driven audits influenced the overall performance of firm.

### Hypothesis Testing

**Table 9**

		Unstandardized Coefficients	Std. Error	Standardized Coefficients	T	p.
R= 0.548						
R <sup>2</sup> = 0.586						
Adj. R <sup>2</sup> = 0.501						
F= 67.562*		B	Std. Error	Beta		
(Constant)		6.228	2.855		2.626	.009
implementation of technology driven audits		-.268	.088	.158	3.336	.001

*Dependent Variable: overall firm performance*

*Predictors: (Constant), technology driven audit\* p<.05 (p =.000)*



Table 9 shows that influence of technology audit techniques towards predicting overall performance of firm yield a multiple regression coefficient (R) of .548 and a correlation square ( $R^2$ ) of .586. These values are statistically significant at 0.05 probability level ( $R=.548$ ,  $R^2=.586$ ,  $F=67.562$ ). Therefore, it can be concluded that technology driven audits significantly predict overall firm performance.

## SUMMARY AND CONCLUSION

This study examined integration of new technology audit techniques and its implications for firms' performance. The objectives of the study include to examine the current landscape of technology audit techniques adopted by firms, to examine the challenges firms encounter in integrating new technology audit techniques into their existing audit practices, analyze the influence of these technologies on internal controls and risk management, and to assess the impact of technology-driven audits on firms' overall performance. The study will adopt the descriptive survey of the correlational type which requires systematic and scientific investigation of data from the sample population. The population of this study will consist of audit unit staff of selected firms in Nigeria. The research instrument used for data collection in this study was questionnaire. The data collected from respondents was analyzed using descriptive statistics. Frequency and percentage were used to analyze the research questions while the hypothesis was tested using regression analysis. The result of the study revealed that technology audit techniques have helped in identifying weaknesses or gaps in the respondents' firm's internal control systems, it also revealed that the adoption of technology-driven audits influenced the overall performance of their firms. Furthermore, the result showed that lack of skilled personnel to operate technology audit tools is one of the challenges encounters when using technology audit techniques. The study then concludes that there exist a significant correlation between implementation of technology-driven audits and improved overall firm performance.

## RECOMMENDATIONS

The study recommends that firms should disclose information about their use of technology in audits, including the types of tools and techniques employed, to foster trust and confidence among investors, regulators, and other stakeholders.

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