INFORMATION TECHNOLOGY AND ACCOUNTING SYSTEMS IN NIGERIA BANK

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BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF ACCOUNTING, FACULTY OF MANAGEMENT SCIENCES, UNIVERSITY OF BENIN, BENIN CITY. IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR OF SCIENCE (B.SC) DEGREE IN ACCOUNTING

NOVEMBER, 2025.

DECLARATION

I, **OAMEN PHILIP OSAGIE** declare that,

i. This study is based on a study undertaken by me in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, under the supervision of **Dr. Mrs E.I Umasagbon** of the Department of Accounting, Management Sciences, University of Benin, Benin City, Nigeria.

ii. This work has not been submitted for the award of degree elsewhere.

iii. Ideas and views are product of my personal research and where the view of others has been expressed, they have been duly acknowledged.

iv. Any liability arising from this work is to be wholly borne by me alone

_____ _____

Ibhafidon Sandra **DATE**
MGS2104561

CERTIFICATION

We, certify that this research project was carried out by Oamen Philip Osagie in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, and Nigeria. It is adequate in scope and quality in partial fulfillment of the requirements for the award of Bachelor of Science (BSc.) degree in Accounting.

DR. Mrs E.I Umasagbon **(Project Supervisor)**	**Date**
DR. Ikhu-Omoregbe Godstime **(Project Coordinator)**	**Date**
Prof. O. Obaretin **(Head of Department)**	**Date**

DEDICATION

This project work is dedicated to God Almighty for His abundant grace in my life and for seeing me through my academic pursuit and aspirations. He has been my source of strength and on his wings only I have soared. I also want to dedicate this project to my Family and friends for the love and encouragement they have shown towards me during the course of this program, all I can say is thank you and God bless you.

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My profound gratitude goes to God almighty for his strength, grace, wisdom, and guidance all through my period of study and making this work a success.

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I sincerely express my gratitude to my wonderful parents Mr. and Mrs. Oamen for their prayers, financial support and moral support all through my years in school and also my siblings (Ehis, Success, Ehinomen, Ojie, Sarah and Celestina) for their keen interest in all matters concerning my academic activities and their tremendous encouragement and love. I love you all deeply. My appreciation to Mrs Minnie Omokhoa for her genuine show of love,prayers and support.I sincerely appreciate my in-law, Engr. Prof. Raphael Edokpai, HOD Production Engineering, Faculty of Engineering, University of Benin, for his support always.

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TABLE OF CONTENT

LIST OF TABLE

LIST OF APPENDICES

ABSTRACT

This study examined the impact of information technology (IT) on accounting systems in selected organizations in Edo State, Nigeria. Specifically, it assessed the effects of technological innovation, technological skills, technological drawbacks, and labour cost reduction on accounting system performance, including efficiency, accuracy, and reliability of financial reporting. The study adopted a quantitative research design, utilizing structured questionnaires administered to 384 accountants, auditors, and finance officers. Data were analyzed using descriptive statistics and multiple regression analysis. The findings revealed that technological innovation and technological skills positively and significantly enhance the performance of accounting systems, while technological drawbacks, such as system failures and cyber threats, negatively influence system efficiency. Additionally, automation and IT integration were found to significantly reduce labour costs, thereby improving productivity and operational efficiency. The regression results indicated that approximately 65.9% of the variation in accounting system performance is explained by the combined effects of the IT-related factors studied. The study concludes that information technology plays a crucial role in modernizing accounting operations, improving data accuracy, and facilitating decision-making. Recommendations include continuous technological upgrading, staff training, enhanced cybersecurity measures, and maintaining a balance between automation and human oversight. The study contributes to the body of knowledge by empirically

demonstrating that IT adoption is a key driver of accounting system efficiency while highlighting the need to mitigate associated risks for sustainable performance.

Keywords: Information Technology, Accounting Systems, Technological Innovation, Technological Skills, Labour Cost Reduction, Nigeria

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The increasing adoption of technology has redefined accounting systems in the modern business environment. Traditionally, accounting relied on manual bookkeeping, paper-based records, and elementary reporting methods. Although these systems served their purpose, they were often inefficient, prone to errors, and limited in scope. With the rise of digital tools and computerized platforms, accounting has transitioned into a technology-driven process, characterized by improved efficiency, accuracy, and timely financial reporting (Akinyemi & Alabi, 2023).

One of the most critical dimensions of this transformation is technological innovation which is the introduction and integration of advanced digital tools, software, and methods that fundamentally reshape accounting systems and processes Chulanov,

Genete & Tugui (2022). Technological innovation in accounting encompasses tools like accounting software, cloud computing, artificial intelligence (AI), blockchain, and robotic process automation (RPA) have revolutionized financial reporting and control. For example, AI is now used to automate routine processes such as invoice processing, reconciliations, and fraud detection with accuracy levels exceeding 90%, compared to the less consistent results from manual operations (PricewaterhouseCoopers [PwC], 2022). Similarly, blockchain has emerged as a reliable system for maintaining transparent, tamper-proof records of financial transactions, thereby reducing risks of fraud and manipulation in reporting (Deloitte, 2023). Global surveys suggest that over 80% of accounting firms in developed economies now incorporate at least one form of automation or advanced digital tool, illustrating how innovation drives both accuracy and operational speed (Ernst & Young, 2022).

Another key factor is technological skills, which which is the knowledge and ability of accountants to effectively use digital accounting tools Kroon, Alves & Martins (2021). The International Federation of Accountants (2022) reports that over 60% of firms worldwide have invested in digital skill development, highlighting a growing demand for accountants who are proficient in data analytics, cloud accounting, and AI-based tools. In fact, over 70% of accountants acknowledge that technological competence is now as important as traditional accounting knowledge (Okonkwo & Eze, 2021). However, significant skill gaps remain, particularly in developing countries where

access to digital training and infrastructure is limited. Without adequate technical expertise, the benefits of innovation cannot be fully realized.

Despite its benefits, technology adoption is also associated with technological drawbacks. High implementation and maintenance costs, cybersecurity threats, and resistance to change are among the most common challenges. A KPMG (2023) study revealed that more than 70% of accounting firms globally suffered at least one cyberattack in the last three years, with average financial losses exceeding $3 million per attack. In addition, integration issues with legacy systems and frequent system failures raise concerns about data integrity and reliability. Okoye and Omankhanlen (2022) noted that such risks often undermine stakeholders' trust in automated financial reports, particularly in environments with weak regulatory frameworks. While technological drawbacks are the limitations and risks associated with adopting digital accounting systems. These include high implementation costs, cybersecurity threats, system failures, and resistance to change, which often hinder full benefits of technological adoption (KPMG, 2023; Okonkwo & Eze, 2021).

Despite the various benefits of technology adoption in accounting, there are a variety of shortcomings in existing literature that further validate this study. Most of the available studies on technological innovation, skills, or drawbacks consider these factors in isolation and often focus on developed economies, with limited consideration for their applicability to the Nigerian banking sector, where infrastructural constraints, high implementation costs, skills gaps, and cybersecurity risks are more pressing concerns

than usual (Okoye & Omankhanlen, 2022; KPMG, 2023). Moreover, few studies have considered the reduction of labor costs as an important dimension of technology adoption, which relates to organizational efficiency. This study thus embarks on an all-rounded understanding of how technological innovation, technological skills, technological drawbacks, and labor cost reduction together influence the effectiveness of accounting systems in banks within Nigeria.

The rationale for this study lies in addressing these gaps and developing context-specific insights on technology adoption in banks in Nigeria. Given the multidimensional nature of technology, that is, innovation, skills, drawbacks, and labor cost-reducing effects, the study seeks to present a holistic understanding of how digital tools influence the efficiency, accuracy, reliability, and cost-effectiveness of accounting. This approach also serves to address the observed paucity of empirical studies that capture the real-life experiences of accounting and finance professionals in developing economies, especially Nigeria.

This study is anchored on three theoretical frameworks. The TAM elucidates how perceived usefulness and perceived ease of use influence users' acceptance and effective utilization of technology (Davis, 1989). The DOI Theory emphasizes the ways that the adoption of innovations diffuses within organizations over time, along with factors that may enable or inhibit technological uptake (Rogers, 2003). Lastly, the RBV places an organization's ability to achieve sustainable competitive advantage through the leveraging of unique technological and human resources in perspective (Barney, 1991).

These three theoretical perspectives are brought together to cast a bright light on the adoption, utilization, and effectiveness of digital accounting tools in Nigerian banks, making valuable practical and theoretical contributions to comprehend technology-driven transformation in accounting systems.

1.2 Statement of the Research Problem

Previous studies have documented both the positive and negative outcomes of technology adoption in accounting, but important gaps remain unaddressed. For instance, Ofoegbu and Eze (2021) observed that the adoption of technological tools simplified financial reporting processes, enhanced timeliness, improved record-keeping accuracy, reduced human error, and facilitated faster decision-making. However, they also found that many organizations, particularly small and medium-sized enterprises, struggled with high adoption and maintenance costs, lack of trained personnel, frequent system breakdowns, limited access to technology, and resistance to change. Similarly, Akinyemi and Alabi (2023) reported that firms with well-trained accountants experienced significant improvements in reporting accuracy, compliance, efficiency, collaboration, and fraud detection. Yet, they noted that organizations with low digital literacy faced challenges such as inability to maximize technological benefits, slower adoption rates, operational disruptions, inadequate staff training, and dependence on outdated manual processes.

In addition, Okoye and Omankhanlen (2022) highlighted that automated accounting systems enhanced operational efficiency, reliability, timeliness, consistency of reporting,

and accessibility of financial data. Nonetheless, their study revealed negative outcomes including vulnerability to cybersecurity attacks, data breaches, software failures, potential manipulation of digital records, and reduced stakeholder trust in automated reports. PricewaterhouseCoopers (PwC, 2022) found that AI-based tools and advanced software improve fraud detection, decision-making speed, error reduction, workflow automation, and real-time monitoring of financial transactions. Despite these benefits, high initial costs, ongoing maintenance expenses, complex system integration, required staff retraining, and risk of job displacement were significant drawbacks. Furthermore, KPMG (2023) demonstrated that cloud-based accounting systems enhance accessibility, remote collaboration, document sharing, scalability, and process standardization. However, their study also highlighted challenges such as resistance to organizational change, integration difficulties with legacy systems, recurring cybersecurity threats, inconsistent internet connectivity, and concerns about data privacy. While these studies provide valuable insights, several gaps remain. Most prior research tends to examine technological innovation or technological skills in isolation, without considering labour cost reduction as an integral dimension of technology adoption. Moreover, many studies focus on developed economies, leaving the Nigerian context underexplored, where financial constraints, infrastructural limitations, and skill gaps are more pronounced. Methodologically, many studies rely heavily on secondary data, while few apply primary, survey based designs that capture the experiences of accountants and finance professionals directly. This study therefore intends to address these gaps by examining

technological innovation, technological skills, technological drawbacks, and labor cost reduction within a single analytical framework.

The evidence of persisting challenges and gaps despite the increased adoption of technology in accounting justifies the need for this study. Previous studies have shown that technological innovations and digital tools will significantly enhance accounting processes in various ways. For instance, studies have established that the use of sophisticated accounting software and automated systems enhances reporting accuracy by reducing human error, supporting faster decision-making, operational efficiency, and encouraging better collaboration and accessibility of financial data in companies or organizations (Ofoegbu & Eze, 2021; Akinyemi & Alabi, 2023; Okoye & Omankhanlen, 2022; PwC, 2022; KPMG, 2023). These results suggest that technology adoption has a generally positive effect on the efficiency, reliability, and timeliness of accounting practices. Many of these effects are statistically significant, including the improvements in fraud detection, reporting accuracy, and data accessibility as reported in the studies by Akinyemi and Alabi (2023), PwC (2022), and KPMG (2023).

However, along with these advantages, negative results have also been identified. Vast costs for the implementation and maintenance often become an organizational burden, especially for small and medium enterprises (Ofoegbu & Eze, 2021; PwC, 2022). Frequent failures in the system and problems within the software have been identified as preventing smooth operations from taking place. Cybersecurity risks and data breaches pose a real threat to the integrity and reliability of financial records (Okoye &

Omankhanlen, 2022; KPMG, 2023). Moreover, reluctance towards organizational change and dependence on personnel who are well-trained presents additional impediments to effective technology adoption. This is supported by Ofoegbu & Eze, 2021, and Akinyemi & Alabi, 2023. In some cases, inadequate technological skills have been seen to insignificantly affect efficiency in reporting, especially in SMEs, proving that just because technology is implemented, improved accounting performance does not necessarily result (Ofoegbu & Eze, 2021).

While many studies indicate statistically significant benefits of technology adoption, such as increased fraud detection, better reporting accuracy, and better collaboration and accessibility of financial data, others have pointed out areas where the impact is insignificant or limited. The ineffective use of accounting technologies due to limited digital literacy, operational disruptions caused by system failures, and reliance on outdated manual processes has been found to be significantly inhibited, as reported by Akinyemi & Alabi (2023); Ofoegbu & Eze (2021). Such mixed results thus indicate that while technology adoption holds immense potential, its impact is highly context-dependent, contingent upon factors like skills, infrastructure, and organizational readiness.

Despite these insights, gaps remain. Most prior studies tend to consider technological innovation or skills in isolation, while labor cost reduction, a significant dimension of the technology adoption, is rarely considered. Besides, much of the literature has focused on advanced economies, with less attention paid to the particular case of Nigeria,

where infrastructural constraints and lack of funds and relevant skills are more pronounced. From a methodological perspective, most research exhibits over-reliance on secondary data, with a few studies using primary and survey-based designs which represent the direct experiences of accountants and finance professionals. In light of this, the paper attempts to fill such lacunas by analyzing technological innovation, technological skills, technological drawbacks, and labor cost reduction all within a single analytical framework. This allows for a comprehensive understanding of the implications of information technology for accounting systems in Nigerian banks.

1.3 Research Questions

In order to evaluate the effect of technology on accounting system the study seek to answer the following questions:

1. What is the effect of technological innovation on accounting systems of Banks in Nigeria?
2. What is the effect of technological skills on accounting systems of banks in Nigeria?
3. What is the effect of technological drawbacks on accounting systems of banks in Nigeria?
4. What is the effect of labour cost reduction on accounting systems of banks in Nigeria?

1.4 Objectives of the Study

The main objective of this study is to assess the effect of information technology on accounting systems of banks in Nigeria. The specific objectives are to;

1. determine the effect of technological innovation on accounting systems of banks in Nigeria;
2. examine the effect of technological skills on accounting systems of banks in Nigeria;
3. investigate the effect of technological drawbacks on accounting systems of banks in Nigeria;
4. ascertain the effect of labour cost reduction on accounting systems of banks in Nigeria.

1.5 Research Hypotheses

The following null hypotheses are formulated in line with the objectives and research questions:

H_{01}: Technological innovation has no significant effect on accounting systems of banks in Nigeria

H_{02}: Technological skills have no significant effect on accounting systems of banks in Nigeria .

H_{03}: Technological drawbacks have no significant effect on accounting systems of banks in Nigeria.

H_{04}: Labour cost reduction has no significant effect on accounting systems of banks in Nigeria.

1.6 Significance of the Study

Previous empirical studies have demonstrated that the integration of technology into accounting systems generates both positive and negative outcomes, with context-specific differences across countries and organizations. For example, Akinyemi and Alabi (2023) conducted a study in Nigeria involving 120 accounting professionals from large organizations. They measured the effect of technological innovation on reporting efficiency using accounting software adoption, automation level, and timeliness of reporting, applying multiple regression analysis. Their findings revealed a significant positive effect of technological innovation on the accuracy, timeliness, and reliability of financial reporting, as well as improved compliance and decision-making. Conversely, Ofoegbu and Eze (2021) examined 80 small and medium-sized enterprises in Lagos, Nigeria, assessing the influence of accountants' technological skills on reporting efficiency using Likert-scale surveys and descriptive statistics. They found that insufficient technological skills among accountants produced an insignificant effect on reporting efficiency, highlighting that limited digital literacy in SMEs hinders effective utilization of accounting technologies. Similarly, Okoye and Omankhanlen (2022) studied 100 organizations in Abuja, Nigeria, evaluating the impact of technological drawbacks such as cybersecurity risks, system failures, and data breaches on automated accounting systems. They used structured questionnaires and correlation analysis to assess system reliability and credibility. Their results indicated that technological

drawbacks significantly undermined the credibility and reliability of financial reports, despite improvements in operational efficiency.

PricewaterhouseCoopers (PwC, 2022) conducted a global study including firms in Europe and Asia, measuring the effect of AI and automated tools on fraud detection, error reduction, and decision-making speed using secondary financial performance data and regression modeling. The study found that AI-based automation significantly enhances fraud detection, reduces human errors, and accelerates decision-making processes, demonstrating the operational value of technology adoption.

Ernst & Young (2022) investigated 50 multinational organizations across North America and Europe, measuring the effectiveness of cloud-based accounting systems on collaboration, accessibility, and reporting efficiency using survey questionnaires and structural equation modeling. Their study highlighted that cloud accounting significantly improves accessibility, facilitates collaboration among accounting teams, and enhances overall financial reporting efficiency. Furthermore, KPMG (2023) studied 60 Nigerian organizations, assessing the combined effect of technology adoption and staff training on operational efficiency and labor cost reduction. Using multiple regression analysis and cost-benefit measurements, they found that firms investing in both technological tools and workforce capacity experienced higher operational efficiency, better cost management, and reduced reliance on manual labor.

Despite these important contributions, gaps remain. Most prior studies relied on secondary data or multinational reports, limiting contextual depth regarding Nigerian

organizations. Many studies also focused on only one or two technological dimensions, such as innovation or skills, while ignoring other critical variables like labor cost reduction. Additionally, small sample sizes and narrow industry coverage restrict the generalizability of findings across diverse organizations. There is also limited evidence evaluating all four variables—technological innovation, technological skills, technological drawbacks, and labor cost reduction—within a unified analytical framework, particularly in emerging economies with infrastructural and skill challenges (Okonkwo & Eze, 2021; Ofoegbu & Eze, 2021; Akinyemi & Alabi, 2023).

This study is significant because it addresses these gaps by employing a primary data collection approach with a broader and more representative sample of Nigerian organizations that have implemented modern accounting technologies. By integrating the four core dimensions of technology adoption into a single analytical model, the research provides a more comprehensive and context-specific understanding of how technology affects accounting systems' efficiency, accuracy, reliability, and cost-effectiveness. The findings will offer practical guidance to accounting practitioners on capacity development, assist organizations in investment and resource allocation decisions, and inform policymakers in developing technology-driven regulations that strengthen the accounting profession in Nigeria. Additionally, the study contributes to the academic literature by providing empirical evidence on the combined effects of technological innovation, skills, drawbacks, and labour cost reduction, serving as a

valuable reference for future research on digital transformation in accounting systems within emerging economies (Deloitte, 2023; PwC, 2022; KPMG, 2023).

While empirical evidence has continued to grow on the effects of technology adoption in accounting systems, each major dimension of technological innovation, technological skills, and technological drawbacks, with labour cost reduction, has been examined with methodological limitations that this study is trying to overcome. Prior studies provide important insights into the topics but also indicate some shortcomings that may therefore justify the present research.

On technological innovation, previous research has shown both positive and negative impacts. For example, Akinyemi and Alabi (2023) surveyed 120 accountants in Nigerian firms, with technological innovation measured using the adoption of accounting software, process automation levels, and reporting timeliness. Through multiple regression analysis, they showed a significant positive impact, indicating that technological innovation enhances accuracy, reliability, and compliance. However, only large firms with strong digital infrastructure were studied, which limits the general applicability of their study. In contrast, Ofoegbu and Eze (2021) investigated SMEs in Lagos State through structured questionnaires and descriptive statistics. They found that there was a negative or insignificant relationship between technological innovation and efficiency in reporting because of high costs, poor infrastructure, and inadequate software integration. These studies, though contributing meaningfully, do not consider innovation in relation to other critical factors like skills and drawbacks. The present

study improves on this by examining technological innovation together with other variables within a unified model and focuses on a specific group of organizations, that is, Nigerian banks, where innovation adoption has unique operational challenges.

On the level of technological skills, mixed results have also been reported. Akinyemi and Alabi (2023) investigated the impact of accountants' digital competencies on reporting efficiency, measuring proficiency in automation and data analytics by using a skill-assessment scale. In contrast, Ofoegbu and Eze (2021) used Likert-scale surveys across SMEs to find that low technological skills had an insignificant effect, indicating that technology does not automatically result in better reporting outcomes without sufficient training. While these studies underline the relevance of digital literacy, they addressed the challenges of technological skills as an isolated factor and not in concert with organizational drawbacks and cost implications. This paper tries to fill this gap by assessing the technological skills in concert with innovation, drawbacks, and labour cost reduction, hence enabling a fuller understanding of how competencies shape the effectiveness of accounting systems in Nigerian banks.

However, previous studies about technological drawbacks are found to indicate both positive/insignificant and negative/significant effects. For example, PwC (2022), in a cross-national study using data from companies in Europe and Asia, reported that although system failures and integration problems did occur, their overall impact on reporting efficiency was insignificant due to cybersecurity and IT support within the firms. On the other hand, Okoye and Omankhanlen (2022) assessed 100 Nigerian

organisations through correlation analysis with questionnaires. They reported that threats in the form of cybersecurity attacks, data breaches, and software malfunctioning; significantly adversely impacted the credibility and reliability of automated financial reports. These studies highlight the contextual nature of technological drawbacks. Neither of these studies incorporated drawbacks along with other dimensions such as labour cost reduction. This study bridges this literature gap by analysing drawbacks within a broader technological framework, especially in a banking sector reliant on data integrity and system security.

Finally, labour cost reduction studies are not very abundant despite this being one of the most expected outcomes from technology adoption. KPMG (2023) researched 60 Nigerian firms and concluded that the investments that were made in automation and staff training significantly reduced labour costs, enhancing process efficiency and reducing dependence on manual documentation. Their cost–benefit analysis was supported by regression modelling. On the other hand, Okonkwo and Eze (2021), using surveys across small enterprises, found the effect to be insignificant or even negative, reporting that high training expenses, system maintenance costs, and resistance from employees offset expected labour savings. While these studies highlight that labour cost outcomes vary across different types of organizations, they generally fail to integrate labour cost reduction with other technological variables. The present study overcomes this limitation by taking labour cost reduction as a core variable and presenting its interaction with innovation, skills, and drawbacks—something previous studies did not

do. In general, this study is significant because it enhances existing studies by developing, testing, and incorporating a comprehensive, integrated analytical model that surveys the four dimensions of technology adoption simultaneously rather than in isolation. It also contributes context-specific evidence within the scope of Nigerian banks, where technological adoption is expanding rapidly and unevenly. The results will be informative for accounting practitioners, bank managers, policymakers, and researchers in detailing how technology can be gainfully utilized to enhance accounting systems while minimizing risks and unintended costs.

1.7 Scope of the Study

This study focuses on the role of technology in accounting systems in Nigeria, with specific attention to technological innovation, technological skills, technological drawbacks, and labour cost reduction. The population of this study comprises accountants, auditors, and finance officers working in registered organizations in Nigeria. These professionals are directly engaged in accounting, auditing, and financial reporting activities, which makes them suitable respondents for assessing the role of technology in modern accounting practices. Data will be collected from accounting and finance staff directly involved in financial reporting and auditing activities, as they are the most appropriate respondents for understanding the impact of technology on accounting practices. The study examines how the selected independent variables technological innovation, technological skills, technological drawbacks, and labor cost reduction affect

the dependent variable, accounting system effectiveness, specifically in terms of efficiency, accuracy, and overall performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Conceptual Review

Empirical Review

Theoretical Review

Research Gap

Conceptual Review

2.2 Accounting System

Modern accounting system effectiveness refers to the extent to which accounting functions meet organizational needs by providing timely, accurate, and decision-relevant information. It also encompasses reported numbers' accuracy, process effectiveness,

responsiveness to change, and supporting managerial decisions (Kabir, 2022). Previously, effectiveness in accounting was assessed in terms of how well bookkeepers were doing in keeping books and meeting reporting requirements. Nevertheless, in the era of technology, effectiveness is increasingly associated with the application of technology that increasingly guarantees precision, punctuality, and transparency of financial data (Akinyemi & Alabi, 2023).

According to Bello and Yusuf (2021), the efficiency of an accounting system should also be viewed from the perspective of stakeholders' satisfaction, particularly managers and regulators, who take decisions based on timely and accurate information. Thus, an efficient modern accounting system is one that provides credible financial reporting, minimizes errors, enhances conformity, and enhances decision-making. Different recent research works have reflected the strong impact of technology advancements on the efficiency of an accounting system. For instance, Alotaibi (2024) suggested the Digital Transformation Framework for Accounting System Effectiveness (DTFASE), emphasizing the importance of adopting digital technologies to enhance accounting processes. The framework explains steps such as assessment and planning, implementation and integration, operationalization and monitoring, continuous improvement, and evaluation and reporting with an emphasis on increasing efficiency and effectiveness in accounting systems.

Apart from that, Widjajanto (2024) studies highlight that information systems work well if they produce information that meets stakeholders' expectations. As per the study, the

success of decision making and organizational performance lies in the effectiveness of accounting information systems, and by association, business objectives. In emerging economies, a test of the adoption of cloud computing technologies by accounting systems was done by Alotaibi (2024) and found that organizations leveraging cloud-based technologies indicated increased efficiency and accuracy of information handling in finance. The presence of challenges such as data security concerns and system integration challenges was reported, and these highlighted the importance of careful implementation and upkeep of technological solutions. These studies as a whole determine that the performance of contemporary accounting systems depends more and more on strategic technology integration. Organizations embracing digital change and making investment in quality information systems are more likely to meet stakeholder needs and enjoy superior financial outcomes.

2.2.1 Effectiveness

Effectiveness is the degree to which an accounting system can meet its designed goals, especially those dealing with the relevance and materiality of information, timeliness of financial reporting, efficiency of operations, and the quality of decision-making. In a contemporary organization, effectiveness reflects how well the accounting process supports both strategic and operational functions, particularly when integrated with emerging technologies such as AI, cloud computing, ERP systems, and data analytics tools. An effective accounting system, according to Adebayo and Salawu (2022), must

be one that generates reliable information continuously to aid managerial decisions, ensure regulatory compliance, and guarantee organizational transparency.

Technology has become one of the critical determinants of accounting system effectiveness. Digital tools improve accuracy by minimizing human error, automating repetitive processes, and enabling real-time data processing. Cloud-based accounting solutions, for example, provide organizations access to up-to-date financial records at any time, thus enhancing timely reporting and reducing the lag associated with manual bookkeeping. Similarly, AI-driven systems help organizations enhance fraud detection via automated anomaly detection and predictive analytics that increase the reliability of their financial reports.

Effectiveness in the Nigerian context is influenced by the adoption of technological innovations to support seamless transaction processing, enhanced data security, and improved audit trails. On the operational effectiveness of ERP and AI-supported accounting platforms, there is evidence that those banks and large organizations in Nigeria adopting them have recorded higher levels of effectiveness in their financial close cycles and reporting accuracy (Eze & Nwankwo, 2022; Okoye & Omankhanlen, 2023). These systems support integration across departments, guaranteeing coherence and reliability in the management of financial information.

In addition, accounting personnel competence forms another vital component of effectiveness. Technological skills, such as those related to digital accounting software, data analytics, and cybersecurity awareness, are supportive of the optimized benefit of

modern accounting technology tools. Ineffective skill levels can undermine the effectiveness even in more advanced levels of accounting technologies (Ahmed & Bello, 2021). This again points to the significance of continuous training and professional development during the course of digital platform adoptions within organizations.

Effectiveness is also characterized by system reliability. A system that frequently goes down, leads to data loss, or experiences technical glitches cannot be effective, no matter how functional it is. Musa and Ibrahim (2021) stress that system stability and resilience in cybersecurity represent integral aspects of accounting effectiveness, particularly in developing countries with enduring infrastructure deficits. Protection of data, protection against cyberattacks, and stability of the performance of the system thus contribute significantly to overall effectiveness.

Besides, effectiveness extends to cost efficiency. Effective systems often save labor costs through the automation of tasks that recur, such as payroll processing, bank reconciliations, and data entry (Okeke, 2022). This allows organizations to redeploy their staff toward more strategic and analytical tasks, thereby enhancing productivity while improving financial performance. In summary, the effectiveness of the accounting system is contingent on the production of accurate, timely, reliable, and cost-efficient financial information with the help of technological innovations and skilled personnel. With the increased adoption of digital technologies in most organizations today in Nigeria, evaluation and improvement in the effectiveness of accounting systems become

imperative to gain a competitive advantage, as well as improve financial control and organizational performance.

2.2.2 Efficiency

Efficiency in modern accounting systems is the ability to record financial transactions accurately and quickly, so that data is available when needed for making timely decisions and satisfying reporting deadlines. Efficiency and speed in accounting tasks have been significantly enhanced by the application of advanced technologies, including artificial intelligence (AI), cloud computing, and automation (Akinyemi & Alabi, 2023). AI accounting tools computerize typical accounting tasks such as data entry, invoice management, reconciliations, and audit sampling. Research has shown that firms that utilize AI in accounting reduce the time spent on routine tasks by approximately 40–50%, allowing accountants to focus on strategic decision-making and advisory services (Alotaibi, 2024; Widjajanto, 2024). Moreover, AI systems improve processing speed while simultaneously reducing errors, achieving over 95% accuracy in tasks that previously required substantial manual effort (Okoye & Omankhanlen, 2022).

Cloud computing has been equally vital in promoting efficiency. Through enabling real-time access to financial data and remote collaboration, cloud-based accounting systems allow organizations to process transactions faster and reduce delays arising from manual reporting or on-premise work (Akinyemi & Alabi, 2023). A study of businesses in emerging economies found that cloud usage led to a 30% reduction in financial processing time and improved inter-departmental coordination (Alotaibi, 2024).

Traditional accounting methods are relatively slower and more prone to human error, with late reporting and decision-making usually the result. The shift to automated and cloud systems has transformed accounting efficiency in terms of faster turnaround of reports, timely compliance with regulatory requirements, and better allocation of resources within organizations (Bello & Yusuf, 2021). Greater efficiency in accounting systems also benefits the stakeholders. Organizations enjoy cost savings and better cash flow management, whereas accountants are able to focus on higher-value tasks. Regulators and investors are provided with more timely and reliable financial information, facilitating improved oversight and confidence in reporting (Kabir, 2022). Basically, efficiency is no longer an issue of having the accounting work completed but also how technology permits organizations to respond efficiently and swiftly to financial and managerial needs.

2.2.3 Accuracy

Accuracy, correctness, and reliability of accounting records are accuracy in modern accounting systems, which are crucial in making sound decisions, attaining regulatory compliance, and sustaining the confidence of stakeholders. Adoption of advanced technologies, including AI, cloud computing, and automation, has greatly enhanced accounting accuracy by limiting human mistakes and delivering uniform record-keeping (Akinyemi & Alabi, 2023). Artificial intelligence has transformed accounting accuracy through automation of routine tasks such as data entry, reconciliations, and transaction verification. Reports indicate that AI implementation in accounting has the ability to

reduce human error by 35–40% and improve fraud and anomaly detection by up to 45% (Alotaibi, 2024; Widjajanto, 2024). This has allowed accountants to shift focus from tedious clerical tasks to analysis and strategic decision-making.

Cloud computing also improves accuracy by granting access to combined financial data in real time and facilitating collaboration among departments and geographies. Alotaibi (2024) found that firms utilizing cloud-based accounting experience a reduction of 30% in data inconsistencies and processing errors when compared to firms utilizing conventional accounting systems. Cloud systems also improve version control and prevent duplicate or conflicting entries, thereby making them more dependable.

Increased accuracy is also achieved through automation and processes which are standardized. Automated accounting processes, for example, accounts payable and receivables management, produce uniformity in the processing of transactions and fewer opportunities for human error, sometimes being the reason behind discrepancies. Kabir (2022) also reaffirmed that computerized systems ensure more uniform compliance with reporting requirements and internal controls to maintain financial data integrity. On the other hand, traditional manual bookkeeping is liable to errors as a result of miscalculation, delayed postings, and irregular record-keeping. Today's accounting systems integrated with artificial intelligence, cloud computing, and automation well outshine traditional techniques in providing timely, accurate, and decision-making-oriented financial information (Bello & Yusuf, 2021). Increased accuracy is useful to different stakeholders. Enterprises gain more reliable reports for operating and strategic

decisions. More time can be dedicated by accounting experts to advisory and analytical tasks, contributing value to the firm. Investors and regulators alike benefit from accurate financial information that increases the transparency, compliance, and trust associated with financial reporting (Okoye & Omankhanlen, 2022).

2.2.4 Performance

Performance has been referred to here as the overall ability of the organization or system to achieve its desired outcomes relating to efficiency, accuracy, productivity, profitability, and strategic responsiveness. It captures, in an accounting system, the extent that financial processes contribute to operational excellence, quality reporting, cost reduction, and informed decision-making. Contemporary organizations require not only that accounting systems record transactions but also contribute to organizational competitiveness through timely insights, reduced errors, and improved resource utilization (Adebisi & Okafor, 2022).

The integration of technology into an accounting system is closely related to its performance. These digital tools, like AI, RPA, cloud-based accounting, and ERP systems, enhance the overall performance of organizations by speeding up the handling of financial transactions, providing access to financial information in real time, and automatically managing workflows (Olawale & Salami, 2023). Performance improves through such innovations because they reduce errors from human involvement, make reporting consistent, and free accountants from regular bookkeeping to concentrate on analytical and strategic duties.

Empirical studies have also shown the positive influence of technology on performance. For instance, a study by Adekunle and Ibrahim (2023) showed that financial institutions in Nigeria using AI-driven accounting platforms realized a 30% increase in reporting speed and a 22% boost in productivity within operations compared to firms relying on manual systems. Similarly, organizations that implemented ERP systems recorded an improvement in coordination across departments, translating into more efficient budgeting, cost control, and compliance monitoring (Ezekiel & Musa, 2022). The above findings therefore underscore that technology-enabled accounting systems are driving improvements in performance through operational processes and at the level of strategic decision-making.

Performance is further related to cost efficiency. An automated accounting system cuts down on labor and administrative costs related to tasks that are considered repetitive in nature, such as bank reconciliations, sorting of invoices, and calculation of payroll (Samuel & Danjuma, 2021). With such tasks automated, an organization can re-assign its human capital to roles that add more value. This enhances overall performance and competitiveness. Moreover, automated systems avert delays, enhance timely financial closings, and reduce the cost of correcting errors in improving financial performance.

Another very important dimension of performance relates to the reliability and security of the accounting system. Highly performing systems are stable, impervious to cyber threats, and able to protect financial information. Indeed, in modern times, cyber security breaches and data manipulation can profoundly destroy achievements through

financial loss and reputational damage. Research by Nwoye and Adebanjo (2023) illustrates how organizations with strong IT controls and cybersecurity frameworks have higher performance outcomes because secure systems enhance user confidence, ensure business continuity, and promote the credibility of financial information.

Finally, performance can be considered from a managerial effectiveness perspective. Technology-enhanced accounting systems give managers real-time dashboards, predictive analytics, and advanced reporting tools that foster proactive decisions. These systems enable managers to forecast cash flows with greater accuracy, assess investment opportunities, detect fraud, and examine operational risks (Daramola & Ojo, 2024). In fact, the ability to make timely and relevant decisions is also an important factor in organizational performance, especially within dynamic business environments. In summary, performance within the context of accounting systems pertains to the ability of financial processes to support efficiency, accuracy, cost savings, timely reporting, and strategic decision-making. The integration of digital technologies improves this aspect significantly, automating processes, decreasing errors, enhancing security, and ultimately offering real-time insights. As more and more Nigerian organizations adopt innovative technologies in conducting their businesses, the trend is toward the improvement of accounting system performance that would promote organizational competitiveness and long-term sustainability.

2.3 Information Technology

Information Technology refers to the application of computers, digital systems, software applications, and networks, among other modern technologies that aid in the processing, storing, retrieval, and transmission of information within an institution or learning setting. In modern society, IT has grown from mere support service to a key driver of innovation and productivity, be it for strategic advantage or not. The use of IT in education, business, health, and governance has transformed the mode of operation, communication, and value delivery within institutions and to their respective stakeholders.

IT enhances teaching and learning in educational settings by providing platforms that support virtual classrooms, e-learning systems, and the delivery of digital content. The adoption of technologies like the LMS, AI-based tutoring tools, and cloud-based collaboration platforms enables students to learn at their own pace while providing teachers with facilities for assessment, feedback, and record management (Mbah 2023). This movement toward digital learning accelerated after the COVID-19 pandemic, which truly stamped IT as a vital part of instructional delivery in tertiary institutions worldwide (Ojo & Bello 2021).

IT enables efficiency within organizations by automating routine tasks, improving the flow of communication, enhancing decision-making with data, and allowing real-time access to critical information. Businesses employ various IT systems that include enterprise resource planning, customer relationship management, and analytics software in pursuit of process optimization, reduction of operational cost, and enhancement in

service delivery. IT also improves innovation by enabling an organization to pursue new products, services, and business models with the help of emerging technologies like artificial intelligence, the Internet of Things, cloud computing, and blockchain.

Moreover, IT has become the significant source of competitive advantage. According to the RBV, the firm can achieve a competitive advantage if its resources are of more value, are rare, and technologically advanced. IT infrastructure and digital capabilities fall into this category now because firms largely depend on data analytics and digital competencies to stay ahead in the competitive environment. Some of the challenges it faces include cybersecurity threats, digital inequality, a shortage of IT skills, and poor infrastructure. The effectiveness of these technologies in Nigeria, like in other developing countries, tends to retard with regard to efficiency, access, and reliability due to these challenges. Such challenges have huge implications for IT services, especially in education, as noted by Okafor & Nwafor, 2022. For these reasons, ongoing investments in digital infrastructure, capacity building, and policy support are crucial in harnessing full benefits from IT in fostering learning, innovation, and institutional development.

2.3.1 Technological Innovation

Accounting technological innovation is the systematic application of advanced tools such as artificial intelligence (AI), blockchain, big data analytics, robotic process automation (RPA), and cloud computing to enhance financial management and reporting processes. Contrasting with traditional accounting processes that are primarily manual

and retrospective, technological innovation enables real-time analysis, forward-looking intelligence, and higher levels of efficiency (Okoye et al., 2022). It goes much beyond simple automation of routine processes by bringing accounting to the level of a strategic process that facilitates business development and decision-making.

Artificial intelligence, for example, has been applied in situations such as invoice processing, detection of fraud, and predictive analytics, which reduces errors by humans and increases accuracy. According to Eze and Chukwu (2023), businesses that adopt AI-based accounting mechanisms realize data processing times up to 40% less than their counterparts in traditional accounting. Equally, blockchain provides immutable ledgers that improve transparency, reduce manipulation of financial data, and increase stakeholder trust (Adeniran & Bello, 2021). Cloud computing also provides accessibility and collaboration through the ability to let accountants and managers access financial information from anywhere, thereby increasing responsiveness to business needs (Kabir, 2022).

Big data analytics has also transformed accountants' way of providing insights. Unlike worrying about historical records, analytics-driven systems allow organizations to forecast trends, assess risks, and optimize resource allocation. Research conducted by Akinyemi and Salami (2024) on financial institutions in Sub-Saharan Africa found that companies that integrated big data into accounting activities saw their decision-making accuracy increase by 25% compared to those relying on spreadsheets. This indicates how innovation indirectly helps in the effectiveness of accounting systems. Additionally,

using robotic process automation (RPA) within accounting procedures such as reconciliations and payroll has eased processes. Facts reveal that organizations that implement RPA record up to 60% reduction in workload repetition and significant reduction in operational costs (Obi & Adeoye, 2023). These findings are consistent with the general trend in the world towards digitalization, such that accounting is no longer viewed as a compliance function but as a driver of competitive advantage. In comparison, organizations that fall behind in adopting these technology developments experience slowness in financial reporting, wider margins of errors, and reduced flexibility in responding to shifts in the business environment. While advanced economies such as the United States and Europe lead the world in blockchain and AI adoption in accounting, emerging economies such as Nigeria and Ghana are also closing the gap, particularly in banking and fintech (Olawale & Okafor, 2025). This global comparison highlights the acknowledgment that innovation is now not just desirable but essential for modern accounting practice. In conclusion, technological innovation not only makes accounting more efficient and accurate but also turns accounting into an active, predictive, and innovation-oriented function. With the incorporation of AI, blockchain, cloud, and big data analytics, modern accounting systems evolve from crude record-keeping devices to platforms for strategic decision-making, fraud prevention, and sustainable development.

2.3.2 Technological Skills

The success of modern accounting systems not only relies upon technology infrastructure but also upon the expertise of accountants operating the systems. Technological ability is the ability of accounting personnel to utilize sophisticated digital tools like ERP systems, cloud accounting software, and data analytics tools effectively to enable efficient financial processes. Without the right skills, the potential of innovation and automation remains underutilized, and there is inefficiency and inaccuracy in reporting (Ofoegbu & Eze, 2021). Accounting skills in applying software such as QuickBooks, SAP, and Oracle are a key requirement for accountants in today's digital economy. A survey by IFAC (2022) discovered that over 72% of global accounting firms place ERP competence and digital literacy among their top hiring needs, and this is a shift from traditional bookkeeping competencies towards technology competencies. In Nigeria, Adebanjo and Salihu (2023) found that firms that invested in continuous training for their accountants through cloud accounting courses saw a 30% efficiency gain over firms utilizing manual or outdated processes. It indicates the apparent link between computer proficiency and the efficiency of accounting systems.

One of the other technological competencies is IT competency and data analytics. The complexity of financial transactions has increased the demand for accountants to process huge volumes of data. Companies that integrated analytics in their accounting operations had a 25% boost in decision speed than companies that did not have analytics capabilities, according to Adebayo (2022). This highlights the degree to which technical skills diverge from managing finances on a day-to-day basis to strategic knowledge that

facilitates business growth. Continuing professional development and training are critical to equipping accountants with relevant skills. For instance, a World Bank (2021) Sub-Saharan African study indicated that formal professional accounting training in digital accounting tools occurred only in 45% of instances, as opposed to 78% in developed economies. This discrepancy not only shows regional disparities but also indicates the need for technical investment in improving skills in order to become more competitive in the world's financial market. Furthermore, Ijeoma and Okonkwo (2024) theorize that continuous professional development, particularly in areas such as artificial intelligence in auditing and blockchain accounting, is now necessary in ensuring the reliability and transparency of financial reports.

Developed nations, on the other hand, are light-years ahead of their developing counterparts when it comes to technology use in accounting practice. For example, it was demonstrated in a Deloitte (2023) study that 85% of North American and European accounting firms used AI-driven accounting software compared to less than 40% of most African countries. This disparity is partly attributed to infrastructural deficits but also partly attributable to different levels of technological expertise among accountants. Thus, technology existing, its impact on system efficiency is moderated by professionals' expertise in leveraging it. In conclusion, accounting competency is the cornerstone of efficient accounting systems in the modern world. Expertise in accounting software, competence in data analytics, and continuous training in emerging technologies equip accountants with the ability to fully capitalize on innovation for

efficiency, accuracy, and strategic decision-making. Without such skills, sophisticated accounting systems stand to be poorly used, thus compromising organizational performance and competitiveness.

2.3.3 Technological Drawbacks

While technology has changed modern accounting to a very large degree, it also has serious disadvantages that can undermine its effectiveness. One of the biggest of these is cybersecurity threats. As more and more accounting systems become cloud-based and reporting systems go digital, accounting information becomes vulnerable to cyber attacks. A global survey by PricewaterhouseCoopers (PwC, 2023) revealed that 40% of the finance firms reported at least one significant cyber attack over the last three years, with accounting systems being the most frequently targeted. Similarly, Alabi and Musa (2022) noted that cyber fraud, phishing, and ransomware attacks erode the integrity of financial documents and erode stakeholders' confidence.

The other disadvantage is the frequency of system breakdowns and software crashes. When accounting systems crash or break down, they lead to operation delays and at times lead to loss of critical financial data. As discovered in a study by Osei and Adeyemi (2021), 27% of Nigerian firms had more than 12 hours' downtime for their accounting software per quarter, which had profound effects on the timeliness of financial reports. In comparison, multibusiness firms in rich economies experience fewer collapses due to more robust IT infrastructures, thereby accentuating the disparity in technological resilience.

The cost of implementation and acquisition is also a major limiting factor. Advanced accounting packages such as SAP or Oracle ERP have enormous financial expenses on licensing, customization, and continuous updates. For instance, Bello and Adebayo (2022) noted that small and medium-sized enterprises (SMEs) in Nigeria allocate an average of ₦5 million per annum to accounting technology adoption and maintenance, which is found unsustainable by most firms. On the other hand, large organizations with more financial resources can absorb such costs and make effective use of technological strengths. Finally, employee resistance to embracing technology limits the effectiveness of accounting innovations. A few accountants, particularly those from classical systems training, perceive higher tools like AI, blockchain, and cloud accounting as threats to them. Eze and Chukwu (2021) explained that nearly 30% of professional accountants in their study resisted the adoption of cloud-based accounting solutions because they were not familiar with them and feared loss of jobs. Such resistance holds back organizational advancement towards efficiency and accuracy. In summary, even though technology enhances accounting processes, its drawback—cybersecurity threat, system failure, cost of implementation, and employee resistance—poses challenges that must be overcome. Those organizations that fail to mitigate these risks can make their investment in technology worthless. Hence, examination of both benefits and drawbacks of technology is necessary in deciding its role in modern accounting.

2.3.4 Labor Cost Reduction

Another major driving force that motivates technology implementation in accounting is that it has the ability to save huge man-hour expenses by automating monotonous and recurring tasks. Accounting procedures such as data entry, reconciliations, running of payroll, and generating reports, which previously were subjected to the drudgery of a few workers, can now be executed by advanced software with minimal human intervention. This automation reduces manpower needs, thereby reducing payroll expenses. For example, Adeyemi (2023) finds that companies adopting enterprise resource planning (ERP) systems experience an average accounting staff requirement reduction of 25–30% due to automated core functions. Similarly, Akinyemi and Osho (2022) found that Nigerian banks which transitioned from manual accounting to integrated accounting software experienced up to 18% payroll savings within the first two years of adoption. By contrast, a 2022 study by the International Federation of Accountants (IFAC) revealed that firms globally reduced accounting staffing costs by approximately 22% after they installed AI system-based solutions, along with reporting speed and accuracy improvements. But such cost savings have a tendency to trigger job displacement discussions. A study by Johnson and Lee (2021) indicates that while automation lowers repetitive jobs, it also creates new opportunities in higher-skilled areas such as data analysis, systems auditing, and financial projections.

Moreover, technological adoption enhances cost-effectiveness in accounting processes other than reducing labour costs. As an illustration, Okonkwo (2023) explains that automation enables organizations to handle greater transaction volumes without non-

proportional labour increases, with scalability being enhanced. As opposed to earlier when conventional systems required a rise in workers in a direct proportion with processes increasing. Thus, while cost reduction in labor is one of the most tangible benefits of IT installation, firms must balance this benefit by having plans for workforce reskilling and redeployment in order to offset the fear of job insecurity and guarantee long-term productivity.

2.4 Empirical Review

2.4.1 Technological Innovation and Accounting System

Nwachukwu (2024) investigated the impact of Robotic Process Automation (RPA) adoption on the operational efficiency of banking accounting systems, with particular focus on transaction processing. The study aimed to determine whether the implementation of RPA technologies enhances both the accuracy and the speed at which financial transactions are processed within banks. To achieve this, the researcher collected primary data through structured questionnaires administered to accounting and operations staff across several banking institutions. The questionnaires were designed to measure perceptions of RPA adoption, improvements in transaction processing speed, and the accuracy of financial operations following automation. The collected data were analysed using regression analysis to establish the relationship between RPA adoption

and operational performance metrics. The results indicated a positive and statistically significant effect, suggesting that banks that implemented RPA experienced measurable improvements in both the speed and accuracy of their transaction processing. Specifically, the findings demonstrated that repetitive and time-consuming accounting tasks, such as reconciliations, fund transfers, and ledger updates, were completed more efficiently with reduced errors when automated. The study concluded that RPA adoption not only streamlines routine banking operations but also enhances the reliability of accounting systems, thereby contributing to overall operational efficiency and supporting better decision-making. These findings underscore the growing importance of technological innovation in the accounting practices of financial institutions. By reducing human intervention in repetitive processes, RPA minimizes the likelihood of manual errors, shortens processing times, and allows accounting personnel to focus on more strategic financial tasks. The study further highlights that the successful integration of RPA in banks depends not only on the technology itself but also on staff readiness, proper system configuration, and continuous monitoring to ensure consistent performance.

Olawale and Akinyemi (2021) examined the effect of technological innovation, with a particular focus on cloud computing adoption, on the timeliness and accuracy of financial reporting among manufacturing firms in Nigeria. The study aimed to determine whether the integration of cloud-based accounting systems into organizational processes enhances the efficiency and reliability of financial information. To achieve this, the

researchers collected primary data through structured questionnaires administered to accounting staff, finance managers, and IT personnel across a sample of manufacturing firms. The questionnaire captured information on the extent of cloud computing adoption, perceptions of system efficiency, timeliness of reporting, and the accuracy of financial records. The study employed multiple regression analysis as the primary estimation technique to quantify the effect of cloud-based accounting systems on financial reporting outcomes. Specifically, the dependent variables were timeliness of reporting (measured by the speed of generating monthly and quarterly reports) and accuracy of reporting (measured by the frequency of errors, reconciliations required, and audit adjustments). The independent variable was the degree of technological innovation, operationalized through indicators such as the level of cloud adoption, use of real-time data processing, and integration of cloud systems with existing enterprise resource planning (ERP) tools. Control variables, including firm size, staff IT competence, and prior accounting system sophistication, were included in the regression models to isolate the effect of cloud computing adoption. The regression results indicated a positive and statistically significant relationship between cloud computing adoption and both timeliness and accuracy of financial reporting. For example, the model coefficients suggested that firms with higher levels of cloud adoption experienced shorter reporting cycles and fewer errors in financial statements. The adjusted R^2 values indicated that a substantial proportion of variation in reporting efficiency and accuracy could be explained by cloud computing adoption and the associated technological innovations.

The findings imply that cloud-based systems facilitate real-time data entry, automated reconciliations, and seamless access to financial information, thereby reducing delays and minimizing human error in accounting processes. Beyond quantitative results, Olawale and Akinyemi (2021) discussed practical implications for Nigerian manufacturing firms, emphasizing that the successful implementation of cloud accounting requires not only technological infrastructure but also staff training, robust cybersecurity measures, and system customization to align with organizational processes. The study further highlighted that technological innovation, particularly cloud adoption, serves as a critical driver of operational efficiency, improved audit readiness, and enhanced decision-making within firms. In conclusion, the study provides strong empirical evidence that cloud-based accounting systems improve the efficiency and accuracy of financial reporting. Methodologically, the use of survey instruments, multiple regression analysis, control variables, and operationalized metrics for timeliness and accuracy ensures that the results are robust and generalizable within the Nigerian manufacturing sector. It also underscores the importance of integrating technological innovation with human capability to maximize the benefits of digital accounting systems.

Adegbite (2022) examined the effect of artificial intelligence (AI) adoption on operational efficiency and fraud detection in selected audit firms in Lagos State, Nigeria. The study sought to determine whether the integration of AI tools into accounting and auditing processes enhances the speed, accuracy, and reliability of financial operations,

while also reducing incidences of fraud. To collect relevant data, the researcher employed a structured questionnaire administered to accounting staff, auditors, and IT personnel within the sampled audit firms. The questionnaire measured several dimensions, including the extent of AI adoption (such as the use of AI for data analytics, transaction verification, and anomaly detection), perceptions of process efficiency, frequency of accounting errors, and effectiveness of fraud detection mechanisms. For the estimation of effects, the study employed correlation analysis to investigate the relationship between AI adoption and operational outcomes. The dependent variables were operational efficiency (measured by speed of processing, reduction in manual interventions, and timeliness of reporting) and fraud detection (measured by the number of detected anomalies, error reductions, and improved audit accuracy). The independent variable, AI adoption, was operationalized through indicators such as the usage of machine learning algorithms, predictive analytics, and automated monitoring tools. Control variables included firm size, staff experience, and pre-existing IT infrastructure to ensure the relationship observed could be attributed to AI adoption rather than confounding factors. The analysis revealed a positive and statistically significant correlation between AI adoption and both operational efficiency and fraud detection. This finding indicates that firms that embraced AI technologies experienced faster and more accurate accounting processes, while simultaneously enhancing their ability to identify and prevent fraudulent transactions. Specifically, AI tools automated repetitive accounting tasks such as data entry, reconciliations, and ledger maintenance, thereby

reducing human errors and freeing staff to focus on higher-value auditing activities. Additionally, AI algorithms improved the detection of anomalies in large datasets, enhancing the reliability of financial reporting and the credibility of audit outcomes. The study also highlighted practical considerations for successful AI implementation in accounting and audit functions. These include the need for continuous staff training to leverage AI tools effectively, ensuring data quality for machine learning applications, and maintaining cybersecurity measures to protect sensitive financial information. Adegbite (2022) concluded that AI adoption represents a transformative innovation for auditing firms, not only improving efficiency but also strengthening internal controls and fraud management systems. Methodologically, the study's use of primary survey data, structured measurement of AI adoption and operational outcomes, and correlation analysis provided empirical evidence supporting the role of AI in modernizing accounting processes. The findings underscore the importance of integrating technological innovation with skilled personnel to achieve sustainable improvements in accounting accuracy, efficiency, and fraud prevention.

Ezekiel and Umar (2023) examined the impact of blockchain technology on transparency and accountability in public sector accounting. The study aimed to determine whether the adoption of blockchain systems could mitigate manipulation of accounting information and enhance the reliability and credibility of financial reporting in government institutions. To achieve this, the researchers employed a case study approach, focusing on selected public sector entities that had implemented blockchain-

enabled accounting or financial reporting systems. The study relied primarily on secondary financial records, including audit reports, ledgers, and publicly available financial statements, to assess changes in transparency, incidences of discrepancies, and overall accountability before and after blockchain adoption. For the estimation of effects, the researchers analysed the secondary data using comparative and trend analysis, alongside descriptive and inferential statistics, to evaluate the improvements in reporting accuracy and the reduction in manipulation of records. The dependent variables were transparency and accountability, operationalized through metrics such as the frequency of accounting errors, number of reconciliations or adjustments, and the timeliness of financial reporting. The independent variable, blockchain technology adoption, was conceptualized as the degree to which blockchain protocols were integrated into record-keeping, transaction verification, and reporting processes. Control factors included organizational size, prior accounting system efficiency, and staff competence, to isolate the impact of blockchain adoption on the outcomes of interest. The findings revealed a positive and statistically significant effect of blockchain technology on both transparency and accountability. Specifically, the study demonstrated that the immutable and decentralized nature of blockchain reduced opportunities for fraudulent manipulations, unauthorized adjustments, and misstatements in financial records. Additionally, real-time tracking of transactions and automated verification processes improved reporting reliability, thereby fostering greater trust in public sector financial statements. The case study also highlighted that blockchain adoption enhanced internal

control mechanisms, reduced reliance on manual reconciliations, and facilitated external audit processes by providing verifiable, tamper-proof records. The study further emphasized practical implications for public sector accounting, including the need for appropriate technological infrastructure, staff training on blockchain functionalities, and integration with existing financial management systems to maximize benefits. Ezekiel and Umar (2023) concluded that blockchain technology offers a transformative solution for enhancing financial accountability in government institutions, ensuring that public funds are recorded accurately, reported transparently, and safeguarded against mismanagement. Methodologically, the study's use of secondary financial records, case study design, comparative trend analysis, and descriptive statistics provided robust evidence supporting the positive influence of blockchain technology on accounting practices in the public sector. The findings highlight that blockchain adoption not only improves the accuracy and reliability of financial reporting but also strengthens institutional mechanisms for transparency, thereby supporting better governance and public trust.

2.4.2 Technological Skills on Accounting System

Ogunleye (2023) investigated the effect of accountants' technological readiness on the integration of big data analytics and its subsequent impact on decision-making effectiveness. The study aimed to examine whether accountants who are more digitally prepared and proficient are better able to leverage big data tools for improved financial analysis and strategic decision-making. To collect data, Ogunleye (2023) employed a

structured questionnaire administered to accountants across various organizations. The questionnaire measured respondents' technological readiness, including their familiarity with digital accounting tools, competency in data analytics software, and comfort with emerging financial technologies. The independent variable, digital readiness, was operationalized through indicators such as IT skill levels, previous training in accounting software, and self-reported confidence in using analytics tools. The dependent variable, decision-making effectiveness, was assessed through respondents' perceptions of their ability to analyze complex financial data, make timely decisions, and provide accurate recommendations for organizational management. Control variables, including years of professional experience, firm size, and prior exposure to technology, were included to isolate the effect of digital readiness on decision-making outcomes. For estimation, the study employed correlation analysis to assess the relationship between accountants' technological readiness and decision-making effectiveness. The results revealed a positive and statistically significant effect, indicating that higher levels of digital readiness among accountants are associated with enhanced decision-making capabilities. Accountants who were more technologically proficient were better able to interpret large volumes of financial data, identify trends, and make informed recommendations, thereby improving organizational performance. The study also highlighted practical implications, emphasizing the importance of continuous professional development, IT training programs, and organizational support to enhance accountants' technological competence. Ogunleye (2023) concluded that fostering digital readiness is critical for leveraging big

data analytics effectively, ensuring that accountants can contribute meaningfully to strategic decision-making and organizational success. Methodologically, the study demonstrates the utility of structured questionnaires combined with correlation analysis to empirically assess the relationship between technological preparedness and accounting performance outcomes. The findings provide strong evidence that digital readiness among accountants not only facilitates the adoption of advanced analytical tools but also significantly enhances the quality and effectiveness of financial decision-making within organizations.

Oladipo (2021) examined the role of technological proficiency in influencing the adoption and effective utilization of cloud-based accounting systems within Nigerian banks. The study aimed to assess whether the level of staff ICT competence affects how efficiently cloud-based accounting systems are implemented and used for day-to-day financial operations. To collect data, the researcher administered structured questionnaires to accounting and finance staff across selected banks. The questionnaire measured respondents' technological proficiency, including their familiarity with cloud computing platforms, ability to navigate accounting software, and competence in using digital tools for financial reporting. The independent variable, staff ICT skills, was operationalized through indicators such as prior ICT training, experience with digital accounting platforms, and self-assessed competence in technology use. The dependent variable, system utilization and efficiency, was measured by the degree of engagement with the cloud-based accounting system, frequency of software use, speed of transaction

processing, and overall improvement in operational workflows. Control variables, including bank size, staff experience, and pre-existing technology infrastructure, were included to ensure the effect of ICT skills was isolated. For estimation, the study employed regression analysis to examine the relationship between staff technological proficiency and cloud-based accounting system utilization. The results revealed a positive and statistically significant effect, indicating that higher ICT skills among staff led to more efficient adoption and usage of cloud-based accounting systems. Staff with greater technological competence were better able to navigate system functionalities, reduce errors, and leverage automation features, ultimately improving operational efficiency and the reliability of financial reporting. The study highlighted practical implications, emphasizing that investment in ICT training and continuous professional development is crucial for maximizing the benefits of cloud-based accounting systems. Oladipo (2021) concluded that staff technological proficiency not only facilitates system adoption but also enhances overall accounting efficiency, decision-making speed, and the quality of financial reporting in Nigerian banks. Methodologically, the study demonstrates the effectiveness of questionnaire-based data collection combined with regression estimation techniques in evaluating the impact of human technological capability on the performance and utilization of accounting technologies. The findings provide strong empirical support for the notion that technological proficiency among accounting staff is a critical determinant of successful system adoption and operational efficiency.

Chinedu and Hassan (2022) explored the moderating role of technological knowledge on the relationship between accounting software adoption and audit quality, with the aim of determining whether accountants' technological competence enhances the effectiveness of software in improving auditing outcomes. The study recognized that while accounting software can streamline processes and improve accuracy, the benefits may depend heavily on the users' level of technological knowledge. The researchers employed survey methods, administering structured questionnaires to auditors, accounting staff, and finance managers across selected organizations. The questionnaire captured information on the extent of accounting software adoption, respondents' technological knowledge, and perceptions of audit quality, including error detection, compliance adherence, and reliability of financial reports. The independent variable, accounting software adoption, was measured through indicators such as frequency of use, functional coverage of the software, and integration with other accounting modules. The moderating variable, technological knowledge, was operationalized through prior training, experience with digital tools, and self-assessed IT competence. The dependent variable, audit quality, was assessed through audit accuracy, timeliness, and reliability of reported findings. Control variables included firm size, prior audit performance, and staff experience to ensure the observed effects were attributable to the interaction between software adoption and technological knowledge. For estimation, the study employed regression analysis with moderation effects to examine how technological knowledge influences the relationship between software adoption and audit quality. The

results revealed a positive and statistically significant moderating effect, indicating that higher levels of technological competence among accounting staff strengthened the positive impact of accounting software on audit quality. In other words, organizations where staff were more technologically proficient experienced greater improvements in audit accuracy, error detection, and compliance when utilizing accounting software. The study highlighted practical implications, emphasizing that firms seeking to maximize the benefits of accounting software should invest in staff training and continuous professional development to enhance technological knowledge. Chinedu and Hassan (2022) concluded that software adoption alone is not sufficient to achieve optimal audit quality; the competence of the staff using the software is equally critical in realizing improvements in auditing performance. Methodologically, the study demonstrates the utility of survey data and regression analysis with moderation testing to evaluate how human technological competence can influence the effectiveness of accounting tools. The findings provide robust evidence that technological knowledge not only enhances software utility but also significantly improves audit quality, thereby reinforcing the importance of staff capacity-building alongside technology adoption in accounting practice.

Okonkwo (2019) examined the relationship between accountants' technological competence and financial reporting accuracy in small and medium-sized enterprises (SMEs), with the aim of determining whether higher levels of digital skill among accounting personnel enhance the precision and reliability of financial statements. The

study focused on routine accounting functions such as ledger maintenance, reconciliations, and financial report preparation, which are prone to human error if performed manually or by staff with low technological proficiency. Data for the study were collected using survey questionnaires administered to accountants and finance staff in selected SMEs. The questionnaire assessed respondents' technological competence, including their proficiency in accounting software, familiarity with digital financial tools, and prior experience with automated accounting processes. The independent variable, technological competence, was operationalized through self-reported digital skills, IT training, and experience with accounting software. The dependent variable, financial reporting accuracy, was measured through the frequency of errors in reports, adherence to accounting standards, and reliability of submitted financial statements. Control variables such as firm size, prior technology adoption, and staff experience were included to isolate the effect of technological competence on reporting accuracy. For estimation, the study employed linear regression analysis to examine the relationship between technological competence and financial reporting accuracy. The results revealed a positive and statistically significant relationship, indicating that accountants with higher digital skill levels produced more accurate and reliable financial statements. The study highlighted that technologically competent staff are better able to utilize accounting software effectively, automate repetitive processes, and reduce errors associated with manual calculations. Okonkwo (2019) further emphasized practical implications, noting that SMEs should prioritize staff training in accounting

technologies and provide continuous professional development opportunities to enhance technological competence. By improving digital skills, firms can achieve more accurate reporting, timely financial information, and increased stakeholder confidence in their financial management. Methodologically, the study demonstrates the effectiveness of survey-based data collection combined with linear regression analysis in assessing the impact of human technological capability on accounting performance outcomes. The findings provide empirical support that enhancing accountants' technological competence is a critical factor in improving the accuracy, reliability, and overall quality of financial reporting in SMEs.

Ahmed and Bello (2020) investigated the effect of continuous professional development (CPD) in IT skills on the performance of accountants in Northern Nigeria, with the aim of assessing whether ongoing training in information technology enhances accountants' efficiency and effectiveness in using accounting software. The study focused on accounting operations such as data entry, ledger management, financial reporting, and internal control processes, which are heavily influenced by staff technological competence. The study collected data using structured questionnaires administered to accountants, finance officers, and managers across selected organizations. The questionnaire measured respondents' participation in IT-focused CPD programs, their familiarity with accounting software, and the perceived impact of IT skills on their work performance. The independent variable, continuous professional development in IT skills, was operationalized through indicators such as frequency of

training, types of IT programs attended, and self-reported skill improvement. The dependent variable, accountants' performance, was measured by efficiency in software utilization, accuracy of financial reports, and timeliness in completing accounting tasks. Control variables included organization size, prior technology adoption, and employee experience, which were incorporated to isolate the effect of CPD in IT skills on performance outcomes. For estimation, the study employed descriptive analysis to examine trends and patterns in the data, and to establish the relationship between CPD in IT and accountants' performance. The results revealed a positive and statistically significant effect, indicating that firms that invested in staff IT training experienced more efficient and effective use of accounting software. Accountants who participated in continuous IT training were better able to navigate complex software functions, automate routine tasks, and enhance the overall accuracy and speed of financial operations. The study highlighted practical implications, emphasizing that organizations should prioritize continuous IT skills development as a strategic investment to improve staff performance and overall operational efficiency. Ahmed and Bello (2020) concluded that continuous professional development in IT not only strengthens technical competence but also enhances productivity, reduces errors, and facilitates the adoption of modern accounting technologies. Methodologically, the study demonstrates the value of questionnaire-based data collection and descriptive analysis in assessing the impact of training interventions on accounting performance. The findings provide strong empirical support for the notion that investing in continuous IT training is essential for optimizing

accountants' use of software tools and enhancing organizational financial management outcomes.

2.4.3 Technological Drawbacks and Accounting system

Adams (2023) investigated the impact of resistance to change on accountants' adoption of new software packages, with the objective of determining how behavioral and attitudinal factors influence the successful implementation of accounting innovations. The study recognized that, while technological innovations can enhance efficiency and accuracy in accounting operations, employees' reluctance or hesitation to adopt new systems can significantly hinder the benefits of such innovations. Data for the study were collected through a survey of accounting practitioners, including accountants, finance officers, and auditors from various organizations. The questionnaire captured information on respondents' attitudes toward new accounting software, perceived challenges in adapting to new technology, and the extent of software usage in their daily tasks. The independent variable, resistance to change, was operationalized through indicators such as fear of job displacement, discomfort with learning new systems, and reluctance to modify established workflows. The dependent variable, successful implementation of accounting innovations, was measured by the degree of software utilization, integration of new processes into daily accounting tasks, and improvements in operational efficiency. Control variables such as organizational size, prior technology adoption, and staff experience were included to isolate the effect of resistance to change on innovation adoption. For estimation, the study employed regression analysis to

examine the relationship between resistance to change and the successful implementation of accounting innovations. The results revealed a significant negative effect, indicating that higher levels of resistance among accountants were associated with lower adoption rates and reduced effectiveness of new software systems. Practitioners who were reluctant or unwilling to embrace technological change were less likely to utilize the full capabilities of accounting software, which hindered process automation, reduced accuracy, and slowed the efficiency of financial reporting. The study highlighted practical implications, emphasizing the need for change management strategies, staff training, awareness programs, and supportive organizational culture to mitigate resistance. Adams (2023) concluded that addressing behavioral and attitudinal barriers is essential for maximizing the benefits of accounting innovations and ensuring smooth transitions to digitalized accounting systems. Methodologically, the study demonstrates the utility of survey-based data collection combined with regression estimation to empirically assess the impact of human resistance on technology adoption in accounting. The findings provide strong evidence that resistance to change is a critical factor that negatively influences the successful implementation of accounting software, highlighting the importance of human factors alongside technological advancement.

Lawal (2021) examined the effect of high software acquisition costs on the adoption of modern accounting technologies in small and medium-sized enterprises (SMEs). The study aimed to determine whether financial barriers hinder the effective implementation of digital accounting systems, which are essential for improving

operational efficiency, accuracy, and reporting timeliness. Data were collected through structured questionnaires administered to accounting and finance staff in selected SMEs. The questionnaire assessed respondents' perceptions of software affordability, willingness to invest in new technologies, and extent of technology adoption. The independent variable, software acquisition cost, was measured through perceived expense levels, budget limitations, and affordability relative to organizational resources. The dependent variable, technology adoption, was operationalized through indicators such as usage frequency, integration of digital tools in accounting processes, and reliance on modern accounting software. Control variables included firm size, prior IT infrastructure, and staff competency. For estimation, the study employed descriptive statistics and regression analysis to evaluate the impact of cost barriers on technology adoption. The findings revealed a negative and statistically significant effect, indicating that high software costs substantially reduce the likelihood of SMEs adopting modern accounting technologies. Organizations facing financial constraints were less likely to invest in updated software, leading to continued reliance on manual processes and outdated accounting systems. The study highlighted practical implications, emphasizing the need for cost-effective solutions, government subsidies, and flexible payment plans to encourage SMEs to embrace technological innovations.

Omoregie and Aliyu (2022) investigated the issue of data insecurity as a technological drawback in public sector accounting, with the goal of understanding how concerns over data breaches and cyber threats affect trust in digital accounting systems.

The study focused on public sector organizations where sensitive financial information is managed and the risk of data manipulation or unauthorized access can have significant consequences. Data were collected using interviews and case study analysis, engaging accounting staff, IT personnel, and management officials in public sector institutions. The independent variable, data insecurity, was operationalized through perceived risks of hacking, unauthorized access, and system vulnerabilities. The dependent variable, trust in digital accounting systems, was measured through adoption willingness, system usage frequency, and confidence in the accuracy and reliability of financial reports. For estimation, the study applied qualitative case study analysis combined with interpretive evaluation of interview responses to understand the relationship between data insecurity and system adoption. The findings revealed a negative and statistically significant effect, showing that high levels of concern over data breaches reduced users' trust in digital accounting systems and hindered full adoption of technological solutions. Employees were reluctant to rely on automated systems, preferring manual verification methods, which negatively impacted efficiency and reporting accuracy. The study emphasized practical measures such as robust cybersecurity frameworks, regular system audits, staff awareness programs, and secure system architectures to mitigate concerns and build confidence in digital accounting adoption.

Eze (2019) investigated the effect of system downtime on the reliability of financial reporting among Nigerian firms, with the objective of understanding how interruptions in accounting software operations impact the accuracy and credibility of

financial statements. The study focused on the challenges posed by frequent system failures, network disruptions, and hardware malfunctions, which can delay reporting processes and increase the likelihood of errors. Data were collected from secondary sources, including firm financial records, audit reports, and IT system logs, to assess instances of system downtime and corresponding discrepancies in financial reports. The independent variable, system downtime, was operationalized through frequency and duration of accounting system outages, while the dependent variable, financial reporting reliability, was measured through error rates, delays in report submission, and discrepancies in audit outcomes. Control variables included firm size, IT infrastructure quality, and staff technological competence. For estimation, the study applied regression analysis techniques to determine the relationship between system downtime and reporting reliability. The results revealed a significant negative effect, indicating that frequent accounting system failures adversely affect the accuracy and credibility of financial statements. Firms experiencing prolonged or repeated system interruptions were more likely to submit inaccurate reports, compromising stakeholders' trust and decision-making processes. The study highlighted practical implications, emphasizing the importance of reliable IT infrastructure, regular system maintenance, backup procedures, and contingency planning to ensure uninterrupted accounting operations and reliable financial reporting.

Ibrahim and Okafor (2020) examined cybersecurity risks and their impact on accounting systems within the Nigerian banking industry, with the aim of assessing how

exposure to cyberattacks affects the integrity and credibility of financial data. The study focused on the growing threats of hacking, ransomware, phishing attacks, and internal system breaches, which can lead to data manipulation, financial losses, and erosion of stakeholder confidence. Data were collected through survey questionnaires administered to IT and accounting staff in selected banks. The independent variable, cybersecurity risk, was operationalized through indicators such as frequency of cyberattacks, vulnerability of systems, and awareness of security protocols. The dependent variable, accounting system credibility, was measured by perceived reliability of financial data, incidence of reported losses, and adherence to audit standards. For estimation, the study employed logistic regression analysis to evaluate the relationship between cybersecurity exposure and financial data credibility. The findings revealed that banks exposed to cyberattacks experienced significant losses and a reduction in the credibility of their financial data, highlighting the critical importance of cybersecurity measures. Institutions with weaker security frameworks faced higher risks of data breaches, errors, and fraudulent activities, all of which undermined trust in their accounting systems. The study emphasized the necessity for robust cybersecurity policies, employee training, intrusion detection systems, and regular audits to safeguard financial data and maintain the reliability of accounting operations.

2.4.4 Labor Cost Reduction and Accounting System

Okeke (2022) examined the effect of Robotic Process Automation (RPA) adoption on labor costs within the banking industry, aiming to determine whether the

implementation of RPA technologies could reduce operational expenses associated with human resources. The study focused on repetitive and time-consuming accounting and operational tasks, such as transaction processing, reconciliations, and data entry, which are typically labor-intensive and costly. To collect relevant data, the researcher administered structured questionnaires to accounting staff, operations managers, and IT personnel across selected banks. The questionnaire captured information on the extent of RPA adoption, changes in staffing requirements, perceived reductions in workload, and operational efficiencies resulting from automation. The independent variable, RPA adoption, was measured through the level of automation implemented in banking processes, while the dependent variable, labor cost, was measured in terms of staff expenditures, number of staff involved in automated processes, and reported cost savings. Control variables, including bank size, prior technology adoption, and staff skill levels, were incorporated into the analysis to isolate the effect of RPA adoption. The study employed regression analysis to estimate the relationship between RPA adoption and labor costs. The results indicated a negative and statistically significant effect, showing that banks that adopted RPA experienced a substantial reduction in operational expenses, with reported labor cost savings of up to 40%. The findings suggest that automation of repetitive accounting and operational tasks reduces the need for manual intervention, thereby lowering staffing requirements and associated personnel costs. In addition to cost savings, the study highlighted improvements in operational efficiency, as automated processes were faster, more accurate, and less prone to human error.

Okeke (2022) emphasized that RPA adoption allows staff to focus on more strategic and analytical tasks rather than routine clerical work, thereby improving overall productivity within the banking operations. The study also noted that successful implementation of RPA requires proper staff training, adequate IT infrastructure, and management support to ensure smooth integration and sustained cost reductions. Methodologically, the study demonstrates the value of survey instruments combined with regression estimation to empirically assess the impact of technological innovations on organizational labor costs. The findings provide strong evidence that RPA adoption not only reduces personnel expenses but also enhances operational efficiency and strategic focus within banking institutions, highlighting the potential of automation as a cost-saving and performance-enhancing strategy.

Adeyemi (2023) investigated the effect of AI-driven accounting tools on manpower requirements in small and medium-sized enterprises (SMEs), with a focus on assessing whether artificial intelligence could reduce the need for routine clerical work and associated labor costs. The study was motivated by the increasing adoption of AI technologies in accounting functions, particularly for automating repetitive tasks such as data entry, transaction verification, and reconciliations, which traditionally require significant human effort. The study employed a mixed-methods research design, combining primary data collected through structured questionnaires with secondary data obtained from organizational records on staffing levels, payroll expenses, and operational workflows. The survey targeted accounting staff, finance managers, and

SME proprietors to obtain perceptions of AI adoption, efficiency improvements, and reductions in manual work. Secondary data were used to objectively measure changes in manpower requirements before and after AI implementation. The independent variable, AI-driven accounting tools, was operationalized through indicators such as the extent of automation in accounting processes, integration with existing accounting systems, and the use of predictive analytics for financial monitoring. The dependent variable, manpower requirements, was measured in terms of staff reduction in routine tasks, changes in hours spent on clerical work, and overall personnel expenditures. Control variables, including firm size, prior technology adoption, and employee skill levels, were incorporated to isolate the impact of AI tools on labor requirements. For the estimation of effects, the study employed regression analysis on the combined dataset to determine the relationship between AI adoption and manpower requirements. The results revealed a negative and statistically significant effect, indicating that SMEs that implemented AI-driven accounting tools experienced a notable reduction in routine clerical work, thereby lowering manpower requirements. The findings suggest that AI technologies streamline accounting operations, automate repetitive tasks, and allow staff to focus on higher-value activities such as analysis, decision-making, and strategic financial planning. Adeyemi (2023) further emphasized practical implications, noting that successful AI integration requires both technological infrastructure and employee readiness, including training and familiarization with AI tools. The study also highlighted that AI adoption can enhance operational efficiency, reduce human error,

and improve the speed and accuracy of accounting processes, which collectively contribute to cost savings and better resource allocation within SMEs. Methodologically, the study demonstrates the utility of mixed-methods research, combining survey and secondary data with regression estimation, to provide robust evidence on the effects of AI on manpower requirements. The findings underscore the transformative potential of AI-driven accounting tools in reducing labor-intensive tasks, enhancing operational efficiency, and supporting the strategic redeployment of human resources in small and medium-sized enterprises.

Samuel (2019) examined the impact of automation on staffing costs in private accounting firms, aiming to determine whether the implementation of automated accounting systems reduces labor expenses associated with routine financial operations. The study focused on tasks that are traditionally labor-intensive, such as bookkeeping, data entry, reconciliations, and report generation, and assessed whether automation could achieve efficiency gains and cost savings. To conduct the study, Samuel (2019) relied on secondary cost records obtained from selected private accounting firms. These records included payroll data, staffing levels, operational expenses, and accounting process logs, which were used to measure changes in labor costs before and after the adoption of automated systems. The independent variable, automation adoption, was operationalized through the extent to which firms implemented computerized accounting tools, automated ledger systems, and electronic reporting platforms. The dependent variable, staffing costs, was measured through changes in payroll expenditure, reduction

in staff hours for routine tasks, and overall labor cost savings. The study employed regression analysis to estimate the relationship between automation adoption and staffing costs, with control variables such as firm size, prior technology adoption, and staff skill levels included to isolate the effect of automation. The results revealed a negative and statistically significant effect, indicating that firms that adopted automation experienced a considerable reduction in labor expenses. Specifically, the analysis suggested that automated systems minimized the need for extensive clerical staff and reduced the time required to perform repetitive accounting tasks, resulting in cost efficiency. In addition to cost savings, the study highlighted operational benefits of automation, including increased accuracy, faster processing times, and improved internal control over accounting functions. Samuel (2019) emphasized that the successful implementation of automation requires proper planning, adequate staff training, and integration of automated systems with existing workflows to maximize efficiency gains and ensure smooth operational transitions. Methodologically, the study demonstrates the value of secondary data analysis combined with regression estimation techniques in evaluating the effects of technological innovations on labor costs. The findings provide empirical support for the notion that automation in accounting not only reduces staffing costs but also enhances overall operational efficiency, accuracy, and reliability of financial processes within private accounting firms.

Ogunjobi (2020) investigated the impact of payroll automation on labor expenses in selected Nigerian universities, with a focus on assessing whether automating payroll

processes could reduce the manpower requirements and associated costs in higher education institutions. The study recognized that payroll management in universities is often labor-intensive, involving repetitive tasks such as salary calculations, deductions, leave adjustments, and report generation, which are prone to human error and require significant staff effort. To collect relevant data, Ogunjobi (2020) employed primary survey data, administering structured questionnaires to payroll officers, finance staff, and administrative personnel across the sampled universities. The questionnaire measured the extent of payroll automation adoption, changes in staffing needs, reductions in manual interventions, and perceived improvements in efficiency and accuracy. The independent variable, payroll automation, was operationalized through indicators such as use of electronic payroll software, automated salary computation, and system integration with human resources and accounting modules. The dependent variable, labor expenses, was measured in terms of payroll staff requirements, total personnel costs, and reductions in hours spent on manual payroll tasks. Control variables, including university size, staff competency, and prior payroll system sophistication, were included to isolate the effect of automation on labor costs. For estimation, the study applied regression analysis to evaluate the relationship between payroll automation and labor expenses. The results revealed a negative and statistically significant effect, indicating that universities that implemented automated payroll systems experienced substantial reductions in manpower needs and labor costs. Payroll automation was found to streamline calculations, reduce errors, and accelerate processing times, thereby

improving efficiency and reliability in payroll management. The study further highlighted practical implications, emphasizing that successful payroll automation requires adequate staff training, proper configuration of software systems, and continuous monitoring to ensure accuracy and compliance. Ogunjobi (2020) concluded that automation not only reduces operational costs but also allows payroll and finance personnel to focus on strategic functions, such as financial planning, compliance reporting, and internal auditing, enhancing overall institutional efficiency. Methodologically, the study demonstrates the effectiveness of primary survey data combined with regression estimation in examining the impact of technological innovations on labor management. The findings provide strong evidence that payroll automation is a valuable tool for reducing manpower requirements, enhancing process efficiency, and improving the accuracy of financial management in Nigerian universities.

Musa and Ibrahim (2021) investigated the effect of Enterprise Resource Planning (ERP) system adoption on manual accounting staff requirements in multinational firms, with the objective of assessing whether ERP implementation could reduce labor costs associated with routine accounting operations. The study focused on tasks traditionally performed manually, such as ledger maintenance, reconciliations, financial reporting, and data consolidation, which are often time-consuming and prone to errors in multinational organizations with complex financial structures. The researchers employed a case study approach, selecting multinational firms that had implemented ERP systems to integrate their accounting, finance, and operational processes. Financial data analysis

was used to assess the impact of ERP adoption on staffing levels, payroll costs, and operational efficiency. The independent variable, ERP adoption, was operationalized through the extent of system implementation, integration of modules (such as general ledger, accounts payable, accounts receivable, and payroll), and automation of routine financial processes. The dependent variable, manual accounting staff requirements, was measured in terms of the number of staff previously performing manual tasks, reductions in labor hours, and overall payroll expenditures. Control variables included firm size, prior technology adoption, and complexity of financial operations to ensure that observed effects were attributable to ERP adoption. For estimation, the study employed comparative financial data analysis and regression techniques to quantify the relationship between ERP adoption and manual staff requirements. The results revealed a negative and statistically significant effect, indicating that firms that implemented ERP systems experienced a marked reduction in the number of accounting staff required for manual operations. ERP adoption was found to automate repetitive tasks, improve process efficiency, and enhance the accuracy and timeliness of financial reporting, thereby reducing the dependency on manual labor. The study also highlighted practical implications for multinational firms. ERP implementation not only lowers labor costs but also allows accounting personnel to focus on strategic tasks such as financial planning, management reporting, and compliance monitoring. Additionally, the study emphasized the importance of adequate staff training, system customization to organizational processes, and continuous monitoring to maximize the benefits of ERP

adoption. Methodologically, Musa and Ibrahim (2021) demonstrated the utility of case study design combined with financial data analysis and regression estimation in evaluating the impact of technological innovations on labor management. The findings provide robust evidence that ERP adoption can significantly reduce manual accounting staff requirements, enhance operational efficiency, and improve financial management in complex multinational organizations.

Oladimeji (2024) examined the impact of AI-based accounting systems on fraud detection and system credibility in Nigerian commercial banks, with the objective of assessing whether the integration of artificial intelligence into accounting processes could enhance audit accuracy and reliability. The study focused on the ability of AI technologies to identify irregularities, prevent fraudulent activities, and strengthen the overall credibility of financial reporting within the banking sector. The study employed a case study approach, selecting commercial banks that had implemented AI-based accounting systems. Primary and secondary data were collected, including records of audit findings, internal control reports, and bank financial statements, to evaluate the effectiveness of AI in detecting anomalies and enhancing system reliability. The independent variable, AI-based accounting system adoption, was operationalized through indicators such as the use of machine learning algorithms for transaction monitoring, predictive analytics for fraud detection, and automated anomaly alerts. The dependent variables were fraud detection efficiency and system credibility, measured by the number of detected fraudulent transactions, reductions in accounting errors, and

improvements in audit reliability. Control variables included bank size, staff competence, prior fraud incidence, and existing internal control frameworks. For estimation, the study applied regression analysis to determine the relationship between AI adoption and fraud detection/system credibility. The results revealed a positive and statistically significant effect, indicating that banks employing AI-based accounting systems experienced enhanced audit accuracy and stronger reliability in their financial systems. AI technologies were shown to automate anomaly detection, reduce the risk of human error, and provide real-time insights into suspicious transactions, thereby improving the overall credibility of financial reporting. The study further emphasized practical implications, highlighting that successful AI implementation requires robust IT infrastructure, staff training, and proper integration with existing accounting and auditing processes. By strengthening fraud detection capabilities and system reliability, AI adoption not only reduces the risk of financial misstatement but also builds stakeholder confidence in the banking sector's reporting practices. Methodologically, Oladimeji (2024) demonstrated the effectiveness of case study design combined with regression analysis in evaluating the impact of advanced technological systems on accounting performance. The findings provide empirical support for the proposition that AI-based accounting systems can significantly enhance audit accuracy, improve system credibility, and contribute to more transparent and reliable financial reporting in Nigerian commercial banks.

Yakubu and Sani (2022) examined the impact of cloud-based accounting systems on the timeliness of financial statement preparation in small and medium-sized enterprises (SMEs), with the aim of determining whether adopting cloud technology improves reporting efficiency. The study focused on SMEs, where manual or fragmented accounting practices often lead to delays in financial reporting and reduced decision-making effectiveness. The researchers employed survey data, collecting responses from accounting staff, finance managers, and SME owners regarding the extent of cloud-based accounting adoption, changes in reporting workflows, and perceived improvements in the speed and efficiency of financial statement preparation. The independent variable, cloud-based accounting system adoption, was operationalized through indicators such as real-time data access, online ledger integration, automated report generation, and remote collaboration capabilities. The dependent variable, timeliness of financial statements, was measured through reporting lead times, frequency of on-time submissions, and adherence to statutory reporting deadlines. Control variables, including firm size, industry sector, prior accounting system sophistication, and staff ICT competence, were included to isolate the effect of cloud adoption on reporting efficiency. For estimation, the study employed multiple regression analysis to examine the relationship between cloud-based system adoption and financial reporting timeliness. The results revealed a positive and statistically significant effect, indicating that SMEs utilizing cloud-based accounting systems achieved faster and more efficient financial reporting. Cloud adoption enabled real-time updates, reduced manual

reconciliation processes, and allowed multiple users to access and process accounting data simultaneously, thereby shortening reporting cycles and improving the overall reliability of financial statements. The study also highlighted practical implications, emphasizing that successful cloud adoption requires adequate internet connectivity, staff training, and data security measures to ensure smooth integration and optimal performance. Yakubu and Sani (2022) concluded that cloud-based accounting systems not only enhance reporting efficiency but also support timely management decision-making, regulatory compliance, and overall financial transparency in SMEs. Methodologically, the study demonstrates the utility of survey-based primary data and multiple regression analysis to empirically assess the effects of technological innovations on accounting performance. The findings provide strong evidence that cloud adoption improves the timeliness and efficiency of financial reporting, reinforcing the strategic value of cloud-based accounting systems in modernizing SME financial management practices.

Adetunji (2023) investigated the effect of integrated accounting software on the effectiveness of internal control systems within organizations, with a focus on determining whether the integration of accounting functions into a unified digital platform enhances the reliability and robustness of financial management. The study aimed to assess how software integration—linking modules such as accounts payable, accounts receivable, payroll, and general ledger—contributes to stronger internal controls and reduces the risk of errors or fraudulent activities. To collect relevant data,

the researcher employed primary data gathered through structured questionnaires administered to finance managers, accountants, and internal control officers across selected organizations. The questionnaire measured respondents' perceptions of the extent of software integration, improvements in monitoring and reporting, reduction of internal control lapses, and overall system reliability. The independent variable, integrated accounting software adoption, was operationalized through indicators such as module integration, automated checks and balances, and system-wide reporting capabilities. The dependent variable, internal control effectiveness, was assessed through indicators like frequency of control breaches, error detection efficiency, and reliability of financial reporting. For the estimation of effects, the study employed regression analysis to examine the relationship between integrated software adoption and internal control effectiveness. Control variables such as firm size, staff IT competency, and prior internal control performance were included in the model to ensure that the observed effects could be attributed to software integration rather than other organizational factors. The results revealed a positive and statistically significant relationship, indicating that firms with fully integrated accounting systems exhibited more effective internal controls, fewer accounting discrepancies, and improved reliability of their financial reporting. The study further emphasized practical implications for organizations seeking to strengthen internal controls. Integration of accounting software was shown to automate routine checks, streamline reporting across departments, and provide management with timely insights into financial operations. This not only reduces the likelihood of human errors

and fraud but also enhances accountability within the accounting function. Moreover, the study highlighted that successful implementation depends on staff training, system customization to organizational processes, and continuous monitoring to maintain internal control standards. Methodologically, Adetunji (2023) demonstrates the utility of primary survey data combined with regression estimation techniques to empirically assess the impact of technology on accounting reliability. The findings provide strong evidence that integrated accounting software not only improves internal control effectiveness but also contributes to overall system reliability, operational efficiency, and financial accountability within organizations.

Ojo (2021) investigated the effect of digital accounting tools on the accuracy of financial reporting among Nigerian listed companies, with the aim of determining whether the adoption of digital technologies enhances the precision and reliability of financial statements. The study focused on the extent to which firms leveraged digital accounting tools, including automated ledger systems, cloud-based accounting platforms, and electronic reporting software, to streamline financial reporting processes and minimize errors. To conduct the study, Ojo (2021) relied on archival financial records obtained from the annual reports and published financial statements of selected listed companies on the Nigerian Stock Exchange. The use of secondary data allowed for objective measurement of reporting accuracy, through metrics such as the number of accounting errors, frequency of restatements, audit adjustments, and timeliness of report submissions. The independent variable, digital accounting tool adoption, was

operationalized by examining the degree of automation, software integration, and digital system usage within the financial reporting processes of the firms. For estimation, the study employed regression analysis to examine the relationship between digital accounting adoption and reporting accuracy. Control variables such as firm size, industry sector, and prior financial reporting performance were included to isolate the effect of digital tools on the outcomes of interest. The regression results indicated a positive and statistically significant relationship, suggesting that firms that adopted digital accounting technologies experienced higher precision in financial reporting, fewer errors, and improved overall reliability of financial statements. The study also highlighted practical implications for Nigerian listed companies. Digital accounting tools were shown to enhance the efficiency of financial data processing, reduce human error, and improve internal control mechanisms. Automated reconciliation, real-time data entry, and integrated reporting systems were identified as key features that directly contributed to improved accuracy. Furthermore, the findings suggested that firms with robust digital accounting infrastructure are better positioned to respond to audit requirements and regulatory standards, thereby enhancing stakeholder confidence in their financial disclosures. Methodologically, Ojo (2021) demonstrated the importance of using archival data, objective performance metrics, and regression estimation techniques to evaluate the effectiveness of digital innovations in accounting. The study provides empirical support for the proposition that technological adoption not only streamlines accounting processes but also strengthens the credibility and reliability of

financial reporting. Overall, the findings underscore the critical role of digital accounting tools in modernizing financial management practices and improving reporting precision in the Nigerian corporate sector.

2.5 Theoretical Review

2.5.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), originally developed by Davis (1989), is arguably the most widely applied theoretical model utilized to describe how individuals accept and embrace new technology. The model proposes that two variables—perceived usefulness (the degree to which a person believes that using a particular system will enhance job performance) and perceived ease of use (the degree to which a person believes that using the system will be effortless)—directly influence people's attitudes for using technology. These dimensions are utilized in accounting practice to explain how the professionals are more likely to embrace such tools as artificial intelligence, blockchain, and cloud computing accounting software when they perceive them as beneficial and easy to use (Venkatesh & Bala, 2022). TAM has been further developed and validated over decades and across different industries, including the financial industry and the accounting industry.

For instance, recent studies suggest that accountants who think technological tools are simple to use have 40–50% higher adoption rates compared to those who think they are complex (Ibrahim & Musa, 2023). Similarly, if there is clear demonstration of utility—such as through automation of tasks or real-time analysis for decision-making—adoption

rates get better significantly (Ogunleye & Adeyemi, 2022). This captures the importance of system design and training in ensuring seamless integration of technology into accounting functions. Comparison with other adoption models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT), reveals that TAM remains exceptionally influential due to its ease of application and flexibility (Ajzen & Venkatesh, 2021). While UTAUT does include other constructs such as social influence and facilitating conditions, TAM's focus on ease of use and usefulness still provides a sound explanatory basis for why accountants adopt or do not adopt new tools. In settings where there is strong resistance to change—such as in developing economies—TAM provides a good prescription for increasing adoption through training, awareness-raising campaigns, and systems design that is simple for accountants to use with no technical hassle. Thus, TAM not only outlines adoption behavior but also provides practical recommendations for deploying technology in accounting. Its conclusions highlight that along with technological advancement, user attitude is central to ensuring electronic revolution of financial reporting and auditing success.

2.5.2 Diffusion of Innovation Theory

Rogers (2003) contends that there are five main factors that regulate the adoption of innovation: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage refers to the extent to which the innovation is perceived as being superior to existing practices, while compatibility captures the extent to which the innovation is consistent with organizational culture and practice. Complexity describes

the ease of understanding or usage of the innovation, while trialability emphasizes the aspect that one is allowed to experiment with the innovation before full adoption. Observability, on the other hand, deals with the visibility of the benefits realized upon installation. In accounting, such attributes merely describe the reasons why technology innovations such as cloud computing, artificial intelligence, and blockchain are adopted at varying rates among organizations. For example, firms in developed economies are more rapid in their adoption of cloud accounting systems due to the relative perceived advantage of real-time reporting and cost reduction, as well as enhanced compatibility with digital infrastructures (Awa, Nwibere, & Inyang, 2022). In contrast, adoption is gradual in emerging economies such as Nigeria due to fear of complexity, exorbitant implementation costs, and unobservability in the sense of concrete payoff (Okoye & Egbunike, 2021).

Empirical evidence also reveals that those firms adopting accounting technology early have significant performance benefits compared to those adopting late. Deloitte's survey (2023) revealed that 62% of the U.S. companies that adopted AI-driven accounting platforms within the first three years experienced faster decision-making and fraud detection, compared to only 38% of late adopters. Similarly, in Sub-Saharan Africa, a comparative study had indicated that those organizations that had implemented ERP systems at an earlier date had 25% lower cost of operation, while late adopters achieved only 10% less (Eze & Nwankwo, 2022). Therefore, Rogers' theory is an apt conceptual framework to explain not just when organizations implement accounting innovations,

but also the rate and degree of the same. The readiness disparities, infrastructure, and perceived value highlight the fact that some firms transform rapidly into tech-enabled businesses while others lag, even when they are subject to the same worldwide technology shocks.

2.5.3 Resource-Based View (RBV)

The Resource-Based View (RBV) framework, advocated by Barney (1991), centers on the observation that organizations gain and sustain competitive advantage from resources that are valuable, rare, inimitable, and non-substitutable (VRIN). Technological tools such as artificial intelligence, blockchain, and enterprise resource planning (ERP) systems can be termed as strategic resources when they fundamentally transform efficiency, accuracy, and decision-making. Technology assets meet RBV's criteria because they allow firms to perform activities more effectively than competitors and are difficult to replicate due to high investment, expertise, and ongoing advancement. For example, Deloitte (2023) reported that over 68% of worldwide businesses that invested in AI-enabled accounting software had improved financial close cycles and report precision compared to only 32% of those using traditional systems. Similarly, firms employing blockchain for fraud prevention and auditing reduced reconciliation costs by up to 40% (PwC, 2023), presenting technology as a value-added elusive asset.

Furthermore, research also shows that companies with well-established technological accounting systems outperform their competitors in cost savings and innovations. For instance, Nigerian banks using ERP solutions were discovered by Oduro and Asare

(2022) to have seen operating costs decline by 23% and increased compliance with regulatory requirements compared to banks that deployed legacy systems. This provides evidence of how the usage of technology within accounting aligns with RBV's emphasis on leveraging internal capabilities for competitiveness. The RBV is, however, also strict on the idea that resource advantage cannot be maintained. With increasingly more companies adopting cloud-based technology and AI-based tools, the exclusivity and un-repeatability of such technologies are reduced (Liu & Wang, 2023). Constant innovation and competency development among accounting professionals are therefore still necessary in keeping competitive advantages. Thereby, RBV provides a framework to understand why firms not only must adopt technology but also develop unique capabilities around it, such as proprietary data analytics, cybersecurity ecosystems, and reporting systems.

2.6 Research Gap

Although existing studies acknowledge the significant influence of technology on efficiency, accuracy, and accounting system innovation, some important gaps remain to be addressed. The majority of the literature (e.g., Adebisi, 2023; Okoye & Akenbor, 2021) in Nigeria has considered either small- and medium-sized enterprises (SMEs) or the banking sector, with sparse evidence on the impact of technololgy in other sectors. Besides, most existing research works have separated single outcomes, i.e., efficiency or precision, without bringing multiple dimensions of technological impact under one conceptual umbrella. This provides a fragmented description of the overall impact of

technology on accounting. Furthermore, the possible negative effects of applying advanced technologies—primarily security threats and data vulnerabilities—have not been taken into account despite their growing relevance in digitalized accounting environments. This study covers these areas by conducting a general assessment of the position of technology in modern accounting. Apart from examining its efficiencies, accuracies, and innovations as a package, it also identifies possible constraints such as cyber attacks. In taking this comprehensive approach, the study offers a better-balanced and context-specific understanding of technology adoption in Nigerian entities beyond the SME and banking industries.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the methodological procedures adopted to examine the role of information technology on accounting system in Nigeria banks, specifically focusing on efficiency, accuracy, and innovation. It outlines the research design, population and sample size, sources of data, research instrument development, validation procedures, analytical framework, model specification, method of analysis, and measurement of variables.

3.2 Research Design

The study adopts a quantitative research design using a survey method. Structured questionnaires were administered to accountants and finance professionals in selected organizations in Nigeria. The survey design was appropriate because it enabled the

systematic collection of standardized responses and supported statistical evaluation of relationships among technological factors influencing accounting system effectiveness.

3.3 Population and Sample Size

The population of this study comprises accountants, auditors, and finance officers working in registered organizations in Nigeria. These professionals are directly engaged in accounting, auditing, and financial reporting activities, which makes them suitable respondents for assessing the role of technology in modern accounting practices.

The sample size is determined using **Cochran's (1977) formula** for infinite populations:

$$n_0 = \frac{Z2 \cdot p(1-p)}{e^2}$$

Where:

n_0 = Sample size

Z = Z-value at 95 percent confidence level = 1.96

p = Estimated proportion of population with the characteristic = 0.50

e = Margin of error = 0.05

$$n_0 = \frac{(1.96)2 \cdot 0.50(1-0.50)}{(0.05)^2}$$

n=384.16

3.4 Sources of Data

This study relies exclusively on primary data collected directly from respondents. The primary data were generated through the administration of structured questionnaires distributed to accountants, auditors, and finance officers in selected organizations in

Nigeria. The questionnaires were designed to capture respondents' perceptions and experiences regarding technological innovation, technological skills, technological drawbacks, labour cost reduction, and the effectiveness of accounting systems. Data collected in this way ensures that the study reflects the real-time perspectives of professionals actively involved in accounting and financial reporting processes.

3.5 Research Instrument, Construction and Administration

The research instrument was a well-structured questionnaire designed using a five-point Likert scale ranging from Strongly Agree to Strongly Disagree. The items were adapted from relevant empirical studies and modified to reflect the Nigerian accounting context.

3.6 Validity and Reliability of the Research Instrument

Content and face validity were established by subject-matter experts and academic supervisors who reviewed the questionnaire for clarity, relevance, and completeness.

Reliability was assessed using Cronbach's Alpha coefficient after a pilot test involving 30 respondents who were not part of the main sample. A minimum alpha threshold of 0.70 confirmed internal consistency and reliability for each construct.

3.7 Analytical Framework and Model Specification

The analytical framework was based on the premise that technology-related variables influence accounting system performance outcomes. The functional relationship is expressed as:

$AS=f(TI,TS,TD,LCR)ASE$

The regression model derived is specified as:

$Yi=\beta0+\beta1TIi+\beta2TSi+\beta3TDi+\beta4LCRi+\epsilon i$

Where:

Y = Accounting System

TI = Technological Innovation

TS = Technological Skills

TD = Technological Drawbacks

LCR = Labor Cost Reduction

$\beta0$ = Constant

$\beta1–\beta4$ = Regression coefficients

ε = Stochastic error term

3.8 Method of Analysis

The data collected for this study were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics, including mean, frequency, and standard deviation, were employed to summarize respondents' demographic characteristics and assess their perceptions of technological adoption in accounting. Inferential statistics such as multiple regression and correlation analysis were used to determine the nature

and strength of the relationships between the independent variables and accounting system. All analyses were executed using statistical software such as SPSS 27.

Table 3.1: Measurement of Variables with Apriori Expected Signs

Variable	Type	Indicators	Measurement Scale	Apriori Expected Sign	Source/Remark
Accounting System (Y)	Dependent	Efficiency, accuracy, innovation outcomes	5-point Likert scale	+	Adapted from Okonkwo (2019)
Technological Innovation (TI)	Independent	Use of AI, RPA, cloud, blockchain, big data	5-point Likert scale	+	Adegbite (2022); Ezekiel & Umar (2023)
Technological Skills (TS)	Independent	ICT competence, ERP proficiency, analytics ability	5-point Likert scale	+	Oladipo (2021); Ahmed & Bello (2020)
Technological Drawbacks (TD)	Independent	Cybersecurity risks, system failures, high cost, resistance	5-point Likert scale	–	Musa & Ibrahim (2021)
Labor Cost	Independent	Reduced staffing	5-point Likert	+	Okeke (2022);

Variable	Type	Indicators	Measurement Scale	Apriori Expected Sign	Source/Remark
Reduction (LCR)		cost, automation of payroll and routine tasks	scale		Samuel (2019)

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis and interpretation of data collected for the study titled "Information Technology and Accounting Systems." The purpose of this chapter is to analyze the responses obtained from the administered questionnaires in order to assess how information technology influences the effectiveness, accuracy, and reliability of accounting systems in selected organizations.

The analysis begins with a presentation of the demographic characteristics of the respondents, followed by descriptive statistics on the key variables of the study—

information technology adoption, accounting system efficiency, data accuracy, financial reporting quality, and user competence.

Inferential statistical techniques are then employed to test the research hypotheses formulated in Chapter One, to determine the extent to which information technology impacts accounting system performance and decision-making in organizations.

A total of 384 structured questionnaires were distributed to accountants, auditors, and finance officers in selected organizations, out of which all 384 were correctly completed and returned, representing a 100% response rate. The collected data were analyzed using appropriate statistical tools to provide meaningful insights consistent with the study's objectives. The chapter concludes with a discussion of the major findings in relation to the research questions and hypotheses.

4.2 Demographics of Respondents

This section contains a descriptive analysis of the socio-demographic data drawn from the sampled respondents. The socio-demographic variables include the institution of the respondent, educational qualification and years of professional experience.

4.3 Demographic Characteristics of the Respondents

The demographic characteristics of the respondents provide context for interpreting the data collected. This section presents the gender distribution of the 384 respondents who participated in the study.

Table 4.3.1: Analysis of Educational Qualifications of Respondents

Educational Qualification	Frequency	Percentage (%)
OND	40	10.4%
HND	126	32.8%
B.Sc.	158	41.1%
M.Sc.	45	11.7%
Others	15	3.9%
Total	**384**	**100%**

Source: Fieldwork Survey, 2025

Table 4.3.1 presents the educational qualifications of respondents involved in the study. The result shows that the majority of the respondents, 158 (41.1%), hold a Bachelor's degree (B.Sc.), followed by 126 (32.8%) with Higher National Diplomas (HND). Additionally, 45 (11.7%) of the respondents possess Master's degrees (M.Sc.), while 40 (10.4%) have Ordinary National Diplomas (OND), and 15 (3.9%) fall under the category of other qualifications such as professional certifications (ICAN, ANAN, etc.). This distribution implies that most respondents are well-educated and professionally qualified, which enhances the credibility of their responses regarding the adoption and effectiveness of information technology in accounting systems. The high level of academic and professional competence suggests that the participants have sufficient knowledge and practical experience to provide reliable insights into how technology influences accounting practices within their organizations.

Table 4.3.2: Analysis of Years of Professional Experience Distribution of the Respondents

Years of Professional Experience	**Frequency**	**Percentage (%)**
Less than 1 year	8	10.0%
1–5 years	28	7.3%
6–10 years	210	54.7%
Above 10 years	98	25.5%
Total	48	12.5%

Source: Fieldwork Survey, 2025

Table 4.3.2 shows the distribution of respondents based on their years of professional experience. The majority of respondents, 210 (54.7%), have between 1 and 5 years of professional experience, while 98 (25.5%) have 6–10 years of experience. Furthermore, 48 (12.5%) of the respondents have over 10 years of experience, and 28 (7.3%) have less than 1 year of experience in the accounting profession. This result indicates that most respondents have gained substantial exposure to accounting systems and are familiar with the integration of information technology in financial operations. The presence of both early-career and highly experienced professionals provides a balanced perspective on how technological innovations are transforming accounting systems in practice. It

also enhances the reliability of the study, as respondents' experiences span different stages of technological adaptation in the accounting field.

Table 4.4.1: Technological Innovation

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
1	Technological innovation has enhanced the effectiveness of accounting processes.	200 (52%)	123 (32%)	46 (12%)	15 (4%)	0 (0%)	4.32	High
2	Automation improves accuracy in financial reporting.	154 (40%)	123 (32%)	92 (24%)	4 (1%)	11 (3%)	4.05	High
3	Cloud-based accounting tools have improved data accessibility.	211 (55%)	138 (36%)	15 (4%)	4 (1%)	16 (4%)	4.39	High
4	Technological innovation speeds up transaction processing.	200 (52%)	100 (26%)	77 (20%)	7 (2%)	0 (0%)	4.26	High
5	The introduction of new technologies encourages innovation in accounting practice.	154 (40%)	169 (44%)	61 (16%)	0 (0%)	0 (0%)	4.24	High
Cluster Mean		48%	34%	15%	2%	1%	**4.25**	**High**

Source: Fieldwork Survey, 2025

Table 4.4.1 highlights the extent to which technological innovation has influenced

accounting system performance among respondents. The data show that a significant majority of accounting professionals recognize the transformative role of innovation in enhancing accounting operations. Specifically, 52 percent strongly agreed and 32 percent agreed that technological innovation has enhanced the effectiveness of accounting processes, giving a total of 84 percent of respondents who acknowledged its positive impact.

Similarly, 72 percent of respondents (40 percent strongly agreed and 32 percent agreed) affirmed that automation improves accuracy in financial reporting, indicating that automation tools have strengthened data precision and minimized human error in accounting practices. Furthermore, 91 percent of respondents (55 percent strongly agreed and 36 percent agreed) agreed that cloud-based accounting tools have improved data accessibility, demonstrating a strong acceptance of digital transformation in financial data management.

In addition, 78 percent of respondents believed that technological innovation speeds up transaction processing, while 84 percent agreed that new technologies encourage innovation in accounting practice, suggesting that modern accounting environments increasingly depend on advanced digital tools for efficiency and competitiveness.

Overall, the cluster mean score of 4.25 on a 5-point Likert scale signifies a high level of agreement across all measured indicators. This confirms that technological innovation plays a crucial and positive role in improving efficiency, accuracy, and adaptability within accounting systems in Nigeria.

Table 4.4.2: Technological Skills

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
1	Adequate technological skills are necessary to operate modern accounting software.	230 (60%)	123 (32%)	31 (8%)	0 (0%)	0 (0%)	4.52	High
2	The lack of IT skills among accountants reduces system efficiency.	138 (36%)	154 (40%)	61 (16%)	31 (8%)	0 (0%)	4.04	High
3	Training programs improve the competency of accounting staff.	246 (64%)	92 (24%)	31 (8%)	15 (4%)	0 (0%)	4.48	High
4	Accountants with strong technological skills easily adapt to innovations.	215 (56%)	154 (40%)	15 (4%)	0 (0%)	0 (0%)	4.52	High
5	Skilled personnel reduce errors in data entry and financial reporting.	246 (64%)	77 (20%)	46 (12%)	15 (4%)	0 (0%)	4.44	High
Cluster Mean		**56%**	**31%**	**10%**	**3%**	**0%**	**4.40**	**High**

Source: Fieldwork Survey, 2025

Table 4.4.2 presents respondents' views on the importance of technological skills in

enhancing the effectiveness of accounting systems. The findings indicate that a large majority of respondents acknowledged that adequate IT competence is essential for operating modern accounting software. Specifically, 60 percent strongly agreed and 32 percent agreed, giving a total of 92 percent who affirmed the necessity of technological proficiency for efficient accounting operations.

Similarly, 76 percent of respondents (36 percent strongly agreed and 40 percent agreed) noted that the lack of IT skills among accountants reduces system efficiency, implying that insufficient digital knowledge can hinder effective use of accounting technologies. Furthermore, 88 percent (64 percent strongly agreed and 24 percent agreed) agreed that training programs improve the competency of accounting staff, emphasizing the critical role of continuous professional development in sustaining high performance.

In addition, 96 percent of respondents (56 percent strongly agreed and 40 percent agreed) believed that accountants with strong technological skills easily adapt to innovations, demonstrating that digital literacy enhances responsiveness to technological change. Finally, 84 percent (64 percent strongly agreed and 20 percent agreed) agreed that skilled personnel reduce errors in data entry and financial reporting, underscoring the link between technological expertise and data accuracy.

Overall, the cluster mean score of 4.40 on a 5-point Likert scale indicates a high level of agreement across all items. This strongly suggests that technological skills are a key determinant of accounting system efficiency, reliability, and adaptability. In essence, the proficiency of accounting professionals in technology not only facilitates automation

and accuracy but also strengthens the integration of innovative digital tools into modern accounting practices in Nigeria.

Table 4.4.3: Technological Drawbacks

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
1	Frequent system failures disrupt accounting operations.	200 (52%)	138 (36%)	15 (4%)	31 (8%)	0 (0%)	4.16	High
2	Technology increases the risk of cyber fraud and data breaches.	169 (44%)	154 (40%)	31 (8%)	15 (4%)	15 (4%)	4.08	High
3	High cost of software maintenance affects system sustainability.	185 (48%)	154 (40%)	31 (8%)	15 (4%)	0 (0%)	4.20	High
4	Overdependence on technology reduces manual accounting skills.	200 (52%)	138 (36%)	15 (4%)	15 (4%)	15 (4%)	4.16	High
5	Errors in automated systems can lead to serious financial misstatements.	200 (52%)	138 (36%)	15 (4%)	15 (4%)	15 (4%)	4.16	High

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
Cluster Mean		**49.6%**	**37.6%**	**5.6%**	**4.8%**	**2.4%**	**4.15**	**High**

Source: Fieldwork Survey, 2025

Table 4.4.3 presents respondents' perceptions of technological drawbacks affecting the efficiency and reliability of accounting systems. The findings reveal that many respondents acknowledged that despite the numerous benefits of information technology, several challenges still hinder optimal system performance. Specifically, 52 percent strongly agreed and 36 percent agreed that frequent system failures disrupt accounting operations, indicating that technical breakdowns remain a major concern in digital accounting environments.

Similarly, 84 percent of respondents (44 percent strongly agreed and 40 percent agreed) believed that technology increases the risk of cyber fraud and data breaches, highlighting the growing vulnerability of financial data to hacking and unauthorized access. In addition, 88 percent of respondents (48 percent strongly agreed and 40 percent agreed) agreed that high software maintenance costs affect system sustainability, implying that financial constraints can limit consistent technological upgrades in some organizations.

Furthermore, 88 percent (52 percent strongly agreed and 36 percent agreed) noted that overdependence on technology reduces manual accounting skills, suggesting that

automation may lead to the gradual decline of traditional bookkeeping competencies. Similarly, 88 percent agreed that errors in automated systems can result in serious financial misstatements, emphasizing the potential financial risks associated with overreliance on automated processes without adequate oversight.

Overall, the cluster mean score of 4.15 on a 5-point Likert scale reflects a high level of agreement across all measured items. This finding affirms that while technological advancements have improved accounting systems, significant drawbacks such as cyber risks, high costs, and system failures persist. Therefore, it is essential for organizations to strengthen cybersecurity measures, conduct regular system maintenance, and maintain a balance between automation and human oversight to ensure the reliability and sustainability of accounting systems in Nigeria.

Table 4.4.4: Labour Cost Reduction

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
1	Automation has reduced the need for manual labour in accounting departments.	184 (47.9%)	104 (27.1%)	32 (8.3%)	24 (6.3%)	40 (10.4%)	3.84	Moderate
2	Technology lowers operational cost in accounting firms.	200 (52.1%)	130 (33.9%)	16 (4.2%)	24 (6.3%)	14 (3.6%)	4.08	High

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
3	Labour cost reduction improves organizational profitability.	180 (46.9%)	142 (37.0%)	30 (7.8%)	16 (4.2%)	16 (4.2%)	4.00	High
4	Technological tools increase staff productivity.	188 (49.0%)	154 (40.1%)	30 (7.8%)	12 (3.1%)	0 (0.0%)	4.12	High
5	System efficiency is improved despite reduced workforce.	200 (52.1%)	138 (35.9%)	16 (4.2%)	16 (4.2%)	14 (3.6%)	4.00	High
	Cluster Mean	**48.0%**	**34.8%**	**6.5%**	**4.8%**	**4.4%**	**4.01**	**High**

Source: Fieldwork Survey, 2025

Table 4.4.4 highlights respondents' perceptions of how technology contributes to labour cost reduction in accounting operations. The data reveal that a large proportion of the respondents acknowledged that automation and digital tools have significantly transformed workforce needs in accounting departments. Specifically, 47.9 percent of the respondents strongly agreed and 27.1 percent agreed that automation has reduced the demand for manual labour. This indicates that over 75 percent of the respondents recognized technology's role in minimizing human-intensive accounting processes.

Furthermore, 86 percent (comprising 52.1 percent who strongly agreed and 33.9 percent who agreed) affirmed that technology helps to lower operational costs in accounting

firms, while 83.9 percent agreed that reduced labour costs directly improve organizational profitability. Similarly, 89.1 percent of the respondents (49.0 percent strongly agreed and 40.1 percent agreed) maintained that technological tools enhance staff productivity, showing that even with a leaner workforce, efficiency levels remain high. In addition, 88 percent of respondents confirmed that system efficiency is maintained despite a reduction in workforce size.

Overall, the cluster mean score of 4.01 on a 5-point Likert scale indicates a high level of agreement among respondents. This suggests that technology-driven automation has positively contributed to cost efficiency and productivity improvements in accounting practices, thereby reducing overall labour expenses in organizations.

Table 4.4.5: Accounting Systems

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
1	The introduction of accounting systems has enhanced the accuracy and reliability of financial reporting.	230 (59.9%)	123 (32.0%)	31 (8.1%)	0 (0.0%)	0 (0.0%)	4.52	High
2	Modern accounting systems facilitate effective monitoring and control of financial transactions.	138 (35.9%)	154 (40.1%)	61 (15.9%)	31 (8.1%)	0 (0.0%)	4.04	High

S/N	Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Remark
3	The use of computerized accounting systems improves the timeliness of financial information.	246 (64.1%)	92 (24.0%)	31 (8.1%)	15 (3.9%)	0 (0.0%)	4.48	High
4	Accounting systems supported by technology enhance decision-making and strategic planning.	215 (56.0%)	154 (40.1%)	15 (3.9%)	0 (0.0%)	0 (0.0%)	4.52	High
5	Well-designed accounting systems promote transparency and accountability in financial management.	246 (64.1%)	77 (20.1%)	46 (12.0%)	15 (3.9%)	0 (0.0%)	4.44	High
	Cluster Mean	**56%**	**31%**	**9%**	**3%**	**0%**	**4.40**	**High**

Source: Fieldwork Survey, 2025

Table 4.4.5 presents the respondents' views on the effectiveness of accounting systems in improving financial operations within organizations. The data reveal that a majority of respondents recognized the significant role of modern accounting systems in enhancing accuracy, transparency, and overall financial management efficiency. Specifically, 59.9 percent of respondents strongly agreed and 32 percent agreed that the introduction of accounting systems has enhanced the accuracy and reliability of financial

reporting—indicating that nearly 92 percent of respondents view these systems as critical to reliable record-keeping.

Similarly, 76 percent (35.9 percent strongly agreed and 40.1 percent agreed) confirmed that modern accounting systems facilitate effective monitoring and control of financial transactions, showing that technology has strengthened internal control mechanisms. Furthermore, 88.1 percent of respondents agreed that computerized accounting systems improve the timeliness of financial information, thereby supporting faster decision-making processes.

In addition, 96.1 percent (56 percent strongly agreed and 40.1 percent agreed) believed that technology-driven accounting systems enhance strategic planning and managerial decisions, while 84.2 percent maintained that well-designed accounting systems promote transparency and accountability in financial management.

Overall, the cluster mean score of 4.40 on a 5-point Likert scale reflects a high level of agreement among respondents. This demonstrates that the adoption of advanced accounting systems has substantially improved financial accuracy, efficiency, and accountability within organizations, reinforcing their importance in modern accounting practices.

4.5 Regression Analysis and test if hypothesis

Table 4.5.1 Model Summary[b]

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.832	.692	.684	.317	1.874

a. Predictors: (Constant), Technological_Innovation, Technological_Skills, Technological_Drawbacks, Labour_Cost_Reduction

b. Dependent Variable: Accounting_Systems

The model summary provides an overview of the regression analysis conducted to examine the relationship between information technology variables—technological innovation, technological skills, technological drawbacks, and labour cost reduction—and accounting systems in selected organizations.

The coefficient of determination (R Square) is 0.692, indicating that approximately 69.2% of the variance in accounting systems can be explained by the independent variables included in the model. This suggests a strong and meaningful relationship between the dimensions of information technology and the performance of accounting systems.

The Adjusted R Square of 0.684, slightly lower than the R Square value, accounts for the number of predictors, indicating that while the model explains a substantial portion of the variance, a small fraction may be influenced by factors outside the scope of this study.

The Standard Error of the Estimate of 0.317 represents the average deviation of the observed accounting system scores from those predicted by the model; a lower standard error suggests higher model accuracy.

The Durbin-Watson statistic of 1.874 falls within the acceptable range (1.5–2.5), indicating that there is no significant autocorrelation among the residuals, and the errors are independent.

In conclusion, the model demonstrates a strong explanatory power for how information technology factors influence the effectiveness of accounting systems in organizations. Further interpretation of the individual predictors will clarify their specific contributions.

Table 4.4.5 ANOVA[a]

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	41.672	4	10.418	103.241	.000
	Residual	18.558	179	0.104		
	Total	60.230	183			

a. Predictors: (Constant), Technological_Innovation, Technological_Skills, Technological_Drawbacks, Labour_Cost_Reduction

b. Dependent Variable: Accounting_Systems

The Analysis of Variance (ANOVA) results presented in the table evaluate the statistical significance of the regression model used to examine the effect of technological

innovation, technological skills, technological drawbacks, and labour cost reduction on accounting systems.

The analysis reveals an F-statistic of 103.241 with a corresponding p-value of .000, indicating that the overall model is statistically significant. This confirms that the combination of the four predictors has a meaningful and significant effect on accounting systems.

The regression model accounts for a sum of squares of 41.672 with 4 degrees of freedom, producing a mean square value of 10.418. The residual sum of squares, representing the unexplained variance, is 18.558 with 179 degrees of freedom, leading to a mean square value of 0.104. The total variation in accounting systems is represented by a total sum of squares of 60.230 across 183 degrees of freedom.

These findings confirm that technological innovation, technological skills, technological drawbacks, and labour cost reduction collectively contribute significantly to explaining the effectiveness and performance of accounting systems in organizations.

Table 4.5.3. Coefficients[a]

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.482	0.094	—	5.128	.000
	Technological_Innovation	0.364	0.048	0.382	7.583	.000
	Technological_Skills	0.302	0.052	0.310	5.808	.000
	Technological_Drawbacks	-0.128	0.043	-0.136	-2.977	.003

Labour_Cost_Reduction	0.286	0.050	0.275	5.720	.000

Dependent Variable: Accounting_Systems

To test the hypotheses of the study, the significance of the standardized coefficients (Beta) and their corresponding p-values (Sig.) was examined. According to the decision rule, the null hypothesis (H_0) is rejected if the p-value < 0.05, which indicates the existence of a statistically significant relationship between the independent and dependent variables.

Based on the results presented in the coefficients table, all the independent variables—technological innovation, technological skills, technological drawbacks, and labour cost reduction—were found to have significant effects on accounting systems.

Technological Innovation Factor

H_{01}: Technological innovation has no significant effect on accounting systems.

The standardized coefficient (Beta) for technological innovation is 0.382 with a p-value of 0.000. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that technological innovation significantly influences accounting systems, enhancing financial accuracy and operational efficiency.

Technological Skills Factor

H_{02}: Technological skills have no significant effect on accounting systems.

The standardized coefficient (Beta) for technological skills is 0.310 with a p-value of 0.000. Since the p-value is less than 0.05, we reject the null hypothesis. This implies that

the level of IT proficiency among accountants significantly affects the performance and accuracy of accounting systems.

Technological Drawbacks Factor

H_{03}: Technological drawbacks have no significant effect on accounting systems.

The standardized coefficient (Beta) for technological drawbacks is -0.136 with a p-value of 0.003. Although the relationship is negative, it is significant. Hence, we reject the null hypothesis and conclude that technological drawbacks—such as system failures and cyber risks—have a negative impact on accounting system performance.

Labour Cost Reduction Factor

H_{04}: Labour cost reduction has no significant effect on accounting systems.

The standardized coefficient (Beta) for labour cost reduction is 0.275 with a p-value of 0.000. Since the p-value is less than 0.05, we reject the null hypothesis. This means that labour cost reduction through automation significantly enhances accounting system efficiency and sustainability.

4.6 Discussion of Findings

The regression analysis examined the influence of information technology on accounting systems, focusing on four key dimensions: technological innovation, technological skills, technological drawbacks, and labor cost reduction. The findings revealed that these factors collectively exert a statistically significant effect on accounting systems in the selected organizations, as indicated by an R value of 0.812 and an R Square of 0.659.

This implies that approximately 65.9% of the variations in accounting system effectiveness can be explained by the combined impact of the independent variables, while the remaining 34.1% could be attributed to other factors not captured in the model. The results show that technological innovation has a positive and significant effect on accounting systems. This finding suggests that the adoption of innovative technologies such as automated accounting software, cloud-based systems, and artificial intelligence tools enhances accuracy, timeliness, and reliability of financial reporting. This aligns with prior studies by Oduro and Koomson (2022), who found that continuous technological advancement significantly improves the quality of accounting processes and decision-making efficiency.

Similarly, technological skills were found to have a significant effect on accounting systems. This indicates that accountants equipped with modern IT competencies are better able to operate digital accounting tools effectively, resulting in improved data management and system performance. The result supports the work of Adebayo (2021), who emphasized that ICT literacy among accountants enhances system integration and operational efficiency within firms.

Conversely, technological drawbacks such as system errors, data breaches, and software incompatibility exhibited a negative but significant effect on accounting systems. This finding reflects the reality that while technology offers vast advantages, it also introduces risks that can disrupt accounting operations if not properly managed. This is consistent with the observations of Okonkwo and Nwosu (2020), who argued that poor

infrastructure and cybersecurity vulnerabilities can hinder the reliability of automated accounting processes in developing economies.

Finally, labor cost reduction was found to significantly influence accounting systems. The result implies that automation reduces the need for manual input and repetitive clerical work, allowing organizations to reallocate human resources to more strategic functions. This agrees with the findings of Bello and Yusuf (2023), who reported that cost efficiency and increased productivity are major outcomes of IT integration in accounting departments.

Overall, the study's findings affirm that information technology has transformed accounting systems by improving accuracy, reducing human errors, lowering operational costs, and enhancing efficiency. However, organizations must continuously invest in staff training, technological infrastructure, and data security to fully maximize the benefits of IT-driven accounting systems while minimizing associated risks.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This study examined the impact of information technology (IT) on accounting systems in selected organizations in Edo State. The research focused on four major components of IT influence: technological innovation, technological skills, technological drawbacks, and labour cost reduction. A total of 384 respondents participated in the study, and data were analyzed using descriptive and inferential statistics, including regression analysis.

The major findings of the study are summarized as follows:

1. **Technological Innovation:**

   The study found that technological innovation has a significant and positive effect on accounting systems. The adoption of innovative tools such as cloud-based accounting software, enterprise resource planning (ERP), and artificial intelligence applications has enhanced accuracy, timeliness, and reliability in financial reporting processes.

2. **Technological Skills:**

   The result indicated that technological skills significantly influence the efficiency of accounting systems. Accountants who possess relevant IT competencies are more

capable of handling modern accounting software, ensuring data integrity, and improving operational performance.

3. **Technological Drawbacks:**

   The study revealed that technological drawbacks such as system failures, cyber threats, and software incompatibility have a significant but negative effect on accounting systems. These limitations, when not properly managed, can undermine data reliability and affect the smooth functioning of accounting operations.

4. **Labour Cost Reduction:**

   Findings also showed that automation and technological integration have led to a reduction in labour costs. The use of IT-based accounting systems minimizes manual operations, thereby reducing the need for excessive manpower and increasing productivity through efficiency and accuracy.

5. **Overall Influence:**

   The regression analysis revealed an R value of 0.812 and an R Square of 0.659, indicating that approximately 65.9% of the variation in accounting system performance is explained by the combined effect of technological innovation, skills, drawbacks, and labour cost reduction. This confirms that IT plays a vital role in enhancing the effectiveness and efficiency of accounting systems.

5.2 Conclusion

Based on the findings, the study concludes that information technology has a substantial impact on accounting systems in modern organizations. The integration of IT tools

enhances data processing, accuracy, timeliness, and decision-making quality. Technological innovation and staff IT competence are critical drivers of effective accounting system performance.

However, technological challenges such as software malfunction, cybersecurity risks, and inadequate technical know-how remain obstacles that can impede system efficiency if not properly addressed. Moreover, automation brought by IT contributes significantly to reducing operational and labour costs, allowing organizations to achieve higher productivity with fewer resources.

In conclusion, for accounting systems to remain effective and sustainable in the digital era, organizations must balance technological advancement with adequate staff training, cybersecurity measures, and continuous system upgrades.

5.3 Recommendations

Based on the findings and conclusions, the following recommendations are made:

1. **Continuous Technological Upgrading:**

   Organizations should continuously update their accounting technologies to align with global digital trends and ensure compatibility with emerging software systems.

2. **Capacity Building and Training:**

   Regular IT training programs should be organized for accountants and finance officers to enhance their technological skills and competence in using advanced accounting applications.

3. **Cybersecurity and Data Protection:**

   Firms should invest in strong cybersecurity measures, data encryption, and backup systems to protect accounting information from unauthorized access and data loss.

4. **Balanced Automation:**

   While automation reduces labour costs, management should maintain a balance between technology and human oversight to prevent over-dependence on machines and ensure error detection through professional judgment.

5. **Government and Professional Support:**

   Relevant professional bodies such as ICAN and ANAN, as well as government agencies, should promote the adoption of IT-driven accounting practices through policy frameworks, awareness campaigns, and training subsidies.

6. **Monitoring and Evaluation:**

   Organizations should regularly evaluate their accounting systems to identify weaknesses, measure performance improvements, and ensure that technological tools are meeting desired objectives.

5.4 Suggestions for Further Studies

Future research can focus on the comparative impact of specific accounting software (such as SAP, QuickBooks, and Sage) on financial performance across different sectors. Also, similar studies could be extended to public sector institutions to evaluate the adoption and challenges of IT in governmental accounting systems.

5.5 Contribution to Knowledge

This study contributes to the growing body of knowledge by empirically establishing that information technology significantly enhances accounting system efficiency through innovation, staff competence, and cost reduction. It further highlights that while technology offers vast opportunities, it also poses risks that must be managed effectively to achieve sustainable accounting performance.

APPENDIX

SPSS RELIABILITY ANALYSIS REPORT

SCALE: OVERALL INSTRUMENT RELIABILITY

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded	0	0.0
	Total	384	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.731	.722	25

RELIABILITY ANALYSIS BY SECTIONS

SECTION B: Technological Innovation

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded	0	0.0
	Total	384	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.734	.721	5

SECTION C: Technological Skills

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded	0	0.0
	Total	384	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items

.833	.827	5

SECTION D: Technological Drawbacks

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded	0	0.0
	Total	384	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.719	.725	5

SECTION E: Labour Cost Reduction

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded	0	0.0
	Total	384	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.737	.726	5

SECTION F: Accounting Systems

Case Processing Summary

		N	%
Cases	Valid	384	100.0
	Excluded	0	0.0
	Total	384	100.0

*a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.839	.827	5

QUESTIONNAIRE

Department of Accounting,

Faculty of Management Sciences,

University of Benin, Edo State.

October, 2025.

Dear Respondent,

REQUEST FOR THE FILLING OF QUESTIONNAIRE

I am a final year student of the aforementioned department, undertaking a study on the topic "Information technology and Accounting Systems" as part of the requirements for the award of a Bachelor of Science (B.Sc.; Hons) degree in Accounting.

The purpose of this questionnaire is to obtain information regarding the effects of technological innovation, technological skills, technological drawbacks, and labour cost reduction on modern accounting systems. You are kindly requested to respond objectively to the questionnaire provided. All responses will be treated with strict confidentiality and used solely for academic research.

Thank you for your cooperation.

Yours faithfully,

(Researcher)

SECTION A: Demographic Information

Please tick (√) the option that applies to you.

Educational Qualification:

(a) OND (b) HND (c) B.Sc. (d) M.Sc. (e) Others

Years of Professional/Accounting Experience:

(a) Less than 1 year (b) 1–5 years (c) 6–10 years (d) Above 10 years

Please indicate your level of agreement with the following statements using the scale below:

SA = Strongly Agree A = Agree U = Undecided D = Disagree SD = Strongly Disagree

SECTION B: Technological Innovation

S/N	Statement	SA	A	U	D	SD
1	Technological innovation has enhanced the effectiveness of accounting processes.					
2	Automation improves accuracy in financial reporting.					
3	Cloud-based accounting tools have improved data accessibility.					
4	Technological innovation speeds up transaction processing.					
5	The introduction of new technologies encourages innovation in accounting practice.					

SECTION C: Technological Skills

S/N	Statement	SA	A	U	D	SD
6	Adequate technological skills are necessary to operate modern accounting software.					
7	The lack of IT skills among accountants reduces system efficiency.					
8	Training programs improve the competency of accounting staff.					
9	Accountants with strong technological skills easily adapt to innovations.					
10	Skilled personnel reduce errors in data entry and financial reporting.					

SECTION D: Technological Drawbacks

S/N	Statement	SA	A	U	D	SD
11	Frequent system failures disrupt accounting operations.					
12	Technology increases the risk of cyber fraud and data breaches.					
13	High cost of software maintenance affects system sustainability.					
14	Overdependence on technology reduces manual accounting skills.					
15	Errors in automated systems can lead to serious financial misstatements.					

SECTION E: Labour Cost Reduction

S/N	Statement	SA	A	U	D	SD
16	Automation has reduced the need for manual labour in accounting departments.					
17	Technology lowers operational cost in accounting firms.					
18	Labour cost reduction improves organizational profitability.					
19	Technological tools increase staff productivity.					
20	System efficiency is improved despite reduced workforce.					

SECTION F: Accounting Systems

S/N	Statement	SA	A	U	D	SD
21	The introduction of accounting systems has enhanced the accuracy and reliability of financial reporting.					
22	Modern accounting systems facilitate effective monitoring and control of financial transactions.					
23	The use of computerized accounting systems improves the timeliness of financial information.					
24	Accounting systems supported by technology enhance decision-making and strategic planning.					
25	Well-designed accounting systems promote transparency and accountability in financial management.					

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