

**Innovation Capabilities, Internal Control and Performance of Retail Stores, South-West,
Nigeria.**

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Accounting, Faculty of Management & Social Sciences, Lead City University, Ibadan**

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in Accounting**

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Certification

This is to certify that this thesis was carried out by **Abraham Adebawale OLA-ADEYEMO** with Matriculation number **LCU/PG/002240**, in the Department of Management & Accounting under my thorough supervision in the Faculty of Management and Social Sciences, Lead City University, Ibadan, Nigeria and that this work had not been previously submitted.

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Dedication

This research work is dedicated to all those who are yearning and striving to acquire more knowledge in order to be better for themselves and for their society.

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Abstract

This research explores the impact of innovation capabilities and internal control systems on the performance of retail stores in South-West Nigeria. The study focuses on three primary innovation capabilities: computerized accounting systems, online trading services, and data analytical tools, and assesses their impact on retail performance, measured by sales growth and profitability. Additionally, the study examines the moderating role of internal control systems in enhancing the relationship between these innovative tools and business performance. A cross-sectional survey was conducted, with data collected from 397 retail stores in Lagos and Ibadan, two major commercial centers in the region. The results reveal that computerized accounting systems ($\beta_1=1.079$, $R^2=0.920$, $p=0.000$), online trading services ($\beta_2=1.001$, $R^2=0.880$, $p=0.000$), and data analytical tools ($\beta_3=0.919$, $R^2=0.923$, $p=0.000$) all have a significant positive effect on the performance of retail businesses. Furthermore, internal control systems significantly moderate the relationship between innovation capabilities and performance, strengthening the positive effects of these tools ($IC*ICS=0.2309$, $R^2=0.090$, $p=0.000$). The findings suggest that retail businesses can enhance operational efficiency, competitiveness, and profitability through the adoption of these technological innovations, provided they are supported by effective internal control mechanisms. This research adds to the growing body of knowledge on retail management in developing economies and contributes to the understanding of the role of digital transformation in retail performance, offering valuable insights for retailers in Nigeria and other developing economies.

Keywords: Innovation, Capabilities, Internal Control, Performance, Retail Stores

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Chapter One

Introduction

1.1 Background to the Study

Successful business entrepreneurs are those who can pilot their organizations through the turbulent business environment and do it better than their competitors. It is easier said than done. Many competitive industries and organizations are very difficult to penetrate, despite all the intelligence techniques that may be available to get information. A successful firm must look to assess its competition, and moreover, look inward at the resources available to it.

The retail industry is a highly dynamic and competitive sector, which continually demands innovation to sustain and enhance the performance of retail stores, especially with the economic hardship taking a toll on many Nigerian businesses and the feeling of insecurity and uncertainties surging over businesses; the effects of the pressure of currency exchange are also demanding on most businesses. It is not surprising to hear about the immense numbers of ailing and failing businesses, especially in the last couple of years.

The Nigerian retail industry has evolved significantly over the years, moving gradually from a traditional to a modern system. A firm's success is most commonly represented by the profits it generates¹. According to the resource-based view, a firm's capabilities play a crucial role in helping it achieve optimal returns on its investments. For example, strong performance management abilities allow business leaders to proactively address potential or actual inefficiencies². Additionally, research in strategic management and marketing suggests that capabilities in both process management and customer management can significantly impact a

firm's performance³. Financial performance, in particular, serves as a key metric for assessing how effectively a firm is generating value for its stakeholders.

A company's overall performance is closely tied to its market success⁴, which can be gauged through both financial and non-financial metrics. Economic performance is reflected in metrics like return on capital, return on equity, return on sales, and net income, while non-financial indicators include customer satisfaction, workforce growth, market share, job satisfaction, and work-life balance⁴. Business efficiency spans diverse areas, encompassing development and profitability⁵, and is maintained through a flexible, collaborative management approach where leaders and managers work as partners to achieve strategic outcomes. As a direct reflection of operational success, business efficiency underscores the value of strategic management practices in enhancing company productivity⁶.

Organizational performance, therefore, reflects a company's ability to meet its goals by effectively and efficiently utilizing available resources⁷. Success involves not only reaching financial and market-based objectives—such as market share and profitability—but also fostering customer and employee satisfaction, which are critical subjective indicators of performance⁸. In today's competitive environment, creating value for stakeholders has become a central objective, driving companies to invest heavily in strategies that support sustainable competitive advantages. As a result, organizations must continually innovate and refine their performance to adapt to market volatility and remain competitive⁹.

To achieve profitability, companies must also focus on innovation in products and services, efficient organizational structures, and customer satisfaction¹⁰. This often includes having dedicated research and development teams to drive innovation, which, while sometimes experimental, leads to new initiatives that enhance firm performance¹¹. The financial benefits of

such innovation extend not only to the firms but also positively impact society, illustrating how innovation plays a crucial role in strengthening financial outcomes for forward-thinking businesses¹.

Retailing is undergoing dramatic global transformations. The rise of the Internet has sparked profound changes in the retail sector, both revolutionary in scope and unprecedented in impact. Some companies, like Apple with iTunes, have pioneered entirely new markets, while others, such as Priceline.com, have reshaped existing ones. Today, most major retailers operate as multichannel businesses, enabling customers to interact through various channels for different needs (e.g., researching products online, buying in-store, or reaching customer support by phone). Additionally, many retailers have shifted from merely selling products to actively engaging and empowering customers, aiming to create a fulfilling customer experience.

In times of economic uncertainty, it becomes essential for organizations to continually enhance the elements that foster innovation. The volatile business environment demands creative, unconventional solutions, emphasizing the need for new approaches and models that help businesses remain competitive¹². A positive climate for innovation is critical for organizational success and improving performance¹³. Over the past decade, innovation has gained prominence as a central research topic, explored by scholars, policymakers, and business practitioners alike¹⁴. It is often regarded as both an individual and collaborative learning process, helping organizations address challenges effectively¹⁵. In this context, innovation is frequently defined as the development or enhancement of products, processes, management systems, or new strategies for marketing both new and existing products¹⁶.

Organizations are increasingly seeking innovative approaches to strengthen their market positions, which in turn enhances their capability to innovate continuously. Innovation has thus

become a key factor in gaining and sustaining a competitive edge. By fostering innovative practices, firms can create more efficient processes and strategies, leading to the development of unique products. Research on small and medium-sized enterprises (SMEs) suggests that financial performance tends to improve as innovation increases, particularly when companies use innovation to meet customer demands and stand out from competitors. The capacity to innovate is closely linked to firm performance, with innovation, knowledge sharing, and performance forming interconnected areas of study that warrant further exploration¹⁷.

China's transformation into the world's second-largest economy, especially since the economic reforms of the late 1970s, highlights the significance of innovation. Although manufacturing and global exports have been central to China's economic success, the government has recognized the need to shift from a production-driven model to one that focuses on long-term growth. Investments in technology, research, knowledge transfer, and entrepreneurship education have become essential components of this strategy¹⁸.

Current literature in business and management views innovation as one of the most impactful strategies for improving business performance. This includes the creation of new products, refinement of production processes, and advancements in management and marketing, all of which contribute to competitive advantage and organizational growth. Innovations in products, processes, commercialization, and management systems are consistently highlighted as crucial strategies for achieving better performance outcomes¹⁹.

1.2 Statement of the Problem

In Nigeria, the business sector faces numerous obstacles that create a challenging environment for SMEs, resulting in high failure rates²⁰. Studies indicate that 85 percent of businesses in

Nigeria do not survive beyond five years, and even those that do often fail within the next five years, leaving only about 5 to 10 percent of SMEs in operation²¹. Despite government efforts to support SME development, the sector's contribution to exports remains low, around 7.27 percent. A major factor contributing to this high failure rate is the lack of innovative capabilities among businesses²².

Retail enterprises play a critical role in promoting growth and development in various economies around the world. In countries such as Malaysia, Thailand, China, and India, retail enterprises contribute significantly to economic growth, accounting for over 70 percent of exports. This substantial contribution has been a key factor in the rapid economic development of these nations²³. However, the situation in Nigeria presents a stark contrast. Retail businesses in Nigeria face several challenges that hinder their growth and development, with the most significant issues being limited access to finance and inadequate infrastructure, particularly in areas such as electricity and other essential social amenities.

One of the critical factors affecting the performance of companies in developing countries, including Nigeria, is the lack of innovative capabilities. This may be attributed to the lack of or the underutilization of the research and development departments if at all, in many retail enterprises in developing countries, leading to a deficiency in innovation. This paucity of innovation is further exacerbated by both internal and external challenges that impede the development of necessary skills to foster innovation. Research has consistently shown that innovation is vital for organizational growth and competitiveness²⁴. It acts as a catalyst for enhancing competitiveness, profitability, performance, and the sustainability of firms²⁵.

Despite the recognized benefits of innovation, empirical research on innovation in the retail sector remains inadequate, specifically when compared to research conducted in large enterprises^{26,27,28,29}. Recent studies in the retail industry have explored various aspects of innovation. For instance, a 2016 study investigated the impact of internal and external sources on innovation³⁰, while another study examined the influence of SME business owners' characteristics on their firms' research and development spending in a transition economy³¹. Additionally, research has identified factors that distinguish innovative SMEs from non-innovative ones³² and proposed methodologies for implementing technology road mapping in SMEs³³. More recent researches of innovation within the framework of SMEs include the studies undertaken by other researchers,^{34,35,36,37,38} among others.

Empirical evidence suggests a positive and significant relationship between innovation capabilities and business performance in both large organizations and medium scale retail enterprises^{39,40,41,42,43,44}. It is also true, however that some observed studies have provided indication of a negative relationship between these two constructs^{45,46,47}, highlighting the need for further research.

This is particularly important in the context of retail businesses, where innovation capabilities are critical determinants of firm performance and competitive advantage⁴⁸. Despite ongoing changes, the Nigerian retail sector has not experienced significant improvements in productivity, efficiency, and overall performance. Firms often lack the necessary information to develop innovative products and services, underscoring the need for further research on the link between innovative capabilities and business performance of retail business.

1.3 Aim and Objectives

The objective of the study is to establish the effect of innovation capabilities on performance of retail businesses in Nigeria. The specific objectives are to:

- i) examine the effect of the adoption of a computerized accounting system on the performance of retail stores in South-west Nigeria.
- ii) evaluate the effect of the use of online trading services on the performance of retail stores in South-west Nigeria.
- iii) assess the effect of the use of data analytical tools on the performance of retail stores in South-west Nigeria.
- iv) measure the moderating effect of internal control on the effect of adoption of computerized accounting system, use of internet banking service and the use of data analytical tool on the performance of retail stores in South-west Nigeria.

1.4 Research Questions

In the course of this study, answers will be provided for the following questions:

- i) How does the adoption of computerized accounting system affect the performance of retail stores in South-west Nigeria?
- ii) In what way does the use of online trading services affect the performance of retail stores in South-west Nigeria?
- iii) In what way does the use of data analytics affect the performance of retail stores in South-west Nigeria?

- iv) What are the moderating effects of internal control on the effect of adoption of computerized accounting system, use of internet banking service and the use of data analytical tool on the performance of retail stores in South-west Nigeria?

1.5 Hypotheses

Hypotheses for this research are stated in null form as follows:

- i) H₀₁: adoption of computerized accounting system has no significant effect on the performance of retail stores in South-west Nigeria.
- ii) H₀₂: the use of online trading services has no significant effect on the performance of retail stores in South-west Nigeria.
- iii) H₀₃: the use of data analytical tool has no significant effect on the performance of retail stores in South-west Nigeria.
- iv) H₀₄: internal control has no significant influence on the effect of adoption of computerized accounting system, use of online trading system and the use of data analytical tool on the performance of retail stores in South-west Nigeria.

1.6 Scope of the Study

The study aims at establishing the effects of innovation capabilities on performance of retail stores in Nigeria. To achieve the objectives of the study, the focus is strictly on SMEs that are into retail business in Lagos and Ibadan (excluding small independent stand-alone stores as well as open market retail stores). These two metropolises are chosen because they have the highest number of retail stores in the South-western area of the country.

The target population is limited to the formal employees of selected retail stores in the sample who are of different levels of management. The study is partial in terms of coverage as it only covers one geographical location, that is, South West region of Nigeria.

Despite the many proxies that can be used to measure the variables used in this study, this research employed three (3) proxies namely; computerized accounting system, online trading system and data analytics to measure Innovation Capabilities as the independent variable while Sales growth and Net profit were used to measure Performance of the retail stores as the dependent variable.

1.7 Significance of the Study

The management and the employees of retail businesses themselves are a key stakeholder group. This study research is of great importance to them especially in the operations and accounting departments of retail stores as they will understand the effect of the implementation of innovative strategies on the financial performance.

The study is of importance to other business organizations who wish to enhance their competitiveness and performance through adoption of various strategies. Through the adoption and success of the available strategies other retail businesses would be able to benchmark so as to enhance their performance. This will help them in making a choice on the right innovation capabilities to put in place so as to enhance the performance of their companies and thus enable their firms to be competitive.

The study findings would enlighten the policy makers on the anticipated effect of innovation capabilities on performance of organizations; this will help them in planning suitable approach for innovative advancements channel in firms in Nigeria. Through the discoveries of the study,

the policy makers in Nigeria would be able to appreciate which innovation strategies helped organisations to develop.

This research will also be of great assistance to academicians and scholars. It provides researchers and academia with empirical evidence that can enrich theories and frameworks related to the relationship of innovation capabilities and retail businesses. The findings can stimulate further research and foster academic discussions, promoting a deeper understanding of the dynamics between these variables and their implications on performance.

1.8 Operationalization of Variables

In this study, two variables are highlighted which are independent variable and dependent variable. Innovative Capability is the independent variable while the performance of Retail Stores is the dependent variable. However, Internal Control is the moderating variable in this study.

To express these mathematically, we have the following

$$Y = f(X)$$

Y= Dependent Variable

X= Independent Variable

Y= Performance of retail stores (PRS)

X= Innovative Capability (IC)

$$X = f(x_1, x_2, x_3)$$

X₁= Computerized Accounting System (CAS)

X₂= Online Trading Services (OTS)

X₃= Data Analytics (DA)

$$Y = f(y_1, y_2)$$

$$y_1 = \text{Net Profit (NP)}$$

$$y_2 = \text{Sales Growth (SG)}$$

$$y_1 = f(X_1, X_2, X_3)$$

$$Y = f(X_1, X_2, X_3) \dots \dots \dots (1)$$

$$\text{PERF} = f(\text{CAS}) \dots \dots \dots (2)$$

$$\text{PERF} = f(\text{CAS}, \text{OTS}) \dots \dots \dots (3)$$

$$\text{PERF} = f(\text{CAS}, \text{OTS}, \text{DA}) \dots \dots \dots (4)$$

Where:

PERF= Performance of Retail Stores

CAS= Computerized Accounting System

OTS= Online Trading Services

DA= Data Analytics

1.9 Operational Definition of Terms

Business Performance

Business performance is a company's ability to profit from its resources and achieve its objectives. In practice, the term business performance usually refers to a company's achievements. These are measured using metrics known as Key Performance Indicators (KPIs).

Capability

It is a competence or a skill that an organization possesses that enables it to perform activities.

Computerized accounting system

Computerized accounting system is a computer program that maintains account books on computers, including recording the day-to-day financial transactions of an organization, including fixed asset management, expense management, revenue management, accounts receivable, accounts payable, sub ledger accounting, and reporting and analytics, transactions and account balances.

Data Analytics

Data analytics is the collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision making. Data analytics is often confused with data analysis. While these are related terms, they are not exactly the same.

Innovation

Innovation is the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering goods or services. This is the use of new internal and external developed policies, programs, services, products, processes, devices and systems for the growth of the organization.

Innovation Capability

Innovation capability is defined as a firm's ability to identify new ideas and transform them into new/improved products, services or processes that benefit the firm.

Internal Control

Internal control, as defined by accounting and auditing, is a process for assuring of an organization's objectives in operational effectiveness and efficiency, reliable financial reporting, and compliance with laws, regulations and policies.

Online Trading Services

In the context of retail stores, an Online Trading Service refers to an e-commerce platform or website that allows customers to browse and purchase products online, in addition to or instead of visiting a physical storefront. This service enables retail stores to expand their reach, increase sales, and provide customers with a convenient and flexible shopping experience.

Performance

This is the evaluation of an individual, organization, or system's ability to achieve desired outcomes or goals. It encompasses various aspects such as productivity, efficiency, effectiveness, and quality. Performance is well-defined as the results of effort exerted since it is the most significance link to the organization objectives, customer satisfaction and overall economic contributions.

Retail Stores and SMEs

A Retail store is a business that sells products or services directly to individual consumers, typically through a physical storefront, online platform, or combination of both while SMEs are typically defined as businesses with focus on local customers with fewer than 500 employees. Both retail stores and SMEs aim to generate revenue and profit, and both operate in competitive markets, requiring innovative strategies to stand out. In the context of this study, both terms will be used interchangeably where it's impractically unavoidable.

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Chapter Two

Literature Review

This chapter reviews existing literatures that are relevant to the asset quality, capital adequacy and financial performance. It explicates the conceptual framework that characterizes the contents of the study. It provides a discussion on the theories related to the study, empirical researches from the available literature on the topic under study are also presented in the chapter, as well conceptual model of the study.

2.1 Conceptual Review

2.1.1 Business Performance

For companies to sustain and expand over time, they must generate profits from their operations. Company performance is a key concept that reflects the efficient use of financial resources to fulfill broader organizational goals¹. Generating adequate profits is essential not only for maintaining operations but also for attracting investor funding for growth and contributing to societal welfare through social investments².

The term "perform" originates from the Old French *parfournir*, meaning "to carry out" or "to complete," with roots in the Latin *per-* ("through") and *formare* ("to form" or "to shape"). It signifies actions such as executing, achieving, or fulfilling. Broadly, performance refers to how a specific task is completed in comparison to current standards of accuracy, thoroughness, cost, and speed, essentially reflecting the extent of accomplishment. In this study, "performance" is a general term for an organization's activities over a certain timeframe, often with reference to past or anticipated efficiency, management responsibility, or accountability. Therefore, performance

not only relates to presentation but also to the quality of results achieved, indicating the company's success, condition, and compliance.³

Since an organization's goals are closely tied to how performance is measured, it is essential for businesses to understand the drivers of organizational performance. Performance can be described as achieving results today that will generate measurable value in the future. Business performance, therefore, involves achieving the most efficient, informed, and precise outcomes from a firm's activities. Performance measurement focuses on evaluating the effectiveness and returns of a business's investments over a defined period⁴.

Business performance measurement has long been built on financial metrics. These metrics provided a high level of information aggregation, expressed performance and accomplishment in monetary terms, and were listed in the chart of accounts. More significantly, financial measures adhere to Generally Accepted Accounting Principles and are widely recognized (GAAP). Because non-financial metrics like customer happiness, quality, market share, and human resources tend to take a backseat to financial results, they are nonetheless widely accepted to use by the majority of businesses. Additionally, managers' underlying reliance on financial performance indicators rules over organizational strategy, especially in the short term. The financial measurements have also been employed for many years, and managers are typically at ease using them⁵.

The key performance indicators are the criteria that a business uses to assess its own performance. No single indicator gives a full image of the company's success; rather they must be looked into so as to create a comprehensive overview. A company can define its goals and track its progress toward them with the aid of performance indicators, commonly referred to as

success indicators. An organization requires a mechanism to gauge its success once it has examined its mission, listed all its stakeholders, and established its goals⁶.

Whatever main performance indicators are chosen, they must be quantifiable, reflect the objectives of the firm, and be essential to its success (measurable). Main Performance Indicators (MPI) are typically long-term factors. They do not frequently alter in terms of definition or measurement. The objectives for a certain MPI may alter as the organization's objectives change or when an objective is neared. Depending on the organization, they will vary. The percentage of revenue generated by repeat customers may be one of a company's critical performance metrics. Businesses need to create strategic goals, implement decisions, and evaluate their state and behavior as they approach their goal in order to survive and prosper⁷.

An organization's performance is defined as its ability to achieve its goals by utilizing the resources at its disposal. These resources need to be managed efficiently and effectively while ensuring proper administration⁸. Additionally, the organization must continue to adapt successfully to changes in its external environment while achieving its objectives⁹. Performance metrics are generally characterized by two dimensions. The first dimension focuses on fulfilling performance goals, typically measured through market and financial indicators such as market share, profitability, and capacity development. The second dimension is subjective, encompassing employee and customer-related metrics, including customer satisfaction, service quality, and employee satisfaction¹⁰.

The performance of a business is contingent on its market outcomes, which can be clearly observed⁴. This relationship can be further explained through economic performance indicators, such as return on capital, return on equity, and profit metrics like return on sales, net income, and

return on investment. In addition to financial metrics, non-financial indicators include employee autonomy, customer satisfaction, sales growth, workforce development, market share, job satisfaction, and work-life balance¹¹. Business efficiency spans various areas, such as growth and profitability¹². It represents a dynamic approach in which managers and leaders collaborate within a framework designed to achieve optimal results. This approach stems from operational processes and reflects the tangible outcomes of strategic management. The justification for strategic management practices lies in their potential to enhance organizational efficiency¹³.

Business performance is closely linked to a company's ability to generate profits and achieve growth, ultimately fulfilling its strategic objectives¹⁴. A firm's capacity for innovation is influenced by the opportunities available in its external environment. This suggests that small and medium-sized enterprises (SMEs) can gain a competitive edge in emerging markets by prioritizing innovative activities that enhance their market reputation¹⁵. Essentially, the primary motivation for innovation is the pursuit of improved business performance and a stronger competitive position¹⁶.

Financial performance pertains to how well a company performs in financial terms. According to researchers, financial performance can be assessed through sales figures, sales value, and the overall profitability of an organization¹⁷. The effectiveness of an organization's sales is significantly influenced by its capability to innovate products successfully¹⁸. Marketing performance encompasses aspects such as market growth, cost reductions, revenue generation, customer satisfaction, customer loyalty, brand equity, and market share. Previous research has indicated a positive correlation between innovation capabilities and the market performance of an organization. Market innovation is considered a crucial factor necessary for achieving market

performance¹⁹. Ultimately, the financial performance of a firm is largely influenced by its sales performance.

The relationship strength between innovation and firm performance can be determined by measuring the performance aspect of the firm. When we refer to innovation in economics, we are referring to patent products, processes and technologies that are creative and new which also improve the firm performance²⁰. One of the most popularly used measure of performance when it comes to the innovation and performance relationship is sales turnover that have occurred due to the new innovation. Since it is hard to link other measures such as return on assets and return on equity to innovation, it is hard to use them²¹.

2.1.2.1 Innovative Capabilities

Innovation is defined as the introduction of new programs, systems, services, devices, policies, processes, or products, either developed internally or externally, into an organization²². It fundamentally involves applying novel ideas to improve a firm's performance. At its essence, innovation signifies the introduction of fresh concepts aimed at enhancing a company's productivity²³. This concept enables organizations to expand by increasing market share, entering new markets, and achieving a sustainable competitive advantage. Consequently, fostering innovation equips a firm with a vital strategy to boost productivity, enhance customer satisfaction, capture greater market share, and ultimately secure a competitive edge that is challenging to imitate²⁴.

Process innovation is viewed as a reengineering approach that modifies an organization's internal operations. It encompasses various elements, including technical designs, research and development activities, and the creation of new or enhanced products and services, as well as

improved management and commercialization strategies²⁵. Thus, process innovation focuses on developing or refining techniques, knowledge, systems, procedures, and skills necessary for transforming new processes to create products or services that elevate business performance²⁶.

Moreover, process innovation highlights the need for the reinvention or enhancement of existing processes by increasing their operational flexibility²⁷. This indicates that process innovation pertains to all functional and operational aspects of businesses, resulting in reduced complexity and production costs. This, in turn, improves product quality and delivery methods, strengthens market positioning, provides better competitive advantages, and enhances overall business performance²⁸.

Managerial innovation refers to the adoption of new or improved management methods and practices affecting work organization and the internal and external relationships within enterprises²⁹. This type of innovation can significantly elevate a company's performance by reducing transaction and administrative costs, enhancing employee satisfaction, boosting productivity, fostering internal knowledge development, acquiring external knowledge, and minimizing supplier management costs³⁰.

The ability to innovate is a crucial priority for business management, facilitating sustainability and superior performance. A company's innovation capabilities, developed over time, significantly impact its overall performance. Most organizations assess their performance using both financial and non-financial metrics³¹. Developing innovation capabilities involves organizational support, knowledge, competencies, and the innovation process itself³². This indicates that achieving maturity in innovation capability requires management support to foster

an environment conducive to innovation, followed by the recruitment of individuals with the necessary skills to implement the innovation process³³.

In the 21st century, innovation is vital for businesses to tackle significant challenges arising from socio-economic and environmental shifts³⁴. Research has shown that innovation adds value for customers by creatively addressing their needs³⁵. Many scholars have indicated that innovation leads to the development of new products, production techniques, market expansion, new supply sources, and various competitive forms³⁶. Literature suggests that innovation drives organizational change and aids in establishing competitive advantages. It has been observed that innovative products and designs contribute to maintaining a company's market share and profitability³⁷.

Innovation encompasses a firm's ability to transform available knowledge into new products, ideas, systems, and processes for the organization's benefit and that of its stakeholders³⁸. Thus, it consists of unique integrated resources, both tangible and intangible, developed by a firm to enhance its performance. Research highlights the importance of a firm's capabilities in the innovation process, which includes knowledge management and organizational support. The innovation process can be viewed as a comprehensive lifestyle, incorporating practices, actions, and activities that transform ideas or opportunities into concepts, development, execution, and ultimately commercialization³⁹. This encompasses ongoing improvement and optimization, including elements like exploration capability, portfolio management, exploitation capability, and risk management⁴⁰.

With the advent of digital technologies in accounting functions, there has been a rising demand for skills related to effectively utilizing these technologies among business and accounting

professionals⁴¹. These professionals must evolve beyond traditional skills used for routine tasks, seeking innovative ways to create customer value that ensure business sustainability through the adoption of new digital technologies⁴². Such technologies facilitate the orchestration of new products, processes, services, platforms, and even novel business models, thereby enabling digital innovation⁴³.

In this context, enhancing innovation capabilities within accounting firms is essential, as it compels businesses to pursue continuous innovation in response to environmental changes, with digital technologies serving as key drivers of these transformations⁴⁴. Consequently, the capacity to innovate allows firms to align technological initiatives with improved performance, representing a comprehensive ability to absorb, adapt, and integrate specific technologies into managerial, operational, and transactional routines, which fosters innovation and a competitive edge⁴⁵.

Research indicates that firms that are able to sustain their competitive advantages are those that have embraced innovation⁴⁶. There are firms that have had successful innovations but others have not had such luck. If a firm is to have an innovative campaign that is both a success and sustainable, then it must have unique innovative competencies. These might be in form of resources or skills that the organization has which gives it an edge over its competitors. However, it is important to note that not all the organization resources or competencies can give it an edge over its competitors⁴⁷.

Over time, researchers have shown that innovation impacts organisations' performance^{48,49,50,51,52,53}. Research suggests that the ability to innovate can enhance overall performance. Organizational performance can be enhanced and cultivated through innovation,

influenced by various factors including the environment, organizational culture, and other elements⁵⁴. In light of this, numerous researchers have examined the impact of innovation on organizational performance^{55,56,57,58,59}. A study highlights that organisational performance and organisational effectiveness is interrelated⁶⁰.

2.1.1.2 Computerised Accounting System

Many organizations have extensively adopted computerized accounting systems to streamline and optimize their business operations. These systems have brought significant efficiencies, especially in service industries, which have witnessed notable growth due to their implementation. The banking sector, for example, has benefited greatly from computerized accounting, allowing for faster, more accurate transaction processing and improved customer service⁶¹. Furthermore, the widespread use of the internet has added substantial value to computerized accounting systems by creating a virtual environment in which accounting tasks can be carried out remotely. This advancement means that organizations can now conduct accounting activities not only within their own offices but also across different locations worldwide, making real-time financial management possible on a global scale⁶².

In the accounting field today, a key driver for adopting computerized accounting systems (CAS) is the vast amount of data and transactions handled by many organizations and institutions. Efficient operations and future referencing require that data be stored and managed systematically⁶³. Data management is essential to any institution, encompassing the collection, analysis, storage, and organization of information so it can be easily accessed by authorized personnel when needed. Effective data management also supports operational decision-making and strategic planning for executives and senior managers. Given its critical nature, data

management demands high accuracy levels, underscoring the importance of computer systems to store large volumes of data reliably and ensure accessibility when required⁶⁴.

In an age marked by swift technological advancements, the conventional methods of accounting and auditing are experiencing a significant transformation. The incorporation of artificial intelligence (AI) and machine learning (ML) for automating routine tasks, along with the strategic use of advanced data analytics, is reshaping the industry at an unprecedented rate. As accounting professionals adapt to this technological evolution, their roles are being redefined, requiring a new set of skills and altering the landscape of professional development^{65,66}.

The accounting and auditing sectors are undergoing a substantial change, driven by continuous technological advancements, evolving regulatory frameworks, and a changing corporate environment. With businesses facing an unparalleled rate of innovation, it is crucial to investigate and comprehend the contemporary trends influencing accounting and auditing practices⁶⁷. The integration of AI and ML into accounting workflows represents a significant shift from traditional practices. Routine and monotonous tasks, such as data entry, invoice processing, and reconciliation, are now being automated with remarkable accuracy. This shift not only allows accounting professionals to reclaim valuable time but also reduces the likelihood of human error, thereby enhancing the precision of financial records⁶⁸.

Furthermore, the implementation of new accounting standards has markedly improved transparency and disclosure in financial reporting. Companies are now mandated to provide more comprehensive details regarding their revenue recognition policies, lease agreements, and credit loss projections. This heightened transparency ensures a more accurate portrayal of an entity's financial condition, enabling stakeholders to make well-informed decisions⁶⁹. The

alignment of U.S. GAAP (Generally Accepted Accounting Principles) with IFRS and other global accounting standards fosters standardization and consistency in financial reporting. This convergence facilitates easier cross-border comparisons, streamlines financial analysis, and supports a more integrated global financial reporting system. For multinational corporations, this alignment simplifies the preparation of consolidated financial statements in line with international standards⁷⁰.

Information Technology (IT) is revolutionizing business operations and offers significant opportunities for organizations. The integration of IT into business practices is increasingly evident as companies shift their activities to leverage technology for generating value for both the organization and its customers⁷¹. While acknowledging the widespread adoption of IT by firms is straightforward, the critical questions revolve around empirically determining the business value of IT and understanding the mechanisms through which this value is realized⁷². The business value or performance impact of IT refers to its benefits to organizations, which can manifest in various forms, such as enhancements in product development and process improvements, returns on assets, or any economic value that IT brings to the firm⁷³. This study specifically examines the business value of IT in relation to "accounting improvement," which it defines as *accounting software performance*.

The automation of routine tasks now extends to areas such as transaction categorization, where machine learning algorithms can learn and adapt to changing patterns, thereby increasing efficiency over time. Consequently, accountants are able to concentrate more on complex and strategic elements of financial management⁷⁴. The integration of AI with accounting results in significant gains in accuracy and efficiency. Through continuous learning and adaptation,

machine learning algorithms enhance their ability to categorize and process financial data. This flexibility not only boosts accuracy but also hastens the analysis of large datasets⁷⁵.

As the role of auditors evolves, there is a need for corresponding changes in methodologies to ensure higher audit quality. Auditors are increasingly employing continuous auditing techniques facilitated by data analytics and blockchain technology. This approach enables real-time monitoring of financial transactions, minimizing the delay between an event's occurrence and its identification⁷⁶. Furthermore, auditors are adjusting to the rapid technological advancements by integrating IT audit skills into their practices. Evaluating and understanding internal controls over information systems becomes essential as technology becomes more integrated with business operations. This adaptability ensures that auditors are prepared to navigate the changing technological environment and maintain high standards of audit quality⁷⁷.

A study characterizes IT capability by examining IT infrastructure, IT business experience (a group with expertise in both IT and business), and IT relationship infrastructure (the degree of communication between IT and business units). The authors contend that having IT personnel with both technical and business knowledge is crucial for addressing business problems that necessitate this combined expertise. IT relationship infrastructure facilitates data acquisition and information sharing as IT and business teams collaborate to solve challenges⁷⁸. Digital transformation necessitates a configuration of IT human capital that interlinks digital, analytical, and business skills. In this context, professionals such as online marketing experts and data analysts with IT competencies increasingly assume responsibilities for marketing research and traditional brand/product marketing, while business intelligence teams support the development of IT infrastructure⁷⁹.

To provide more insightful financial assessments, auditors must embrace technological advancements. Data analytics and blockchain enable a shift from a compliance-focused approach to a strategic one. Auditors can proactively identify risks and opportunities, positioning themselves as valuable strategic partners. Additionally, technology can help auditors to improve the efficiency and effectiveness of their audits. For example, data analytics can be used to identify anomalies and trends in financial data, while blockchain can be used to track the proof of transactions. By leveraging these technologies, auditors can provide more value to their clients and help them to make better decisions⁷⁹.

Technology empowers organizations to engage with a wider range of stakeholders, fostering accountability. Social media and digital channels facilitate interaction with shareholders, customers, employees, and the community. Comprehensive stakeholder engagement strategies, including transparent communication and feedback incorporation, enhance organizational sustainability and success^{80,81}.

The use of technology in decision-making raises ethical concerns. Automated systems and AI must be designed and implemented ethically to avoid biases, privacy issues, and unintended consequences. Ethical frameworks, audits, and diverse stakeholder involvement are crucial to mitigate risks and maintain organizational reputation⁸². Additionally, it is important to consider the potential social and economic impact of technological advancements. For example, automation may lead to job displacement, while AI may exacerbate existing inequalities. Therefore, it is essential to develop policies and regulations that promote the ethical and responsible use of technology⁸³.

Integrated reporting frameworks, enabled by technology, provide comprehensive insights into financial and non-financial performance. User-friendly reporting tools enhance information accessibility, allowing stakeholders to understand governance practices⁸⁴. Digital governance platforms streamline processes, improve efficiency, and enhance accountability. Blockchain technology ensures secure and transparent record-keeping, reducing fraud risks^{85,86}.

Accounting software excels in handling big data, enabling accountants to extract valuable insights. This capability is crucial for uncovering opportunities and risks, and making informed decisions. Advanced data analytics and predictive analytics contribute to the development of robust decision support systems. Additionally, accounting software can automate routine tasks, such as data entry and report generation, freeing up accountants' time to focus on more strategic work. Furthermore, accounting software can help organizations comply with complex regulations and standards, such as GAAP and IFRS. By leveraging the power of accounting software, organizations can gain a competitive edge and make better-informed decisions⁸⁶.

2.1.2.3 Online Trading Services

Businesses are increasingly turning to technology to meet their unique needs and capitalize on global business opportunities. Both large and small enterprises rely on information technology to process data efficiently and make informed decisions⁸⁷. The internet has empowered businesses, especially SMEs, to reach a wider audience and expand their market reach. This digital transformation is reshaping traditional business models and driving innovation.

Social media platforms have become essential tools for businesses to connect with customers and promote their products or services. Online marketing strategies, such as social media advertising and search engine optimization, are crucial for driving traffic and increasing sales⁸⁸. By

leveraging these platforms, businesses can target specific demographics, measure campaign effectiveness, and build strong relationships with customers⁸⁹.

Effective communication and customer service are vital for business success. Social media platforms enable businesses to engage with customers directly, address concerns, and build strong relationships⁹⁰. By actively listening to customer feedback and responding promptly, businesses can improve customer satisfaction and loyalty⁹¹.

Online advertising offers a cost-effective and targeted way to reach potential customers. By utilizing platforms like Google Ads and social media advertising, businesses can tailor their messaging to specific demographics and interests. This targeted approach helps to maximize the return on investment for advertising campaigns. Affiliate marketing is a popular strategy for promoting products and services online. By partnering with influencers and other websites, businesses can reach a wider audience and generate more sales. Affiliate marketing can be a cost-effective way to acquire new customers and drive traffic to a website⁹².

Social media has transformed the way businesses interact with customers. Platforms like Facebook and Twitter allow for two-way communication, enabling businesses to gather feedback, address concerns, and build brand loyalty. By actively engaging with customers on social media, businesses can create a positive brand image and foster a sense of community⁹³. Internet banking has revolutionized the way people manage their finances. It offers convenience, security, and efficiency, allowing customers to access their accounts and conduct transactions 24/7. With internet banking, customers can transfer funds, pay bills, and check account balances from anywhere with an internet connection⁹⁴.

Electronic banking, including ATM, POS, and mobile banking, has made it easier for people to access financial services⁹⁵. These technologies have streamlined banking processes and improved customer satisfaction⁹⁶. For example, ATMs allow customers to withdraw cash, deposit checks, and transfer funds without visiting a bank branch. POS terminals enable businesses to process credit and debit card payments quickly and efficiently⁹⁷. Mobile banking apps allow customers to manage their finances on the go, making it easier to stay on top of their finances⁹⁸.

The continuous integration of technology is vital for optimizing business operations. This technological integration is essential for producing high-quality products and services efficiently⁹⁹. Performance measurement serves as a key tool for assessing productivity levels and identifying opportunities for enhancement. Internet banking was introduced to facilitate seamless interactions between banks and their customers.¹⁰⁰

Small and medium enterprises (SMEs) believe that the Internet offers an opportunity to expand their market reach and attract more customers. For these businesses, e-business adoption tends to be a reactive and opportunistic move rather than a strategically planned one¹⁰¹. Perceived benefits are a primary motivator for SMEs to adopt e-business, with efficiency gains including lower operating expenses and reduced transaction costs in sales and procurement. Effectiveness gains include enhanced market intelligence and the ability to find suppliers for product development online. Additionally, e-business is viewed as a way to strengthen trading relationships. Maintaining a positive image is crucial, both for retaining market share and for expanding it. Many researchers have identified improved customer service as a key driver for e-business adoption, not only due to external pressures but also for operational effectiveness, such as faster delivery of goods and enhanced online support¹⁰².

Researchers, in their study of factors influencing electronic business technologies adoption and use by SMEs in a Nigerian municipality, found that most of these SMEs were followers in their sector in terms of adopting technology, as the technologies they used were predominantly e-mail and Internet rather than e-commerce platform to enable online transactions¹⁰³. Mobile banking and mobile money have made it possible for SMEs in Nigeria to perform major financial functions without having to carry cash, cheques or debit cards. Money can easily be transferred, bills paid and purchases and sales also made on the go. Using e-business strategies, companies possess the potential to reach more customers, introduce new products and services quickly, and collaborate with suppliers and business partners from all over the world¹⁰⁴.

As a result of the quest to provide high quality service to customers and also maintaining relationship with their customers, SMEs are getting to grips with adopting e-business strategies¹⁰⁵. A study confirmed that Information Technology and the Internet are not only important features for the facilitation of communication between people but they are a way that creates new business models, by changing the development of business and transforming them in a positive manner¹⁰⁶.

Internet Banking, or online banking, is an electronic payment system that allows bank customers to conduct financial transactions through the bank's website. This convenient service eliminates the need for physical bank visits, enabling users to manage their finances online or via mobile devices. Automated Teller Machines (ATMs) are electronic devices that provide access to various banking services, such as withdrawals, deposits, and fund transfers, without direct interaction with bank staff. Mobile banking, another form of electronic banking, allows customers to perform financial transactions using their mobile phones through bank-provided mobile apps¹⁰⁷.

Economic growth refers to the expansion of an economy's production capacity over time. It is typically measured by the increase in real Gross Domestic Product (GDP), which adjusts for inflation. GDP represents the total value of goods and services produced within a country's borders during a specific period¹⁰⁵. A sustained increase in GDP indicates that the economy is producing more goods and services, leading to higher standards of living, increased employment opportunities, and improved quality of life for its citizens.

The internet has become an integral part of daily life¹⁰⁸, revolutionizing the way we conduct business and communicate. While the concept of electronic commerce predates the internet, its significant growth began in the 1970s with electronic data interchange (EDI)¹⁰⁹. EDI enabled the electronic exchange of business documents like purchase orders and invoices. The introduction of the internet in 1969 further accelerated the growth of e-commerce, leading to the emergence of business-to-business (B2B) and business-to-consumer (B2C) e-commerce models¹¹⁰.

Software as a Service (SaaS) is a popular B2B model where software services are delivered over the internet. Examples of SaaS tools include Asana, Dropbox, and Airtable. Successful B2B marketing strategies involve defining the target audience, building brand authority, creating strong content, and diversifying marketing channels. Networking is also crucial for building relationships and generating leads in the B2B space¹¹¹. In Nigeria, ATMs, internet banking, mobile banking, and point-of-sale (POS) terminals are commonly used electronic payment systems. E-banking has significantly transformed the banking industry, offering greater convenience, speed, and accessibility to customers. It enables users to easily transfer funds, make purchases, and pay bills, both online and offline¹¹².

The internet and mobile technology have played a pivotal role in shaping modern business practices. Banks, as early adopters of internet technology, have leveraged e-banking services to offer a wide range of online financial services, including online transfers, electronic bill payments, and online account opening¹¹³. These technological advancements have not only made banking services more accessible and convenient for customers but have also streamlined operations and reduced costs for banks¹¹⁴.

Furthermore, the internet has empowered businesses of all sizes to reach a global audience, expand their market reach, and improve their operational efficiency. E-commerce platforms have enabled businesses to sell their products and services online, reaching customers beyond traditional geographic boundaries. Social media platforms have provided businesses with powerful tools to engage with customers, build brand awareness, and drive sales. Mobile technology has further enhanced customer experience, allowing businesses to offer mobile apps and mobile-friendly websites to cater to the growing number of mobile users¹¹⁴.

These services, including phone banking, mobile banking, internet payment systems, and internet banking, are designed to enhance customer experience and streamline financial transactions. Mobile banking, in particular, has the potential to significantly improve process efficiency, speed of delivery, and overall service value. However, the success of mobile banking depends on its adoption rate, especially among small and medium-sized enterprises (SMEs)¹¹⁵.

The convenience, simplicity, security, and speed offered by mobile banking have encouraged SMEs in Nigeria to adopt mobile transactions¹¹⁶. Mobile phone users can easily perform various financial tasks, such as checking balances, making payments, and transferring funds, anytime and anywhere. Mobile cash transmission services can further enhance business efficiency and

trade development by providing low-cost, reliable, and efficient money transfer solutions¹¹⁷. Mobile banking technology is user-friendly, secure, and accessible, making it suitable for both banked and unbanked populations¹¹⁸.

The increasing adoption of electronic banking has led to a decline in the use of traditional methods like checks¹¹⁸. This shift has brought numerous benefits to both banks and customers. Automation has improved data processing and accessibility, enabling faster decision-making. It has also reduced operating costs and enhanced fraud detection capabilities¹¹⁹. Additionally, electronic banking has lowered transaction costs and increased transaction speed. By reducing the need to carry large amounts of cash, electronic banking has also helped to mitigate the risk of robberies¹²⁰.

2.1.2.4 Data Analytics

Business analytics techniques have gained significant attention as companies aim to harness data for business growth. Business analytics involves using statistical tools, data analysis, and other quantitative methods to gain insights into business performance and support decision-making¹²¹. As organizations respond to emerging challenges and opportunities, business analytics has become essential for staying competitive in today's fast-paced market. The importance of making quick, informed decisions cannot be overstated.

In today's business environment, the significance of business analytics cannot be overstated. By analyzing data and spotting trends, companies can predict future outcomes, make informed decisions, and secure a competitive edge. Business analytics is becoming increasingly essential, especially in 2021 and beyond. Reports indicate that analytics has shifted from a luxury to a necessity for businesses aiming to survive and thrive in the current market¹²². Utilizing business

analytics is critical for improving operational efficiency, optimizing marketing strategies, identifying new opportunities, and enhancing customer satisfaction. Overall, business analytics helps companies stay competitive and achieve long-term success by providing insights into operations, highlighting areas for improvement, and supporting data-driven decision-making¹²³.

The integration of data analytics into auditing has significantly enhanced efficiency and effectiveness. Traditional manual processes are being replaced by powerful algorithms capable of analyzing vast datasets with speed and precision¹²⁴. By identifying patterns, anomalies, and trends, data analytics enables auditors to focus their efforts on high-risk areas. This increased efficiency translates into time savings and more strategic resource allocation¹²⁵.

Data analytics plays a crucial role in promoting transparency, accuracy, and reliability in financial reporting. By scrutinizing financial data more comprehensively, auditors can identify irregularities, inconsistencies, and potential fraud risks. This increased scrutiny helps to ensure that financial statements are accurate, reliable, and compliant with regulatory standards¹²⁶. Additionally, data analytics can help to identify emerging trends and risks, enabling auditors to provide early warnings and proactive recommendations to management. By leveraging data analytics, auditors can provide stakeholders with greater assurance regarding the accuracy and integrity of financial information, thereby enhancing investor confidence and strengthening the overall credibility of financial reporting¹²⁶.

The evolving role of auditors necessitates the adoption of innovative methodologies. Continuous auditing, enabled by data analytics and blockchain technology, allows for real-time monitoring of financial transactions¹²⁷. This proactive approach reduces the time lag between events and their detection, enhancing the timeliness and accuracy of audits. Additionally, auditors are

increasingly incorporating IT audit skills into their practices to assess the effectiveness of internal controls over information systems. By adapting to the evolving technological landscape, auditors can maintain the highest standards of audit quality¹²⁸.

The increasing reliance on data-driven decision-making has transformed organizational practices. The abundance of data generated by various business functions, combined with advanced analytics and artificial intelligence, empowers decision-makers with valuable insights. By basing strategic choices on real-time, granular data, organizations can make more informed and precise decisions. However, adapting to this data-driven approach requires a cultural shift towards embracing data-driven insights¹²⁹. Decision-makers must develop the skills to interpret and leverage data effectively, and organizations must invest in robust data infrastructure and analytics tools to facilitate the extraction of meaningful insights.

Rapid advancements in technology have necessitated more agile decision-making processes. The dynamic nature of markets, customer preferences, and competitive landscapes demands flexibility and adaptability. Organizations are adopting agile methodologies, which prioritize iterative decision-making and quick responses to changing circumstances. This agile approach enables organizations to quickly pivot their strategies and capitalize on emerging opportunities¹³⁰. A study described big data as the amount of information available to a firm, as well as its varieties, complexity and speed by which the data has to be analyzed or delivered. Big data provide the right users, with the right data in real time¹³¹. It has significantly impacted many sectors of developed economy, including transportation, marketing, healthcare, and manufacturing. It is thus leveraged by public and private sector organizations to enhance their performance¹³².

Big Data Analytics (BDA) is a real time analytical tool, capable of solving business problems in real time¹³³. It facilitates the analysis of huge volume of data available to the firms, especially in real time. There are basically four types of BDA; they are descriptive, diagnostic, predictive and prescriptive analytics¹³¹. A study focused on diagnostic big data analytics and performance of deposit money banks in Rivers State, Nigeria. The application of diagnostic BDA enables organization to achieve competitive edge by minimizing costs, converting challenges to opportunities and minimizing risks¹³⁴.

It is well-established that information systems (IS) and IT-based resources support decision-making and enhance a firm's competitive advantage¹³⁵. As an emerging technology, big data—characterized by the vast volume of data that can be quickly generated, captured, and processed, yet does not fit into traditional relational databases—includes data that can be organized into a highly structured format for meaningful insights. However, the transition between structured data in relational database management systems and unstructured data for analytics can disrupt seamless processing¹³⁶.

Big data requires advanced database management systems that extend beyond the capabilities of standard SQL-based systems. Historically, data primarily stemmed from transactions and was organized in rows and columns. Today, data originates from diverse sources and formats, including photos from mobile devices, GPS maps, surveillance video, call center audio, emails, tweets, and text messages, and it is typically stored in unstructured formats. This variety and unstructured nature of data are what define the concept of big data¹³⁷.

While offering numerous benefits, Big data presents significant challenges such as data quality, security, scalability, and the need for specialized analytics expertise. Addressing these challenges

is crucial for organizations to fully harness the potential of big data and drive transformative change. As technology continues to evolve, big data will play an increasingly important role in shaping the future of businesses across industries¹³⁸. Nigeria, a developing nation, has experienced substantial economic growth. This growth has underscored the importance of the accounting profession in ensuring transparency, accountability, and effective financial management¹³⁸.

Incorporating technology into decision-making processes brings new challenges, especially concerning cybersecurity. As companies depend more on interconnected systems and store large volumes of sensitive information, the risk of cyberattacks escalates. To reduce these risks, organizations must adopt strong cybersecurity practices, such as encryption, firewalls, and continuous network monitoring. Additional measures, including employee cybersecurity training, multi-factor authentication, and regular security audits, are crucial for detecting and resolving potential vulnerabilities¹³⁹. In the digital era, effective risk management requires a proactive approach in which organizations anticipate threats and implement preventive strategies to protect their digital assets.¹⁴⁰

2.1.2.5 Internal Control

Internal controls are a set of mechanisms designed to ensure the achievement of organizational objectives¹⁴¹. These controls can be categorized into accounting controls and operational or administrative controls. Accounting controls focus on safeguarding assets and ensuring the accuracy of financial records, while operational controls aim to improve efficiency and compliance with policies and regulations¹⁴².

Effective internal controls are essential for the success of an organization¹⁴³. They help prevent fraud, reduce errors, and ensure the reliability of financial reporting. Additionally, strong internal controls can enhance operational efficiency, improve decision-making, and mitigate risks. By establishing clear policies and procedures, organizations can promote consistency, accountability, and adherence to regulations¹⁴⁴. Furthermore, effective internal controls can help to protect the organization's assets, reputation, and overall financial health¹⁴².

While internal controls are essential, it's important to note that they are not foolproof. Inherent limitations may exist, and the effectiveness of internal controls depends on factors such as human error, management oversight, and external pressures. To maximize the effectiveness of internal controls, organizations should implement robust monitoring and evaluation processes, and regularly assess and update their control systems¹⁴⁵.

The role of corporate boards of directors in overseeing internal controls is significant. Boards are responsible for ensuring that the organization has adequate internal controls in place and that they are functioning effectively. This includes reviewing the organization's risk management processes, approving significant transactions, and monitoring the performance of internal audit functions¹⁴⁶. Additionally, boards should play an active role in setting the organization's ethical tone and promoting a culture of integrity. This involves establishing a strong code of conduct, providing ethics training for employees, and implementing a robust whistleblower protection program. By fulfilling these responsibilities, boards can help to ensure that the organization's internal controls are effective and that the organization's financial statements are accurate and reliable¹⁴⁷.

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) has emphasized the importance of integrity and ethical values in maintaining effective internal controls. By fostering a culture of integrity and ethical behavior, organizations can significantly reduce the risk of fraud and misconduct. A firm's internal control systems should adapt and improve over time, with each department undergoing beneficial changes. Additionally, the firm should employ skilled professionals to lead all critical departments. An ICT department is essential for accurately capturing business transactions and for classifying, measuring, recording, and reporting data in a timely manner, thereby contributing to an organization's financial performance assessment¹⁴⁸.

Internal control as including internal checks and internal auditing, it projects the whole system of controls to be applicable to sales, purchases, finance, cost, production and others. These controls provide safety and security to assets and continuous checks on the day-to-day transactions¹⁴⁹. A study defines internal control as the plan of the organization and all the methods and procedures adopted by the management to achieve its organizational goals¹⁵⁰.

Internal control is a comprehensive system of policies, procedures, and measures implemented by organizations to ensure efficient operations, safeguard assets, and maintain accurate financial records. It encompasses various components, including internal checks, internal audits, accounting controls, budgetary controls, and physical controls¹⁵¹. By establishing clear guidelines and monitoring compliance, internal controls help organizations achieve their objectives, mitigate risks, and prevent fraud^{152,153,154}.

Effective internal controls are crucial for organizational success. They contribute to operational efficiency, improve decision-making, and enhance the reliability of financial reporting¹⁵⁵. By

promoting accountability, integrity, and ethical behavior, internal controls help to build trust with stakeholders and maintain a positive reputation¹⁵⁶. Organizations should continuously assess the effectiveness of their internal control systems and make necessary adjustments to adapt to changes in the business environment and emerging risks. By investing in strong internal controls, organizations can safeguard their assets, protect their reputation, and achieve long-term sustainability¹⁵⁷.

2.2 Theoretical Framework

This study is grounded in two key theories that underpin the study variables: the Diffusion of Innovation Theory and the Task Technology Fit (TTF) Theory.

2.2.1 Diffusion of Innovation Theory

This study is based on the Diffusion of Innovation Theory, originally proposed by Everett Rogers. This theory posits that the spread of innovation relies on the spontaneous or planned dissemination of new ideas, focusing on the adoption and implementation of innovations. Rogers defines innovation as any concept, practice, or object perceived as new. The theory highlights the importance of perceived novelty, asserting that an idea is considered an innovation if it appears new to the potential adopter¹⁵⁸.

The presence of innovation often introduces uncertainty for potential adopters, as they may lack predictability and sufficient information. One study describes diffusion within a social network as a process of information exchange aimed at reducing uncertainty¹⁵⁹. Here, uncertainty refers to the degree of unpredictability regarding various outcomes. To reduce this uncertainty, those considering adopting an innovation actively seek out information.

The propounder of this theory argues that technological innovation inherently carries information, and its adoption can reduce uncertainty. The diffusion of innovation depends on five key attributes: relative advantage, compatibility, complexity, trialability, and observability. In this research, the Diffusion of Innovation Theory links innovation capability to SME performance, emphasizing the value of new ideas in enhancing organizational performance¹⁵⁸. For small businesses, these ideas could involve developing or improving products and services to boost performance.

Diffusion of Innovation describes how a new idea is introduced and communicated through certain channels within a social system¹⁵⁹. This process is influenced by four factors: the innovation itself, communication channels, time, and the social system. For an innovation to be sustainable, it must achieve widespread acceptance¹⁶⁰. Adoption typically follows an S-curve over time, starting with innovators and progressing through early adopters, the early and late majorities, and finally, laggards.

The success of an innovation is significantly shaped by decisions within the social system, which follow five stages: *Knowledge*, where individuals become aware of the innovation; *Persuasion*, where they seek more information; *Decision*, where they evaluate the pros and cons; *Implementation*, where they apply and assess its utility; and *Confirmation*, where they decide to continue using it. Studies suggest that innovations that simplify processes are more likely to be adopted, as prospective adopters evaluate a new idea based on its competitive advantage—essentially, the benefits it offers over existing methods¹⁶¹.

2.2.2 Task Technology Fit Theory (TTF)

This study draws upon the Task Technology Fit (TTF) Theory, developed by Torkzadeh and Doll in the 1990s. The theory suggests that information and communication technology (ICT) is more likely to be adopted by users when it enhances their performance and when the technology's capabilities align with the tasks that users are expected to perform¹⁶². Key factors in assessing whether technology is suitable for a particular task include system reliability, ease of use and training, quality, user compatibility, authorization, and production timeliness¹⁶³.

The TTF theory is useful for evaluating various settings where IT is applied, such as e-commerce systems and combined techniques that support outcomes related to information systems. According to this model, the success of IT relies on its suitability for the task, leading to improved performance at both individual and group levels. An adaptation of TTF specifically designed for group support systems has been developed and tested, establishing criteria to ensure these systems fit group tasks¹⁶⁴. Notably, TTF has proven effective in contexts involving mobile information systems, though certain aspects of its application in mobile environments remain unexplored.

TTF emphasizes the importance of matching technology with the specific tasks it is intended to support. This model provides a clearer theoretical foundation by linking technology directly to the functions it supports, offering insights into factors that impact technology use and its effectiveness. For this study, TTF is relevant because it considers the evolving needs of business tasks and the technology required to support them¹⁶⁵. Additionally, it examines how the theory could apply to mobile technology contexts and whether any adjustments are needed to ensure effective use in these environments. This framework is particularly relevant to investigating how

electronic banking technology might enhance the performance and competitiveness of commercial banks in Nigeria¹⁶⁶.

2.3 Empirical Review of Related Studies

This section reviews the existing research on the connection between a consumer goods manufacturing companies performance and its innovation capabilities using computerized accounting system, use of online trading internet, use of data analytics and internal control. Although the findings of these studies, which were carried out in many nations, are varied, the majority of them have come to the conclusion that there is a positive correlation between the innovative capabilities and performance of consumer goods manufacturing companies. A firm with good innovative capabilities is expected to perform better than their similar competitors. These studies' authors employed a variety of approaches and a number of factors. The empirical literature shows that a lot of studies try to measure the innovative capabilities influence on performance.

2.3.1 Computerised Accounting System And Performance Of Consumer Goods Manufacturing Companies.

A 2023 study examined the impact of big data on the quality of accounting information among selected Nigerian firms, focusing on the influence of data volume, variety, and velocity on accounting timeliness. Using a survey research approach, the study targeted 157 firms listed on the Nigerian Exchange Group as of December 31, 2021, and selected 20 firms via purposive sampling. A total of 100 respondents, with five from each firm, participated through structured questionnaires. Analysis through descriptive statistics and regression revealed that data volume, variety, and velocity significantly positively affected the timeliness of accounting information¹⁶⁷.

In 2019, another study explored the effect of computerized accounting systems on financial performance in private companies in Arusha, Tanzania. Employing both descriptive and exploratory research designs, the study surveyed 61 accounting and finance employees from 10 randomly selected private firms in the Arusha region, relying on questionnaire-based primary data. The analysis using descriptive statistics and Pearson correlation indicated that both cost and management support significantly impacted the adoption of computerized accounting systems (CAS), with a strong positive correlation between these factors and financial performance¹⁶⁸.

A 2018 study assessed the impact of adopting accounting information systems (AIS) on the financial performance of commercial banks in Lagos State, Nigeria, focusing on a sample of 80 respondents from banks in the Lekki Peninsula area. The study used both primary data from questionnaires and secondary financial data from 2007 to 2017, analyzed through linear regression. Findings showed that AIS adoption had a positive effect on financial indicators, including gross profit margin, net operating profit, return on capital employed, and return on assets with $\alpha < 0.05$ ¹⁶⁹.

Another 2018 study investigated the influence of accounting information systems on both financial and non-financial performance metrics in Nigerian companies. Using data from 16 companies, the study combined primary questionnaire data with secondary data from annual reports (2011–2014) and analyzed it through multiple linear regression. The results demonstrated a positive impact of CAS on both financial and non-financial indicators¹⁷⁰.

In Jordan, a 2018 study examined CAS effects on financial performance in selected real estate firms, employing a survey research design and gathering primary data from 175 employees across five companies. Analysis through linear regression confirmed that CAS positively

impacted financial performance¹⁷¹. Similarly, in India, a 2018 study on the effect of AIS on financial performance in selected FMCG companies used a sample of 400 respondents, with analysis via simple linear regression, revealing a significant positive impact of CAS on financial outcomes.

A 2019 Brazilian study analyzed the innovation capabilities of accounting firms in adopting digital technologies, examining technology development, operation, management, and transaction capabilities. Interviews with managers, along with institutional and external documentation, indicated that digital innovation in accounting is advancing, enhancing business models and operational processes¹⁷².

In Saudi Arabia, a 2018 study on the impact of AIS on the performance of small and medium enterprises (SMEs) analyzed primary data from 137 SMEs through partial least squares analysis. Findings highlighted AIS's positive role in cost reduction, quality improvement, and decision-making effectiveness. Additionally, a 2018 study on Jordanian banks investigated CAS's effects on profitability, relying on responses from 206 employees and analyzing data through linear regression. The results indicated a significant positive impact of CAS on bank profitability¹⁷³.

Finally, an investigation in 2018 into computerized accounting systems within SMEs in Bomet County demonstrated that CAS solutions like QuickBooks, Sage, Pastel, and Tally positively influenced SME performance, based on data from 254 respondents and analyzed via descriptive and regression statistics^{175,176}.

A 2017 study examined the "Impact of Accounting Information Systems on Organizational Performance" with Procter & Gamble (P&G) as a case study. Using a descriptive survey design, the study sampled 174 employees of P&G and collected primary data through self-administered questionnaires. Linear regression analysis of the data revealed that computerized accounting

systems (CAS) significantly impacted various aspects of organizational performance, specifically in marketing, job performance, and financial performance. These findings suggest that CAS contributes positively to multiple performance dimensions within large organizations like P&G¹⁷⁷.

In 2019, research explored the impact of accounting systems on the performance of small and medium-sized enterprises (SMEs) across seven northwestern states in Nigeria. This study relied on questionnaires as the primary data source and used one-way ANOVA with Minitab 14 for data analysis. Results demonstrated that effective accounting systems significantly enhance SME performance and that accurate bookkeeping instills confidence in creditors and lenders, improving access to financing. Findings further indicated that consistent record-keeping aids business decision-making, while the lack of proper accounting records poses challenges for auditing and financial reviews within these enterprises¹⁷⁸.

Another 2019 study focused on the effect of accounting systems on SME performance in Festac-Town, Lagos, Nigeria. Data were gathered from 154 respondents via questionnaires, with an 80% response rate. Hypotheses were tested at a 5% significance level using regression analysis. Both descriptive and inferential statistics showed that accounting information systems have a positive effect on SME performance. The study concluded that AIS adoption by SME managers and owners has significantly contributed to their operational decisions and overall performance¹⁷⁹.

A 2018 study in Ghana investigated the business performance of micro, small, and medium enterprises (MSMEs) through their record-keeping practices. Using a mix of structured and semi-structured questionnaires on a five-point Likert scale, data were collected from 7,800

respondents out of 7,935 questionnaires distributed. This descriptive study found that many MSMEs did not maintain proper financial records, though a small portion recorded transactions in petty cash and sales day books. These findings highlight the importance of accurate record-keeping for improved business performance among Ghanaian MSMEs¹⁸⁰.

In 2016, a researcher conducted a study in Kwara State, Nigeria, to assess the influence of accounting information systems on SME performance and financing access. With a survey design, data were gathered from 153 respondents through questionnaires, then analyzed using frequency tables and ordered logistic regression. Results indicated that accounting information systems significantly improve SME performance and enhance their ability to secure financing from financial institutions. The study concluded that computerized AIS adoption could positively impact SME performance and facilitate access to external funding¹⁸¹.

A 2019 study in Kenya explored the relationship between firm innovation and financial performance within the insurance sector. Guided by the balanced scorecard and stakeholder theories, this study used an explanatory research design with a population of 5,273 employees from 49 insurance firms, sampling 372 participants through Yamane's formula. Data collection involved a structured survey, with reliability confirmed using Cronbach's alpha. Multiple regression and Pearson correlation analyses revealed that innovation significantly boosts the financial performance of insurance firms, underlining the critical role of innovation in driving business success¹⁸².

In 2020, a study investigated the impact of innovative capabilities and entrepreneurial attitude on SME performance in Ghana's Ashanti Region, noting the competitive pressures faced by SMEs. The study included a sample of 400 SME owners, achieving a 98.75% response rate through

purposive and convenience sampling methods. Questionnaires were used to gather data, which was then analyzed using multiple linear regression with SPSS. Results indicated that innovative capabilities in product, process, marketing, and organizational practices positively and significantly affect SME performance. Additionally, entrepreneurial attitude was found to enhance overall SME performance¹⁸³.

A study evaluated whether the implementation of Computerized Accounting Systems (CAS) positively influences entrepreneurial performance in southwestern Nigeria. The study population consisted of 7,474 registered small and medium enterprises (SMEs) in the region, with a sample size of 380 calculated using Taro Yamane's formula. Through random sampling, 301 completed questionnaires were received and analyzed. Data were coded and examined using frequency tables and percentages, with inferential statistics like chi-square and regression analysis employed to test the study's hypotheses. Findings suggested that technological advancements significantly contribute to business success. Results showed that entrepreneurs adopt CAS for its ability to produce timely and accurate reports by rapidly processing accounting information. Additionally, entrepreneurs cited both financial and non-financial benefits as key motivations for adopting CAS, emphasizing its role in enhancing operational efficiency and effectiveness¹⁸⁴.

A study aimed to assess the effect of computerized accounting system on organizational performance. A qualitative method was used to explore computerized accounting system through an organizational level by reviewing the perceptions and practices of communication business leaders, accountants and auditors who have had at least 1 year of proven success with computerized accounting systems. The study employed both statistical and non-statistical sampling techniques. Statistical sampling techniques include random sampling, systematic and

cluster sampling where by the respondents were grouped into different clusters mainly; The Chief Administrative Officer, Deputy Chief Administrative Officer, Principal Human Resources, Chief Finance Officer, Accounts Assistants and other departments' and operational staff. From the findings, the researcher requested respondents to rate the organization performance. The results indicated that organization had a good performance on average. This performance was consistent with the stated response regarding the agreement that Computerized Accounting System increases organization performance¹⁸⁵.

2.3.2 Online Trading And Performance Of Consumer Goods Manufacturing Companies.

A 2020 study explored the impact of online marketing on the performance of small and medium-sized enterprises (SMEs) in the Ikeja Local Government Area of Lagos State. The study used a survey research design, sampling 142 respondents from a total estimated population of 221 SMEs in the area, and data were collected through structured questionnaires. Statistical analysis was performed using SPSS, applying ANOVA, correlation, and regression tests. Findings indicated that online marketing positively influenced SME performance, contributing to youth self-employment, fostering economic growth, and promoting regional development in Lagos¹⁸⁶.

In 2019, a study examined the influence of electronic business (e-business) strategies on SME performance in Ibadan. The study focused on understanding how e-business practices impact SMEs, using a survey research design to collect data from 120 SMEs and conducting interviews with 15 key informants. Questionnaire data were analyzed with frequency and percentage distributions, as well as binary logistic regression, while interview responses underwent content analysis. The results showed that e-business strategies significantly affected SME performance, though many SME owners were aware of these benefits but had not fully leveraged the strategies to enhance their operations¹⁸⁷.

A 2015 study investigated the adoption of e-payment systems in Nigeria, assessing its economic benefits and associated challenges. The findings underscored that electronic payment systems represent a major technological advancement in banking, finance, and commerce, allowing individuals to make transactions remotely without visiting physical locations for bill payments, taxes, fines, or license purchases. Success factors for e-payment adoption were found to include ease of use, cost, security, authorization, acceptability within the industry, and consumer preferences, highlighting the transformative potential of e-payments in modern commerce¹⁸⁸.

A 2016 study explored the impact of electronic banking on Nigeria's economic growth, investigating whether a long-term relationship exists between e-banking and economic growth using the Autoregressive Distributed Lag (ARDL) bounds testing method. The study analyzed quarterly data from 2009 to 2014, regressing economic growth (measured by RGDP) against various e-banking indicators, such as Automated Teller Machines (ATMs), mobile banking (MB), web banking (WB), and Point of Sales (POS) terminals. The Pairwise Granger Causality test was also employed to determine the direction of causality. Findings indicated that e-banking significantly impacts economic growth: ATMs and mobile banking positively contributed to growth, while POS and web banking had a negative effect. Results further demonstrated a long-run relationship, with e-banking shown to Granger-cause economic growth in Nigeria¹⁸⁹.

A study aimed at exploring the online shopping experience and it is aimed at evaluating why consumers shop online as opposed to traditional shopping. The research study was conducted so show that more insight can be developed on customer satisfaction and what affects customer satisfaction during online shopping. This research adopted survey by questionnaire approach. Questionnaires were distributed (with exclusion of minors, infants and customers not resident in Kaduna metropolis) to gauge the intention. To measure customer satisfaction of online shoppers

in Kaduna metropolis data from survey was analyzed with the help of SPSS software. The research conducted indicates that online survey has positively, strongly and significantly impacted on customer's satisfaction in Jumia. The study concludes on the impact of online trade on customer's satisfaction and its significance from Jumia customers in kaduna metropolis, which was clear that online trade will dramatically change the way business operates with focus on the needs of the customer¹⁹⁰.

A 2017 study investigated the communicative factors of online banking that influence the performance of small and micro enterprises (SMEs) in Limuru Town Market, Kiambu County, Kenya. Adopting a descriptive research design, the study focused on 965 licensed SMEs operating in Limuru Market as of 2014. Using questionnaires, data were collected from a sample of 274 SMEs. The results identified access to finance and management experience as critical socio-economic factors affecting business performance. Additionally, access to business information, infrastructure, and government policies and regulations were found to positively influence SMEs in Limuru¹⁹¹.

In Nigeria, a 2017 study examined the impact of electronic banking on banking and financial institutions, with Access Bank as the case study. This research utilized both primary and secondary data and concluded that electronic banking has enhanced the bank's productivity and efficiency, positioning it to deliver more effective services. The study highlights how e-banking contributes to streamlining operations within financial institutions, thereby improving overall bank performance¹⁹².

A 2018 study evaluated the operational efficiency of electronic banking among Nigeria's 21 commercial banks listed on the stock exchange as of 2010. Focusing on variables such as e-

banking practices, credit facilities, and savings deposits, the study used secondary data to assess e-banking's influence on core banking activities. Analyzing the data through correlation and simple percentage techniques, along with the Student's t-distribution, the study found that e-banking's impact on operational efficiency was not statistically significant, although security concerns were noted as an ongoing issue¹⁹³.

In another 2018 study, researchers explored the effect of electronic banking on customer satisfaction and economic growth in Nigeria. Using a paired sample t-test and SPSS, the study rejected both null hypotheses, concluding that e-banking has positively impacted both customer satisfaction and economic growth. The study recommended comprehensive legislation to safeguard both e-banking operators and users, ensuring that all parties are adequately protected within the e-banking ecosystem¹⁹⁴.

A 2019 study investigated the impact of internet banking on the non-financial performance of First Bank Nigeria Plc in Abuja. Utilizing a survey research design, structured questionnaires were administered to employees across 41 branches of First Bank in Abuja. Out of a target population of 2,231 employees, a sample of 337 was derived using the Taro Yamane formula. Data collected were analyzed using Ordinary Least Squares regression. Findings showed that internet banking factors such as low internet costs, round-the-clock service availability, and ICT competence among customers significantly enhanced the bank's performance, indicating a positive effect of internet banking on non-financial performance metrics¹⁹⁵.

A 2020 study examined the impact of electronic banking on Nigeria's economic growth from 2009 to 2018, utilizing quarterly data. The research aimed to assess how electronic banking influences economic growth over this period, using both questionnaire responses and secondary

data from the Central Bank of Nigeria (CBN) statistical bulletin and the Nigerian Bureau of Statistics. The Vector Error Correction Model (VECM) was applied for data analysis, and findings indicated that electronic banking had a significant positive impact on Nigeria's economic growth. While electronic banking as a whole was significantly linked to economic growth, the analysis showed that, individually, Point of Sales, internet banking, and mobile banking had no notable effect. However, Automated Teller Machine (ATM) usage was found to have a significant positive effect on economic growth during the period studied¹⁹⁶.

2.3.3 Data Analytics And Performance Of Consumer Goods Manufacturing Companies.

A 2017 study investigated the effects of Big Data Analytics on competitive advantage and performance among medium to large-sized businesses that incorporate Big Data into their operations. The research involved a thorough analysis of 20 articles published in Information Systems journals from 2011 to 2016, providing a comprehensive review of existing literature on this topic. The findings revealed that businesses using Big Data as part of their regular operations experienced moderate to substantial improvements in both competitive advantage and overall performance.

These results highlight the potential benefits for businesses in adopting Big Data to gain a strategic edge, streamline operations, and enhance decision-making processes. Despite the promising outcomes, the study noted a limitation in that it did not employ a standardized database, which may affect the generalizability of the findings. Nevertheless, the research strongly suggests that integrating Big Data into business operations can be a valuable investment for firms seeking to improve their market standing and operational efficiency¹⁹⁷.

A 2017 study aimed to determine whether firms with strong big data analytics capabilities (BDAC) exhibit better performance. Additionally, the study sought to understand if process-oriented dynamic capabilities (PODC) could enhance the positive relationship between BDAC and firm performance (FPER). To gather data, an online survey was administered to 297 Chinese IT managers and business analysts with experience in big data and business analytics. The findings supported the hierarchical BDAC model, which emphasizes the intertwined nature of various BDAC components. Moreover, the results confirmed that PODC significantly mediates the relationship between BDAC and FPER, indicating that firms with strong PODC are better equipped to leverage their BDAC for improved performance. However, the study's reliance on perceptual performance measures could limit the generalizability of its findings. Future research could incorporate objective performance metrics to provide a more robust assessment of BDAC's impact on firm performance.¹⁹⁸

A 2018 study explored the impact of big data analytics on financial reporting and accounting within an institutional context. Using a qualitative research approach, the study conducted in-depth interviews with accounting professionals across various industries to assess the potential applications and effects of big data analytics in financial reporting and accounting. Findings indicated that while the fundamental nature of accounting and financial reporting remains unchanged, traditional methods of recording, collecting, and analyzing data are evolving. For instance, industries such as airlines and telecommunications, with complex billing systems, require extensive data processing for revenue recognition. Additionally, big data and analytics pose both a challenge and a significant opportunity for accountants, particularly in forensic accounting and valuation¹⁹⁹.

A 2019 study delved into the current landscape of business analytics in manufacturing, identifying key trends, challenges, and opportunities for market leadership. The research unveiled the significant potential of business analytics to drive improvements in productivity, product quality, and decision-making processes. However, the study also highlighted several obstacles that can impede successful implementation. These challenges include the pervasive issue of poor data quality, which can undermine the accuracy and reliability of analytical insights. Additionally, cultural resistance to change can hinder the adoption of new technologies and methodologies, as employees may be hesitant to embrace unfamiliar approaches²⁰⁰.

Furthermore, a lack of experience and expertise in business analytics can limit organizations' ability to effectively leverage its capabilities. To overcome these challenges and realize the full potential of business analytics, manufacturers must prioritize data quality initiatives, foster a culture of innovation and continuous improvement, and invest in training and development programs to build the necessary skills and knowledge within their workforce.

A study underscored the critical role of statistical thinking in enhancing business performance. By adopting a data-driven approach, organizations can harness the power of data to make informed decisions that lead to increased profitability and efficiency. Another study, conducted in 2021, delved into the impact of big data analytics capabilities on decision-making and circular economy performance. The research revealed that organizations with robust big data analytics capabilities are better positioned to leverage data-driven insights to make strategic decisions that align with the principles of the circular economy. This, in turn, can lead to improved resource efficiency, reduced waste, and enhanced environmental sustainability²⁰¹.

The integration of data analytics into the field of accounting has revolutionized the way financial information is processed, analyzed, and interpreted. By leveraging advanced analytical techniques, accountants can extract valuable insights from large and complex datasets, enabling them to make more informed decisions and enhance their strategic value to organizations²⁰².

Data analytics empowers accountants to identify trends, anomalies, and potential risks within financial data. By analyzing historical data and real-time information, accountants can predict future trends, optimize resource allocation, and improve forecasting accuracy. This enhanced analytical capability enables accountants to provide more proactive and strategic advice to management, contributing to better decision-making and improved business performance²⁰³.

Moreover, data analytics can help accountants to automate routine tasks, such as data entry and report generation, freeing up time for more value-added activities. By automating these tasks, accountants can focus on higher-level analysis, such as financial modeling, risk assessment, and strategic planning. This increased efficiency and productivity can significantly benefit organizations by reducing costs and improving overall operational efficiency²⁰⁴.

The implementation of data analytics in accounting also has the potential to enhance the accuracy and reliability of financial reporting. By analyzing large datasets, accountants can identify errors, inconsistencies, and potential fraud more effectively. This increased scrutiny can help to improve the quality of financial information and reduce the risk of financial misstatements²⁰⁵. In conclusion, data analytics has emerged as a powerful tool for accountants, enabling them to add significant value to their organizations. By harnessing the power of data, accountants can improve decision-making, enhance efficiency, and ensure the accuracy and

reliability of financial information. As technology continues to advance, accountants who embrace data analytics will be well-positioned to thrive in the digital age.

A 2023 study conducted in Canada explored the impact of big data analytics (BDA) on financial reporting quality. Through semi-structured interviews with auditors, financial analysts, and accountants, the study found that BDA significantly improves financial reporting quality by providing more accurate and timely insights. The findings also highlighted the potential benefits of BDA, such as customized products, streamlined processes, and enhanced risk management²⁰⁶.

Another study, conducted in China, focused on the relationship between big data talent capability and business intelligence infrastructure. The study found a positive and significant relationship between these two factors, suggesting that organizations with strong big data talent capabilities are more likely to develop robust business intelligence infrastructure, leading to improved financial and marketing performance²⁰⁷.

A recent study examined the impact of data analytics and blockchain technology on audit efficiency, transparency, and financial reporting quality. The study emphasized the importance of auditors embracing these innovations to provide timely, accurate, and insightful assessments of financial statements. Additionally, the study highlighted the influence of regulatory changes on the strategic decision-making processes of organizations.

These studies collectively demonstrate the significant impact of data analytics and emerging technologies on the accounting and auditing professions. By leveraging these technologies, organizations can improve their decision-making processes, enhance financial reporting quality, and mitigate risks. As technology continues to evolve, it is essential for accountants and auditors

to adapt to these changes and acquire the necessary skills to effectively utilize data analytics and other innovative tools²⁰⁸.

Internal Control And Performance Of Consumer Goods Manufacturing Companies

A study conducted in Kenya examined the impact of internal control systems on the financial performance of companies listed on the Nairobi Stock Exchange (NSE). The study employed a descriptive research design and utilized both qualitative and quantitative methods. The findings revealed a strong positive correlation between risk management, corporate governance, control activities, internal control environment, and internal audit function with the financial performance of the companies²⁰⁹.

A 2018 study in Nigeria explored the relationship between internal control systems and the performance of commercial banks. The study found a positive and significant relationship between control environment, control activities, monitoring, and risk assessment with bank performance. However, information and communication were found to have an insignificant impact²¹⁰.

Specifically, the study found that a strong control environment, characterized by clear policies and procedures, effective communication channels, and a commitment to ethical behavior, was positively associated with bank performance. Control activities, such as segregation of duties, authorization controls, and reconciliation procedures, were also found to be important in mitigating risks and ensuring accurate financial reporting. Effective monitoring and risk assessment processes, including regular reviews and evaluations, were also identified as critical components of a strong internal control system²¹¹.

The study's findings highlight the importance of a comprehensive and well-implemented internal control system for commercial banks in Nigeria. By establishing strong internal controls, banks can improve operational efficiency, reduce the risk of fraud and error, and enhance their overall financial performance²¹².

Another study, focused on the telecommunications industry in South-South and South-East Nigeria, also investigated the impact of internal control on organizational performance. The study found a positive relationship between the organization's internal control environment and risk assessment and organizational performance. The study further explored the specific factors within the internal control environment and risk assessment that contributed to improved organizational performance. These factors included strong leadership commitment to internal controls, clear policies and procedures, effective communication channels, regular monitoring and evaluation, and a culture of accountability. The study emphasized the importance of a well-defined internal control framework that aligns with the organization's strategic objectives and risk profile¹⁴².

By implementing effective internal controls, telecommunications companies in the region can enhance operational efficiency, reduce costs, and improve overall performance. Additionally, strong internal controls can help to mitigate risks, such as fraud, cyberattacks, and operational disruptions, which can have significant financial and reputational consequences. A further study analyzed the impact of internal control procedures on the performance of companies in Nigeria's southwest region. The study found a positive relationship between internal audit control, risk management, and monitoring practices, and organizational success. However, control practices and control environment were found to have a negative impact on firm performance²¹¹.

These studies collectively highlight the importance of effective internal control systems in enhancing organizational performance. By implementing robust internal controls, organizations can mitigate risks, improve operational efficiency, and achieve their strategic objectives. It is crucial for organizations to continuously assess and strengthen their internal control systems to adapt to evolving business environments and emerging risks.

A 2023 study conducted in Ondo State, Nigeria, investigated the impact of internal control systems on the performance of Small and Medium-sized Enterprises (SMEs). The study employed a survey research design and utilized stratified random sampling to select 323 SMEs. The collected data was analyzed using descriptive statistics and multiple regression analysis. The findings of the study revealed a significant positive relationship between internal control systems and various proxies of organizational performance, including business growth, survival, and operational efficiency. This suggests that strong internal control systems are crucial for the success and sustainability of SMEs.

By implementing effective internal control systems, SMEs can enhance their operational efficiency, reduce costs, and improve their overall financial performance. Additionally, strong internal controls can help to mitigate risks, such as fraud, theft, and errors, which can have significant negative consequences for SMEs. The study's findings emphasize the importance of establishing and maintaining robust internal control systems in SMEs. By doing so, SMEs can improve their competitiveness, attract investors, and contribute to the overall economic growth of the region²¹².

A study investigated the impact of internal control challenges on the financial performance of selected local government authorities in Arumeru District, Arusha, Tanzania. The research, using

a descriptive-explanatory design, involved 113 respondents from relevant departments. Purposive sampling was employed to select participants. The study identified unethical behavior, insufficient remuneration, and impunity for fraudulent behavior as major challenges. However, participants disagreed with the significance of employee pressure, unnoticed misconduct, inadequate fraud control, and prevention²¹³.

Statistical analysis confirmed a significant negative correlation between poor remuneration, inadequate fraud control, unnoticed misconduct, impunity, and organizational financial performance. On the other hand, employee pressure, unethical behavior, and a lack of internal control measures were not found to have a statistically significant impact on financial performance²¹³.

A study investigated the impact of internal control on the financial performance of manufacturing firms in Mbale, focusing on Elgon Springs Mineral Water Company as a case study. Using stratified, simple random, and purposive sampling techniques, the study selected 32 respondents from a population of 35. Closed-ended questionnaires with an 8-point Likert scale were used to collect data. The findings revealed a positive relationship between internal control and financial performance. Over 85% of respondents believed that effective control environment, control activities, and risk assessment are crucial for ensuring strong financial performance in manufacturing firms²¹⁴.

A study conducted in North-Western Nigeria investigated the impact of internal control systems (ICS) on the financial accountability of Non-Governmental Organizations (NGOs). The study found that ICS plays a significant role in enhancing or hindering the quality of services provided by NGOs. Strong internal controls are associated with improved accountability and transparency

in NGOs. Additionally, the study revealed that government regulations and funding play a crucial role in the effectiveness of NGOs²¹⁴.

Another study aimed to examine the relationship between accounting information systems, internal control, and financial performance in industrial companies. The study found that timeliness, accuracy, and verifiability of accounting information had a significant positive impact on financial performance. Internal control was found to moderate the relationship between relevance, accuracy, and financial performance. The study suggests that organizations should focus on improving the effectiveness of their internal control systems to enhance financial performance²¹⁵.

A study conducted in Nepal explored the contribution of internal control systems to the financial performance of commercial banks. The study found a significant positive relationship between internal control, particularly control environment and internal audit, and financial performance. The study concluded that strong internal control systems are essential for the financial health and performance of commercial banks in Nepal²¹⁶.

These studies collectively highlight the importance of effective internal control systems in various organizational settings. Strong internal controls can help organizations to improve operational efficiency, reduce costs, mitigate risks, and enhance financial performance. By implementing robust internal control systems, organizations can build trust with stakeholders, improve decision-making, and achieve their strategic objectives.

2.4 Conceptual Framework

To understand the impact of innovation capability on organizational performance, a conceptual framework was developed and presented in Figure 2.1. Based on a comprehensive literature

review, four critical determinants of innovation capability in retail service organizations were identified: the utilization of Computerized Accounting Systems (CAS), the adoption of Online Trading (OT), the application of Data Analytics (DA), and the implementation of effective Internal Control (IC) measures. Organizational performance is designated as the dependent variable while the four identified determinants of innovation capability are considered as independent variables in this framework. In this study, internal control (IC) is used as moderating variable.

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**Conceptual Framework on Innovation Capabilities and Performance of Retail Businesses,
South-West Nigeria**

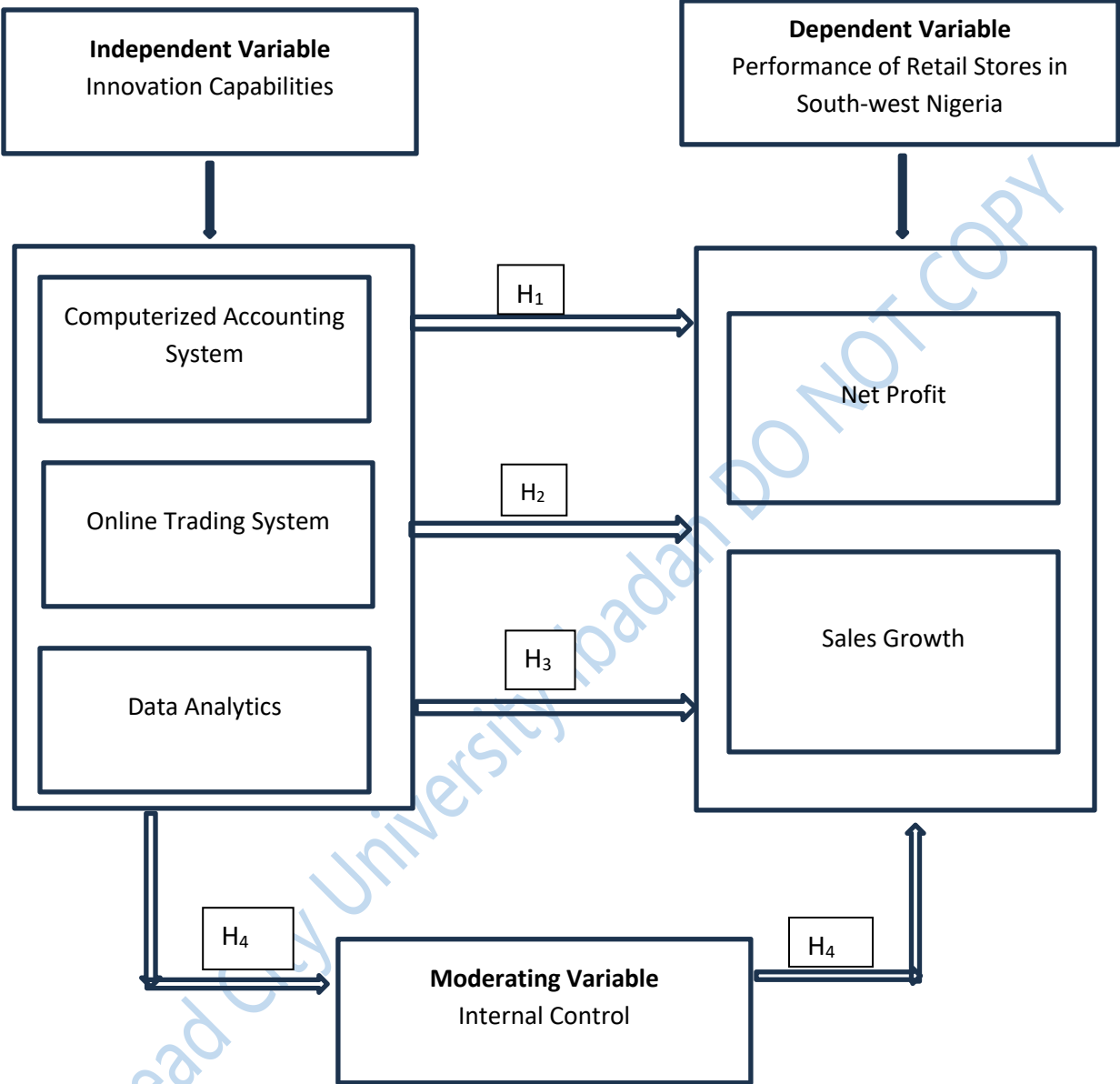


Figure 2.1 Conceptual Framework

Source: Researcher’s Compilations (2024)

Based on the literature reviewed, this study came up with a conceptual model as illustrated in Figure 2.1. The illustration depicts that innovative capability can affect the performance of retail stores in South-west Nigeria. Therefore, innovative capability measured by computerized accounting system, online trading and data analytics are the representation of independent variables in this study, while performance of retail stores is the dependent variable, internal control is used as moderating variable.

2.5 Summary of Literature Gap

While previous research has explored the concept of firm innovation capabilities, the specific link between these capabilities and firm performance has been less studied. The complexity of this relationship remains an ongoing research question. Given the importance of innovation in the retail industry, this study aims to investigate the impact of firm innovation capabilities on the performance of retail stores in South-west Nigeria. The study hypothesizes that there is no significant relationship between firm innovation capabilities and performance. By testing this hypothesis, the research seeks to shed light on the extent to which innovation drives performance in the retail sector.

A contextual gap exists in the literature, particularly regarding the impact of innovative capabilities on the performance of retail businesses in Nigeria. While studies have explored the relationship between innovation and performance in various contexts, including SMEs in Ghana, there is a need for more specific research focused on the Nigerian retail sector. By addressing this gap, the study aims to contribute to the understanding of how innovative capabilities can drive performance in the unique context of Nigerian retail businesses.

Also, while the importance of innovation in business is widely recognized, accounting innovation has received relatively less attention in academic literature. While studies have explored various aspects of market innovation, such as product design, pricing strategies, and promotional activities, the focus on accounting innovation, particularly in small and medium-sized enterprises (SMEs), remains limited.

This study aims to address this gap by investigating the impact of innovative accounting capabilities on the performance of retail businesses in Nigeria. Specifically, the study will examine the influence of computerized accounting systems, online trading, and data analytics, while considering the moderating role of internal control. By exploring these factors, the research seeks to contribute to a deeper understanding of how accounting innovation can drive performance in the Nigerian retail sector.

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Chapter Three

Methodology

This chapter focuses on the research methodology used, in an attempt to attain the objectives of the study which is the effects of innovation capabilities on performance in Nigerian retail stores in the southwest, Nigeria. Attention is focused on research design, population and sample design. It also discusses the data collection method, instruments used, research procedures and the data analysis method.

3.1 Research Design

A cross-sectional survey research design adopted for this study because it allows for the collection of quantitative data from a large sample size. This survey design aligns with the realism and positivism research philosophy which allows a scientific and objective understanding of the relationship between innovative capabilities and performance of retail stores in Lagos state and Ibadan in Oyo state. The cross-sectional survey design is useful for this study because it provides a structured approach to gathering data from a diverse group of participants at a point in time and this ensure consistency in the questions asked from respondents. Furthermore, it allows for the exploration of multiple variables simultaneously, which is ideal for examining the complex relationships between innovative capabilities and performance in the context of retail stores in Lagos state and Ibadan metropolis in Oyo state.

3.2 Population of the Study

The population for this study comprised of all retail stores in Lagos state and Ibadan metropolis in Oyo state. There are about two hundred and sixty-five (265) registered retail stores in Lagos state and one hundred and thirty-two (132) in Ibadan thus, making the total population of this

study to be three hundred and ninety seven (397). The rationale for selecting Lagos state and Ibadan metropolis as the focus areas for this study is because they are the major markets in south western part of the country. These states attract a large number of businesses from various part of the country and many investors prefer to set up business in these locations because of the population. Selecting these markets enabled the researcher gain insights into the challenges faced by retail stores in general and develop strategies to address them effectively.

3.3 Sample and Sampling Techniques

Due to the finite number of retail stores in Lagos state and Ibadan metropolis in Oyo state, the sample size will be determined using Taro Yamane sample size formula¹.

$$n = \frac{N}{1 + N (e)^2}$$

Where

n^o = Desired Sample size (?)

N= the research population

e^2 = Acceptable sample error (5%)

Hence inserting the figures above we have the following:

$$\frac{397}{1 + 397 (0.05)^2} = 199.25$$

Hence 199 retail stores were to be involved in this study. However, 1% of the scientifically determined sample size is added to account for any non-response or incomplete data. Therefore, a total of 220 retail stores were included in the study. This sample size was deemed sufficient to provide a representative picture of the retail stores in Lagos and Ibadan statistical validity in the

analysis of factors affecting their performance as similar studies has adopted same response rate to ensure comparability and generalizability of findings.

Table 3.1 Study Sample frame

S/N	Name	Sample
1	Lagos stores	147
2	Ibadan stores	73
	Total	220

Source: Author’s Compilation (2024)

This study used a random sample technique given the total number of stores to be examined. The random sampling allows the researchers the ability to randomly select the respondents with no specific characteristics for the study.

Random sampling, as a non-probability method, may be a less systematic approach to collecting data, but scholars argued that it saves time and money without sacrificing quality

3.4 Description of Research Instrument

In this study, a structured questionnaire was developed to gather information from the selected participants. The questionnaire was designed as a closed-ended one, allowing for the collection of a quantitative data. The close ended questionnaire was structured using a four-point Likert scale using Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD). The point allocated to these options range from 4 to 1, with SA having the highest point and SD having the least point. This questionnaire was sectioned into two (A and B). Section A covers demographic

data from the selected respondents such as age, gender, and years of experience in the business. In addition, section B computerized accounting system, online trading, data analytics, internal control and performance which are the necessary information tailored to achieve the aim and objectives of this study. The questionnaire items on computerized accounting system, online trading, data analytics, internal control and performance was adapted from various authors.

Table 3.2 Items of Research Instrument

S/N	Variables	No of Items
1	ComputAccounting	5
2	Online Trading	5
3	Data Analytics	5
4	Internal Control	5
5	Performance	5
	Total Items	25

Source: Researcher's Compilations (2024)

3.5 Validity and Reliability of Research Instrument

The research instruments were validated on the basis of face and content validity in order to evaluate the extent to which operationalization of a construct actually measure what it tends to measure³. In order to determine the face and content validity of the instrument, the questionnaires have first been shown to the supervisor and other lecturers in the Department of Management and Accounting, Faculty of Management and Social Sciences, Lead City University, Ibadan. They helped determine the appropriateness of the instruments in measuring what it is supposed to measure and also ensured that the instruments contained the appropriate items that could actually elicit the intended responses on computerized accounting system, online

trading, data analytics, internal as an approach to enhancing the performance of retail stores in Lagos and Ibadan metropolis, Nigeria. Necessary corrections and restructuring based on their comments, modification and recommendation were be made. The pilot study conducted in Abeokuta metropolis in Ogun state provided the opportunity to pre-test the instruments to ascertain construct validity.

The researcher conducted confirmatory factor analysis (CFA) to ascertain the overall adequacy and validity of the instrument. Through the Varimax Extraction Method, factor loadings were extracted from the rotated component matrix to compute the Average Variance Extracted (AVE). Thus, an AVE value above 0.5 offered further confirmation of convergent validity, while discriminant validity values for all constructs below 0.90, according to the Heterotrait-Monotrait (HTMT) criterion, provided additional support for construct validity of each measured variable. Together, the AVE and discriminant validity values demonstrated construct validity across all variables examined in this study. Tables 3.3 and 3.4 below summarize the construct validity for the questionnaire items used.

Table 3.3: Summary of Pilot Test Incorporating Construct Validity Test.

Variable	No. of items	AVE	Remark
	Pilot		
Computerized Accounting	16	0.598	Reliable
Data Analytics	20	0.568	Reliable
Performance	10	0.624	Reliable
Online trading	16	0.598	Reliable
Internal Control	9	0.626	Reliable

Source: Computed from Pilot study, (2024)

Table 3.3 above indicates that all constructs have AVE values above the 0.5 threshold, confirming convergent validity for each reflective construct in this study. Additionally, the Heterotrait-Monotrait (HTMT) criterion was applied to evaluate discriminant validity across reflective constructs. The HTMT criterion, which measures the average correlations of indicators between constructs, is considered a reliable method for establishing discriminant validity. When HTMT values for all reflective constructs are below 0.90, discriminant validity is deemed established. Table 3.4 presents the HTMT values for this study, calculated using the SmartPLS statistical software version 4.0.

Table 3.4: Discriminant Validity using Heterotrait-Monotrait Ratio (HTMT)

Construct	CAS	PF	OT	DA
Internal Control				
Computerised Accounting	0.638			
Performance	0.506	0.714		
Online Trading	0.355	0.688	0.717	
Data Analytics	0.355	0.688	0.717	0.739

Source: Computed from Pilot study, (2024)

The threshold for establishing discriminant validity requires HTMT values below 0.9, and as shown in Table 3.8 above, all constructs meet this criterion, indicating that discriminant validity has been achieved for each reflective construct in this study. Researchers have highlighted the importance of both convergent validity (measured by AVE) and discriminant validity (assessed via the HTMT criterion) as essential indicators of construct validity².

Table 3.5: Validity Statistics Process

Variable	KMO	Bart.	Sig	Remark
Internal Control	0.841	28.174	(0.000)	Accepted
Computerized Accounting	0.680	40.851	(0.000)	Accepted
Performance	0.748	38.841	(0.000)	Accepted
Online Trading	0.822	68.421	(0.000)	Accepted
Data Analytics	0.844	84.681	(0.000)	Accepted

Source: Computed from Pilot study through SPSS V25 (2024)

In furthering the process of validating the research instrument, factor analysis using principal component analysis was employed through Kaiser-Meyer-Olkin (KMO) Test to measure suitability of the data to the study and measure the sampling adequacy for each variable in the model and for the complete model. KMO greater than 5 is required for the variable to be accepted. However, values between 0.5 and 0.7 are average, 0.7 and 0.8 are good, while values between 0.8 and 0.9 are very good according to a researcher³. The Bartlett test of Sphericity assesses the suitability of data for factor analysis by testing the null hypothesis that the variables are uncorrelated. A significant Bartlett test result, with a p-value below 0.05, indicates that the variables are correlated and suitable for factor analysis. As shown in Table 3.5, the KMO and Bartlett test values and their associated p-values meet this criterion, confirming the appropriateness of the factor analysis conducted.

3.6 Reliability of the Research Instrument

The researcher assessed the questionnaire's reliability by testing variables such as financial inclusion, adaptive capability, religiosity, and performance for internal consistency and composite reliability. Internal consistency reliability was measured to determine the

consistency of responses within each scale. For multi-item instruments like the one used in this study, Cronbach's alpha coefficient is commonly applied to evaluate internal consistency. A Cronbach's alpha score between 0.7 and 1 is generally considered reliable for a questionnaire. Additionally, composite reliability was calculated to further confirm the instrument's reliability. Table 3.6 below presents the reliability statistics for all variables in this study.

Table 3.6: Reliability Statistic

S/N	Variables	Composite Reliability	Cronbach's alpha coefficient
1	Computerized Accounting	0.708	0.782
2	Online Trading	0.786	0.747
3	Data Analytics	0.746	0.762
4	Performance	0.910	0.890
5	Internal Control	0.769	0.739

Source: Computed from Pilot Study (2024)

In order to make the correct inferences from the data collected from the field, the data after coding will be subjected to the assumption for running parametric analysis. If the data meets the assumption which include; normality test, Linearity test, multicollinearity test, and heteroscedasticity test then a parametric analysis through regression was conducted and its failure made the researcher adopt non-parametric analysis. The pre-estimation tests were conducted for all the variables in the study.

Normality refers to the assumption that the error term is normally distributed with a mean of zero and constant variance. For multiple regression analysis, which is a parametric statistical method, it is essential that the data follows a normal distribution. To assess normality, the distribution's skewness and kurtosis were examined. A variable with a skewness index exceeding an absolute value of 3.0 is considered highly skewed, while a kurtosis index over 8.0 indicates extreme kurtosis. Skewness values below an absolute 2.0 and kurtosis values under an absolute 7.0 represent minimal violations of the normality assumption.

Also, the Q-Q plot provided additional support for the skewness and kurtosis statistics through a graphical representation of a normally distributed data set. Regression analysis is most accurate when the relationship between independent and dependent variables is linear. If the relationship is nonlinear, regression analysis may underestimate the true relationship. To ensure the suitability of the data for regression analysis, Pearson's product-moment correlation coefficient was used to assess the linearity of the relationship between variables. Positive correlation coefficients, along with their significance levels, confirmed the linear relationship between the variables.

Furthermore, the study's data was subjected to a multicollinearity test. This test checks for correlation amongst the independent variables and a correlation coefficient greater than 0.8; which points to the presence of multicollinearity. Also, their correlation is an indicator of their performing the same function, thus resulting in misleading and unusual results as well as inflated standard errors. Multicollinearity is suspected if the Variance Inflation Factor (VIF) is greater than ten (10), or when the Tolerance Factor/Value (TF) which is the inverse of VIF is less than 0.1 inferring that collinearity is suspected ($\text{Tolerance Value } (1-R^2) < 0.1$).

The assumption of homoscedasticity requires that the variance of the error term remains constant across all observations. When this assumption is violated, heteroscedasticity occurs, resulting in inefficient estimates. Given that this study uses cross-sectional data from selected paints and coatings manufacturers, concerns about potential heteroscedasticity arise. The classical linear regression model (CLRM) assumes homoscedasticity, meaning that the error term has a constant variance. If this condition is not met, heteroscedasticity is present in the data. Running a regression model without addressing heteroscedasticity could lead to unbiased parameter estimates. Therefore, homoscedasticity was assessed by examining the normality of residuals using a Normal P-P Plot and a scatter plot.

3.6 Administration of Research Instrument and Method of Data Collection

Primary source data was considered appropriate for this study. Primary data collection involves gathering data directly from the source, such as through surveys, interviews, or observations. This method allowed the researchers to obtain specific and current information that is relevant to their study. Primary data is useful when researchers want to explore a particular phenomenon in depth and gather detailed information about it.

To obtain data, the managers of the retail stores were approached in order to have their full cooperation and coordinate other staffs in the stores. This collaboration is crucial as it ensures a comprehensive and representative dataset, capturing the perspectives and experiences of various stakeholders. Additionally, reaching out to managers allowed for a more efficient data collection process, as they often have access to a wide range of resources and expertise. By coordinating with these key individuals, researchers could also ensure the accuracy and reliability of the data collected, as they can provide guidance and validate the information obtained.

In addition, 220 copies of questionnaires were distributed to ensure a diverse and representative sample. These questionnaires were carefully designed to gather comprehensive and specific information from participants, allowing for a deeper understanding of their perspectives. To ensure the validity and reliability of the data collected through the questionnaires, rigorous testing for example a pilot study was conducted beforehand to identify any potential issues or biases that may result in the collection of inappropriate data.

3.7 Method of Data Analysis

In this study, a combination of both descriptive and inferential statistics was used to analyze the data gathered from the retail stores in the selected areas in Lagos and Ibadan respectively. The descriptive statistics was used to summarize and describe the characteristics of the data, such as measures of central tendency and variability. This provided a clear picture of the distribution and patterns within the data. In order to achieve this, frequency count and simple percentage method was used. In addition, inferential statistics was utilized to make inferences and draw conclusions about the larger population of retail stores based on the sample data collected.

This involved hypothesis testing and confidence intervals to determine the significance of relationships among the variables in this study. This was achieved through the use of regression analysis. Hypotheses 1-3 were tested using the simple regression analysis because it allowed for the examination of the functional relationship between a dependent variable and more independent variables to establish the relative influence of each measure of the independent variables. Hypothesis 4 test was carried out using hierarchical regression because it is appropriate in establishing moderating effect of internal control.

Table 3.7: Method of Data Analysis

S/N	Hypotheses	Analytical Technique
H ₀₁	Computerized Accounting System has no significant influence on performance of retail stores in South-west Nigeria.	Simple Regression Analyses
H ₀₂	Online Trading has no significant influence on performance of retail stores in South-west Nigeria.	Simple Regression Analyses
H ₀₃	Data Analytics has no significant influence on performance of retail stores in South-west Nigeria.	Simple Regression Analyses
H ₀₄	Internal Control has no significant moderating effect on the association between Computerized Accounting System, Online Trading, Data Analytics and performance of retail stores in South-west Nigeria.	Hierarchical Regression Analysis

Source: Research Study (2024)

The model specification that expresses the interaction between Computerized Accounting System, Online Trading, Data Analytics, Internal Control, and performance of retail stores is presented in this section. This study adopted a linear regression function to express the conceptual model of this study and this will be done to establish the effect the innovative capabilities on on performance; and the moderating effect internal control on the interaction between Computerized Accounting System, Online Trading, Data Analytics, Internal Control, and performance of retail stores in South-west Nigeria, through the following statistics:

$$Y = f(X,U)$$

Y=Dependent variable: Performance (PERF)

X,Z= Independent variable: Innovative Capabilities (X), internal Control (Z)

X= Innovative Capabilities (IC),

x_1 = Use of Computerized Accounting System (CAS)

x_2 = Use of Online Trading (OT)

x_3 = Use of Data Analytics (DA)

x_4 = Financial Literacy (FL)

Z= Moderating variable: Internal Control (IC)

The dependent variable- Performance (PERF) Y is measured as:

y_1 = Sales Growth (SG),

y_2 = Profitability (PROF).

The moderating variable – Internal Control (IC) is Z

The following acronym is compiled to represent the dependent,

PERF= (OT)

PERF= (DA) moderating and independent variables under investigation in present study.

They are as follows;

PERF= (CAS)

PERF= (CAS, OT, DA, IC)

By substituting the acronyms of each variable in the regression model, the researcher presents the following:

$$Y = f(X)$$

$$Y = \beta_0 + \beta_1 X_1 + e_i \dots \dots \dots \text{Regression equation 1}$$

$$\text{PERF} = \beta_0 + \beta_1 \text{CAS}_1 + e_i \dots \dots \dots \text{Regression equation 1}$$

$$Y = \beta_0 + \beta_2 U_2 + e_i \dots \dots \dots \text{Regression equation 2}$$

$$\text{PERF} = \beta_0 + \beta_2 \text{aOT}_2 + e_i \dots \dots \dots \text{Regression equation 2}$$

$$Y = \beta_0 + \beta_3 X_3 + e_i \dots \dots \dots \text{Regression equation 3}$$

$$\text{PERF} = \beta_0 + \beta_3 \text{DAI}_3 + e_i \dots \dots \dots \text{Regression equation 3}$$

$$Y = f(X*Z)$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_3 X_3 X*Z_i + e_i \dots \dots \dots \text{Regression equation 4}$$

$$Y = \beta_0 + \beta_1 \text{FI} + \beta_3 \text{REG}_i + \beta_1 \text{ACs} * \text{REG}_i + e_i \dots \dots \dots \text{Regression equation 4}$$

Where:

β_0 = the intercept expected value of y when x is equal to zero.

β = the Coefficient of the independent variable (it is the rate of change in y with respect to x).

e = the error term to accommodate the effect of other variables that can influence performance, but which were not included in the model.

Endnotes

1. J.W.K.J.W. & C.C.H.C.C. Higgins. *Organizational Research: Determining Appropriate Sample Size in Survey Research*. **Information Technology, Learning, and Performance Journal**, 19(1), 2001, 43.
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3. D. Rika & A. A. M. Kassim. "*Financial Literacy on Business Performance: The Moderating Effect of Religiosity Among SMEs In Sumatera, Indonesia*." **International Journal of Academic Research in Accounting, Finance and Management Sciences**, 10(2), 2020, 87-99.

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Chapter Four

Data Analysis, Presentation And Discussion Of Findings

This chapter presents and interprets the results of the data analysis, which was conducted using statistical software. The analysis delved into the relationships between various variables, providing valuable insights into the research question. The findings shed light on the significance of the research, offering implications for future research and practical applications.

Questionnaires were distributed to the selected retail stores in Lagos state and Ibadan metropolis in Oyo state, 220 copies out of which 216 copies were returned. This represents 98.2% return rate, signifying a high level of participation and interest from the respondents. The high response rate achieved for the questionnaire suggests that the selected retail stores in Lagos State and Ibadan Metropolis were enthusiastic about contributing to the research and sharing their experiences and opinions. This high level of engagement strengthens the validity and reliability of the study's findings, as it suggests that the collected data is representative of the overall population of retail organizations in these regions.

4.1 Demographic Characteristics of Respondent

Table 4.1: Demographic Characteristics of Respondent

Characteristics	Classification	Frequency	Percentage
Gender	Male	95	43.8
	Female	121	56.2
Marital status	Single	54	25.0
	Married	108	50.0
	Others	54	25.0
Years spent in service of retailing business	Below 5 years	41	18.9
	6-10 years	108	50.0
	11-15 years	41	18.9
	16 years and Above	26	12.2

Source: Author's Computation (2024)

Table 4.1 shows a gender distribution of 43.8% male and 56.2% female respondents, ensuring diverse gender representation. As regards marital status, 50.0% are married, 25.0% are single, while 25.0% fall under others. In terms of Experience level, 18.9% has spent below 5 years in retailing business, 50.0% has spent 6-10 years in retailing business, 18.9% has spent 11-15 years in retailing business, 12.2% has spent 16 years and above in retailing business, depicting a range of experience within the workforce.

4.2 Analysis of Responses

Table 4.2 Business Performance

Statements	SD	D	A	SA
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Retail store consistently meets or exceeds sales targets.	27 (12.5%)	27 (12.5%)	54 (25.0%)	108 (50.0%)
Retail store effectively manages and minimizes operational costs.	54 (25.0%)	26 (12.0%)	68 (31.5%)	68 (31.5%)
Retail store regularly introduces new products or services to meet customer demands.	26 (12.0%)	54 (25.0%)	68 (31.5%)	68 (31.5%)
Retail store maintains a loyal customer base who frequently return for purchases.	25 (11.6%)	25 (11.6%)	68 (35.8%)	73 (33.7%)
Retail store efficiently adapts to changes in the market and consumer trends.	27 (12.5%)	54 (25.0%)	108 (50.0%)	27 (12.5%)

Source: Researcher's Computation 2024

Table 4.2 presents data on business performance based on various statements. For the statement regarding meeting or exceeding sales targets, 12.5% of respondents strongly disagreed and disagreed, while 25.0% agreed, and 50.0% strongly agreed. In terms of managing and minimizing operational costs, 25.0% strongly disagreed, 12.0% disagreed, 31.5% agreed, and another 31.5% strongly agreed. When asked about introducing new products or services to meet customer demands, 12.0% strongly disagreed, 25.0% disagreed, while 31.5% agreed and

strongly agreed respectively. For customer retention, 11.6% strongly disagreed and disagreed, 35.8% agreed, and 33.7% strongly agreed. Lastly, in terms of adapting to market and consumer trends, 12.5% strongly disagreed, 25.0% disagreed, 50.0% agreed, and 12.5% strongly agreed. This data highlights variations in perceptions of business performance across different operational aspects.

Table 4.3: Computerized Accounting System

Statements	SD	D	A	SA
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
The use of computerized accounting system enhances accuracy in financial record-keeping.	23 (10.5%)	32 (14.7%)	79 (36.8%)	61 (28.4%)
Computerized accounting system improves efficiency in handling financial transactions.	14 (6.3%)	27 (12.5%)	135 (62.5%)	40 (18.7%)
Retail store's computerized accounting system provides timely and reliable financial reports.	68 (31.3%)	68 (31.3%)	40 (18.8%)	40 (18.8%)
Computerized accounting system enhances decision-making processes regarding financial matters in retail store's	81 (37.5%)	14 (6.5%)	94 (43.5%)	27 (12.5%)
Staff in retail store are adequately trained to utilize the computerized accounting system effectively.	14 (6.5%)	27 (12.5%)	122 (56.5%)	53 (24.5%)

Source: Researcher's Computation 2024

Table 4.3 provides an interpretation of the impact of computerized accounting systems on various aspects of financial management within a retail store. Regarding accuracy in financial

record-keeping, 10.5% of respondents strongly disagreed, 14.7% disagreed, while 36.8% agreed and 28.4% strongly agreed. In terms of improving efficiency in handling financial transactions, 6.3% strongly disagreed, 12.5% disagreed, 62.5% agreed, and 18.7% strongly agreed. When asked whether the computerized accounting system provides timely and reliable financial reports, 31.3% of respondents strongly disagreed and disagreed, while 18.8% agreed and strongly agreed respectively. For enhancing decision-making processes, 37.5% strongly disagreed, 6.5% disagreed, 43.5% agreed, and 12.5% strongly agreed. Lastly, regarding staff training for effective utilization of the computerized system, 6.5% strongly disagreed, 12.5% disagreed, while 56.5% agreed and 24.5% strongly agreed. This suggests that while computerized accounting systems are generally seen as beneficial for efficiency and accuracy, perceptions vary regarding their implementation and staff competency.

Table 4.4: Online Trading Service

Statements	SD	D	A	SA
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Customers perceive the online trading platform provided by retail store convenient to make payment.	81 (37.5%)	27 (12.5%)	81 (37.5%)	27 (12.5%)
Online trading service provided by retail store offers a wide variety of products or services to choose from.	81 (37.5%)	54 (25.0%)	54 (25.0%)	27 (12.5%)
Online trading service ensures secure transactions and protects customer information.	14 (6.5%)	41 (19.0%)	81 (37.5%)	80 (37.0%)
Retail store's online trading service effectively communicates promotions and discounts to	67	81	41	27

customers.	(31.0%)	(37.5%)	(19.0%)	(12.5%)
The effectiveness of online trading service provides prompt and reliable delivery of purchased items.	41 (19.0%)	108 (50.0%)	40 (18.5%)	27 (12.5%)

Source: Researcher's Computation 2024

Table 4.4 evaluates customer perceptions of the online trading service provided by a retail store, focusing on aspects such as convenience, variety, security, communication, and delivery. Regarding the convenience of the online trading platform for making payments, 37.5% of respondents strongly disagreed and agreed, while 12.5% disagreed and strongly agreed. In terms of the variety of products or services offered, 37.5% strongly disagreed, 25.0% disagreed and agreed, and 12.5% strongly agreed. When it comes to ensuring secure transactions and protecting customer information, 6.5% strongly disagreed, 19.0% disagreed, while 37.5% agreed and strongly agreed. For the effectiveness of communicating promotions and discounts, 31.0% strongly disagreed, 37.5% disagreed, 19.0% agreed, and 12.5% strongly agreed. Finally, with regard to the prompt and reliable delivery of purchased items, 19.0% strongly disagreed, 50.0% disagreed, 18.5% agreed and 12.5% strongly agreed. These results indicate that there is room for improvement in the areas of product or service offerings and secure transactions. It is clear that customers value prompt and reliable delivery, but there is a need to enhance communication about promotions and discounts.

Table 4.5: Data Analysis

Statements	SD	D	A	SA
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Retail store effectively utilizes data analysis to understand customer preferences and behaviors.	14 (6.5%)	41 (19.0%)	68 (31.5%)	93 (43.0%)
The use of data analysis by retail store helps in identifying trends and patterns in sales and inventory management.	68 (31.5%)	27 (12.5%)	81 (37.5%)	41 (18.5%)
Data analysis tools provided by retail store gave an insights that contribute to strategic decision-making.	54 (25.0 %)	54 (25.0%)	54 (25.0%)	54 (25.0%)
The capabilities of data analysis help in optimizing marketing strategies for better customer engagement.	81 (37.5%)	27 (12.5%)	54 (25.0%)	54 (25.0%)
Retail store invests in continuous improvement of data analysis skills and tools for better performance.	68 (31.5%)	27 (12.5%)	94 (43.5%)	27 (12.5%)

Source: Researcher’s Computation 2024

Table 4.5 presents data on the utilization and impact of data analytics within a retail store, focusing on aspects such as customer understanding, sales management, strategic decision-making, marketing optimization, and investment in data analytics skills. In terms of utilizing data analytics to understand customer preferences and behaviors, 6.5% of respondents strongly disagreed, 19.0% disagreed, 31.5% agreed, and 43.0% strongly agreed. Regarding the identification of trends and patterns in sales and inventory management, 31.5% strongly disagreed, 12.5% disagreed, while 37.5% agreed and 18.5% strongly agreed. For providing insights that contribute to strategic decision-making, the responses were evenly distributed, with

25.0% strongly disagreeing, disagreeing, agreeing, and strongly agreeing, respectively. On the capabilities of data analysis in optimizing marketing strategies, 37.5% strongly disagreed, 12.5% disagreed, and 25.0% each agreed and strongly agreed. Finally, in terms of investing in the continuous improvement of data analysis skills and tools, 31.5% strongly disagreed, 12.5% disagreed, 43.5% agreed, and 12.5% strongly agreed. This data indicates varied opinions on the effectiveness and impact of data analysis within the retail store, with stronger agreement in areas such as customer understanding and continuous improvement.

Table 4.6: Internal Control

Statements	SD Frequency (%)	D Frequency (%)	A Frequency (%)	SA Frequency (%)
Retail store has robust internal controls in place to safeguard assets and prevent fraud.	14 (6.5%)	41 (19.0%)	81 (37.5%)	80 (37.0%)
Internal control procedures ensure compliance with regulatory requirements by retail store.	26 (15.0%)	62 (28.7%)	32 (15.0%)	89 (41.3%)
Internal control mechanisms effectively monitor and manage inventory levels.	54 (25.0%)	27 (12.5%)	27 (12.5%)	108 (50.0%)
Internal control framework helps in preventing errors in financial reporting in retail store.	40 (18.5%)	27 (12.5%)	68 (31.5%)	81 (37.5%)
Retail store regularly evaluates and improves internal control processes for enhanced performance.	54 (25.0%)	41 (19.0%)	27 (12.5%)	94 (43.5%)

Source: Researcher's Computation 2024

Table 4.6 examines perceptions regarding the internal control systems of a retail store, addressing aspects such as safeguarding assets, compliance, inventory management, financial reporting, and process improvement. Concerning the existence of robust internal controls to safeguard assets and prevent fraud, 6.5% of respondents strongly disagreed, 19.0% disagreed, while 37.5% agreed and another 37.0% strongly agreed. For the compliance with regulatory requirements, 15.0% strongly disagreed, 28.7% disagreed, with 15.0% agreeing, and 41.3% strongly agreeing. In relation to monitoring and managing inventory levels, 25.0% strongly disagreed, 12.5% disagreed, 12.5% agreed, and 50.0% strongly agreed, indicating a favorable perception of inventory management controls. Regarding the prevention of errors in financial reporting, 18.5% strongly disagreed, 12.5% disagreed, 31.5% agreed, and 37.5% strongly agreed. Lastly, concerning the regular evaluation and improvement of internal control processes, 25.0% strongly disagreed, 19.0% disagreed, 12.5% agreed, and 43.5% strongly agreed. This data reflects a generally positive perception of the internal control framework, especially in safeguarding assets and managing inventory, although there are mixed views on compliance and continuous improvement processes.

4.3 Test of Hypotheses

To test the formulated hypotheses, Statistical Package for Social Science (SPSS) was utilized. A significance level of 0.05 was adopted as the decision criterion. If the calculated p-value was less than 0.05, the null hypothesis was rejected. Conversely, if the p-value was greater than or equal to 0.05, the null hypothesis was accepted. However, before drawing conclusions, the reliability and validity of the collected data were assessed.

H₀₁: Adoption of computerized accounting system has no significant effect on the performance of retail stores in South-west Nigeria.

To empirically test Hypothesis 1, simple linear regression analysis was utilized. In this analysis, the dependent variable, performance, was regressed on the independent variable, computerized accounting system. The data for the independent variable, computerized accounting system, was generated by summing the responses to all items related to this construct. Similarly, the data for the dependent variable, performance, was obtained by summing the responses to all items measuring performance (net profit and sale growth) used to measure the variable.

Table 4.7: Summary of Regression Analysis for the Effect of Computerized Accounting System on Business Performance of Retail stores in South-west Nigeria

Model		F(df)	Anova Sig
R	0.959 ^a		
R Square	0.920	898.571 (1, 214)	0.000
Adjusted R Square	0.919		
Coefficients	Unstandardized Coefficients	T	sig
(Constant)	-.009	-.089	.929
Computerised Accounting	1.079	29.976	.000

a. Dependent Variable: Performance

b. Predictors: (Constant): Computerised Accounting dimension

Source: Field Results, 2024

Table 4.7 presents the results of simple linear regression analysis for the effect of Computerised Accounting System on performance of Retail stores in South-west Nigeria. Table 4.7 presents the model summary, which assesses the model's fit to the data. The Adj R² value indicates the predictive power of the model. The results show a positive and strong relationship between Computerized Accounting Systems and the performance of retail stores in South-west Nigeria (R = 0.959^a, p=0.000). The Adjusted coefficient of determination (Adj R²) of 0.919 shows that Computerised Accounting System explained 91.9% of the variation in performance of retail stores under study while the remaining 8.1% variation in performance is explained by other exogenous variable different from Computerised Accounting System. This result suggests that Computerised Accounting influence 91.9% of Performance of retail stores in South-west Nigeria. Scholars provided threshold for Adj. R² Values of 0.02, 0.15, and 0.35, represents small, medium, and large effects respectively. The Adj.R² of 0.388 according to Cohen's Adj.R² criterion suggest that the effect of Computerised Accounting System on performance of retail stores in South-west Nigeria is large.

Table 4.7 presents the results of ANOVA (overall model significance) of regression test, which revealed that, the combined Computerised Accounting has a significant effect on performance of retail stores in South-west Nigeria. This can be explained by the F-value (898.571) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that Computerised Accounting affected the performance of retail stores in South-west Nigeria, Nigeria. Furthermore, the results of regression coefficients revealed that a positive relative effect was reported. Further, the results reveal that at 95% confidence level, account opening ($\beta = 1.079$, p= 0.00), of the retail stores in South-west Nigeria were statistically

significant as the p-values were less than 0.05 and the t-values greater than 1.96. Based on coefficient of regression table 4.7, the regression model is restated as follows:

$$BP = -0.009 + 1.079CAS \dots\dots\dots \text{Eq. (i)}$$

Where: BP= Business Performance

CAS= Computerised Accounting System

The regression equation indicates that, holding all other factors constant, the baseline performance of retail stores in South-west Nigeria is 3.573. Additionally, a one-unit increase in the utilization of computerized accounting systems leads to a 1.079 increase in performance, assuming other factors remain constant. This implies that the adoption of computerized accounting systems can positively impact the performance of retail stores.

Based on the results, this study conclude that Computerised Accounting significantly influence performance of Retail stores in South-west Nigeria. On the strength of this result ($Adj R^2= 0.919$, $F(1,79)= 898.571$, $p= 0.000$), this study rejects the null hypothesis one (H_01) which states that Computerised Accounting have no significant effects on performance of Retail stores in South-west Nigeria.

The findings presented in Tables 4.2 and 4.3 reveal a significant positive impact of computerized accounting systems on financial management aspects, including accuracy, efficiency, decision-making, and staff training, addressing Research Question 1. Notably, a majority of respondents expressed agreement (36.8%) or strong agreement (28.4%) on the accuracy benefits, while 62.5% agreed on efficiency gains. These results substantiate the hypothesis that adopting computerized accounting systems enhances retail stores' performance. The overwhelming

consensus on the positive effects of computerized systems on financial accuracy and efficiency aligns with the hypothesis, underscoring the performance-enhancing potential of these systems.

The findings revealed mixed sentiments regarding report timeliness and reliability, as well as decision-making enhancement, with 31.3% of respondents disagreeing on reliability and 37.5% strongly disagreeing on decision-making benefits. This indicates partial support for the hypotheses, highlighting areas for improvement in report generation and decision-making. While the system's benefits in accuracy and efficiency are largely confirmed, implementation challenges and user competence issues cause some deviations from the hypothesized outcomes. Nonetheless, the results from Research Question 1 substantially address Objective 1, providing valuable insights into the system's strengths and weaknesses.

Hypothesis Two

H₀₂: The use of online trading services has no significant effect on the performance of retail stores in South-west Nigeria.

To test Hypothesis Two, a simple linear regression analysis was employed. The values of performance were regressed against the values of online trading services. The data for online trading services was generated by summing responses of all items respectively, while that of performance was generated by adding responses of all items (net profit and sales growth) used to measure the variable.

Table 4.8: Summary of Regression Analysis for the Effect of Online trading services on Business Performance of Retail stores in South-west Nigeria

Model	F(df)	Anova Sig
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R	0.938 ^a		
R Square	0.880	574.478	(1, 0.000 214)
Adjusted R Square	0.879		
Coefficients	Unstandardized Coefficients	T	sig
(Constant)	.485	4.573	.000
Online trading services	1.001	23.968	.000

a. Dependent Variable: Performance

b. Predictors: (Constant): Online trading services dimension

Source: Field Results, 2024

Table 4.8 presents the results of a simple linear regression analysis examining the impact of Online Trading Services on the performance of retail stores in Southwest Nigeria. The table includes a model summary, demonstrating the model's fit with the data. The adjusted R-squared (Adj R²) value was used to assess the predictive strength of the model. Results indicate a positive and strong relationship between Online Trading Services and retail store performance, with R=0.938^a and p=0.000. The adjusted coefficient of determination (Adj R²) of 0.879 suggests that Online Trading Services account for 87.9% of the variability in retail store performance, with the remaining 12.1% influenced by other factors outside the scope of this study. This finding implies that Online Trading Services significantly impact retail store performance in Southwest Nigeria.

Based on Cohen's (1988) criteria, where Adj R² values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, the Adj R² of 0.879 indicates a substantial effect of Online Trading Services on retail performance in this region.

Table 4.8 presents the results of the ANOVA (overall model significance) of the regression test, revealing that the combined effect of Online Trading Services is statistically significant in influencing the performance of retail stores in South-west Nigeria. This is evidenced by the high F-value (574.478) and the low p-value (0.000) at the 95% confidence level. Furthermore, the regression coefficients indicate a positive relationship between online trading services and retail store performance. Specifically, a one-unit increase in account opening is associated with a 1.001 increase in performance, which is statistically significant at the 95% confidence level.

Based on coefficient of regression table 4.8, the regression model is restated as follows:

$$BP = .485 + 1.001OTS \dots\dots\dots \text{Eq. (i)}$$

Where: BP= Business Performance

OTS= Online trading services

According to the regression equation above, taking all factors constant at zero, performance of retail stores in South-west Nigeria is 3.573. The result also indicates that taking independent variables at zero, a unit change in online trading services will lead to a 1.079 increase in performance of retail stores in South-west Nigeria given that all other factors are held constant. This means that when retail stores uses online trading services, their performance will improve by 1.097.

Based on the results, this study conclude that Online trading services significantly influence performance of Retail stores in South-west Nigeria. On the strength of this result ($Adj R^2= 0.879$, $F(1,79)= 574.478$, $p= 0.000$), this study rejects the null hypothesis one (H_01) which states that Online trading services have no significant effects on performance of Retail stores in South-west Nigeria.

However, relating the above result to research question 2, the result in table 4.5 presents an analysis that explores the effectiveness of online trading services provided by retail stores in Southwest, Nigeria focusing on key factors such as convenience, product variety, transaction security, promotional communication, and delivery reliability. The findings suggest mixed views on the convenience of online payments and the range of products or services available. While some respondents appreciated the ease of payments, others expressed dissatisfaction with the variety offered. There is also concern about the security of transactions, with opinions varying between satisfaction and distrust in the protection of customer information. Communication of promotions and discounts emerged as another area of concern, with many customers indicating dissatisfaction. Delivery services, although recognized for their importance, also drew mixed feedback, particularly regarding reliability. Overall, the results highlight the need for retail stores to improve their product offerings, enhance transaction security, and communicate promotions more effectively, while also ensuring that delivery services meet customer expectations. The responses obtained through research question two have also helped achieve objective two.

Hypothesis Three

H₀₃: The use of data analytical tools has no significant effect on the performance of retail stores in Southwest Nigeria.

To test this hypothesis, a simple linear regression analysis was conducted. In this analysis, performance values were regressed on data analytical tool values. The data for the data analytical tool variable was obtained by summing the responses to all related items, while performance data was derived by aggregating responses to items measuring net profit and sales growth.

Table 4.9: Summary of Regression Analysis for the Effect of Data analytical tool on Business Performance of Retail stores in South-west Nigeria

Model		F(df)	Anova Sig
R	0.961 ^a		
R Square	0.923	30.494 (1, 214)	0.000
Adjusted R Square	0.922		
Coefficients	Unstandardized Coefficients	T	sig
(Constant)	.496	5.949	.000
Data analytical tool	.919	30.494	.000

a. Dependent Variable: Performance

b. Predictors: (Constant): Data analytical tool

Source: Field Results, 2024

Table 4.9 presents the results of simple linear regression analysis for the effect of Data analytical tool on performance of Retail stores in South-west Nigeria. Table 4.9 presents a model summary, which establishes how the model equation fits into the data. The *Adj R²* was used to establish the

predictive power of the study's model. From the results, Data analytical tool have positive and strong relationship with performance of retail stores in South-west Nigeria ($R = 0.961^a$, $p=0.000$). The adjusted coefficient of determination ($Adj R^2$) of 0.922 indicates that data analytical tools account for 92.2% of the variation in retail store performance in Southwest Nigeria, with the remaining 7.8% explained by other external factors not included in this analysis. This result implies that data analytical tools have a substantial influence, explaining 92.2% of the performance outcomes for retail stores in this region. According to established thresholds for $Adj R^2$ values, where 0.02, 0.15, and 0.35 indicate small, medium, and large effects respectively, an $Adj R^2$ of 0.922—based on Cohen's criteria—demonstrates a large effect of data analytical tools on retail store performance..

Table 4.9 presents the results of ANOVA (overall model significance) of regression test, which revealed that, the combined Data analytical tool has a significant effect on performance of retail stores in South-west Nigeria. This can be explained by the F-value (929.906) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that Data analytical tool affected the performance of retail stores in South-west Nigeria, Nigeria. Furthermore, the results of regression coefficients which revealed that a positive relative effect was reported. Further, the results reveal that at 95% confidence level, account opening ($\beta = .919$, $p= 0.00$), of the retail stores in South-west Nigeria were statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. Based on coefficient of regression table 4.9, the regression model is restated as follows:

$$BP = .496 + .919DAT \dots\dots\dots Eq. (i)$$

Where: BP= Business Performance

DAT= Data Analytical Tool

According to the regression equation above, taking all factors constant at zero, performance of retail stores in South-west Nigeria is 3.573. The result also indicates that taking independent variables at zero, a unit change in data analytical tool will lead to a .919 increase in performance of retail stores in South-west Nigeria given that all other factors are held constant. This means that when retail stores use data analytical tool, their performance will improve by .919.

Based on the results, this study conclude that Data analytical tool significantly influence performance of Retail stores in South-west Nigeria. On the strength of this result ($Adj R^2= 0.879$, $F(1,79)= 929.906$, $p= 0.000$), this study rejects the null hypothesis one (H_01) which states that Data analytical tool have no significant effects on performance of Retail stores in South-west Nigeria.

However, relating the above result to research question 3, the result in table 4.5 evaluates the role and impact of data analytics on various operational and strategic aspects of retail store performance. The results indicate that data analytics is perceived as a valuable tool for understanding customer preferences and behaviors, which helps in tailoring services to meet customer needs. Retailers also benefit from identifying sales trends and improving inventory management through data-driven insights, enhancing operational efficiency. Strategic decision-making is another area where data analytics contributes positively, though opinions on its effectiveness are mixed.

The optimization of marketing strategies through data insights is acknowledged, but not universally accepted as highly effective. Investment in data analytics skills and tools is also seen as important, with many respondents agreeing on the need for continuous improvement. Hence,

the findings suggest that while data analytics plays a crucial role in improving customer understanding and operational processes, there are areas for improvement in fully leveraging its capabilities across all functions in retail stores. The responses obtained through research question three has also helped achieve objective three.

Hypothesis Four

H₀₄: Internal control system has no significant moderating effect on the interactions of innovative capabilities and performance of retail stores in South-west Nigeria

To evaluate the null hypothesis four, multiple regression was applied whereby the analysis was carried out in the order of hierarchy. A composite score was obtained for innovative capabilities and internal control system as adopted by the retail stores in South-west Nigeria, Nigeria and were used in the regression analysis. Also, data for performance (Y) was created by adding responses of all items for the variable (net profit and sales growth), while that of internal control system (Z) was obtained from adding responses of all items for the variable. In addition, an interaction term for innovative capabilities and internal control system (X_i*Z_1) was obtained by multiplying the composite score for innovative capabilities and internal control system. The hypothesis would be supported if the effect of the interaction of innovative capabilities and internal control system (X_i*Z_1) on performance of retail stores in South-west Nigeria is statistically significant. The results of the analysis step by step are presented in Table 4.16.

Table 4.10: Summary of Multiple Regression Analysis for the Moderating Effect of Internal control system on the Association between Innovative capabilities and Performance of Retail stores in South-west Nigeria, Nigeria.

Model ^{1,2,3}	Beta	t	Sig.	R	R ²	Adj. R ²	ΔR^2	ΔF	Sig. F Change
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(Constant)	2.502	11.538	.000
Innovative capabilities	.726	2.182	.030

F & Anova Sig: 4.961(2, 213), p=.000

(Constant)	3.463	9.998	.000	.206 ^b	.042	.037	.030	12.435	.000
Innovative capabilities	0.461	3.995	.000						
Internal control system	0.536	3.526	.000						

F & Anova Sig: 8.667(3, 213), p=.000

(Constant)	18.368	5.975	.000	.312 ^c	.097	.090	.055	23.792	.000
Innovative capabilities	1.3652	9.6545	.000						
Internal control system	.8201	14.9187	.000						

Innovative capabilities*Internal control system	.2309	8.5795	.000
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F & Anova Sig: 14.044(3,383), p=.000

a. Predictors: (Constant), Innovative capabilities

b. Predictors: (Constant), Innovative capabilities, Internal control system

c. Predictors: (Constant), Innovative capabilities, Internal control system, Innovative capabilities*Internal control system

d. Dependent Variable: Performance

Source: Field Result, 2024

Tables 4.10 present multiple regression results for the moderating effect of internal control system on the relationship between innovative capabilities and performance of retail stores in South-west Nigeria. The results in Table 4.10 model 4 summarize the output for the analysis if moderation effect is not considered. Therefore, in this model, the independent variable was innovative capabilities. From the results, innovative capabilities have positive but very weak relationship with performance of retail stores in South-west Nigeria ($R = 0.109$, $p=0.000$). The coefficient of determination (R^2) of 0.012 shows that innovative capabilities predicted 1.2% of the changes in performance of retail stores in South-west Nigeria under study while the remaining 98.8% changes in performance is explained by external factors different from innovative capabilities examined. This result suggests that innovative capabilities does not influence 1.2% of changes in performance of retail stores in South-west Nigeria.

Table 4.10 presents the results of ANOVA (overall model significance) of regression test which revealed that innovative capabilities have a significant effect on performance of retail stores in South-west Nigeria. This can be explained by the F-value (4.961) and low p-value (0.000) which is statistically significant at 95% confidence interval. Hence, the result posited that innovative capabilities deployed by the retail stores in South-west Nigeria influenced their performance despite of its weak contribution. Furthermore, the results of regression coefficients revealed that

a positive relative effect was reported for innovative capabilities. Further, the results reveal that at 95% confidence level, innovative capabilities ($\beta = 0.726$, $p = 0.000$) of the retail stores in South-west Nigeria were statistically significant as the p-values were less than 0.05 and the t-values greater than 1.96. Based on coefficient of regression Table 4.10c, the regression model is restated as follows:

$$PF = 2.502 + 0.726IC \dots \dots \dots \text{Eq. (iv)}$$

Where: PF = Performance

IC = Innovative capabilities

In the second model, multiple regression analysis included innovative capabilities and internal control systems as predictor variables. The results showed a change in R^2 of 0.030, suggesting that the model explains 4.2% of the variation in performance, with the remaining 95.8% attributed to factors outside the model. The F-statistic of 12.435, with a p-value of 0.000 ($p < 0.05$), indicates that this effect is statistically significant.

For innovative capabilities, the coefficient is 0.461, with a t-statistic of 3.995 and a p-value of 0.000. This result implies that innovative capabilities have a positive and significant effect on retail store performance in Southwest Nigeria, meaning that a one-unit increase in innovative capabilities corresponds to a 0.461 increase in performance. Additionally, the internal control system shows a coefficient of 0.536, a t-statistic of 3.526, and a p-value of 0.000, indicating that internal control systems also have a positive and significant impact on performance. Specifically, a one-unit increase in internal control system leads to a 0.536 improvement in performance.

The beta coefficient for internal control system is 0.162; t-statistic of 5.955, and a corresponding p-value of 0.000. The regression model is hence restated as follows;

$$PF = 3.463 + 0.461IC + 0.536ICS \dots\dots\dots \text{Eq. (iv)}$$

Where: PF = Performance

IC = Innovative capabilities

ICS = Internal control system

The third model involved the introduction of interaction term of innovative capabilities and internal control system using regression model. Result in Table 4.10 indicates that the R square change is 0.055, and F-change of 23.792 with a corresponding p-value of 0.000 implied that the interaction term of innovative capabilities and internal control system have a positive and significant moderating effect on performance of retail stores in South-west Nigeria, Nigeria (p=0.000). Furthermore, the interaction term of innovative capabilities and internal control system has a beta coefficient of .2309, and a corresponding p-value of 0.000. Hence, this implies that internal control system positively moderates the functional relationship between innovative capabilities and performance of retail stores in South-west Nigeria, Nigeria. The established regression equation from the result is stated as follows:

$$BP = -1.0472 + .8201IC + .8201ICS + .2309(IC*ICS) \dots\dots\dots \text{Eq. (iv)}$$

Where:

BF = Business Performance

IC= Innovative capabilities

ICS = Internal control system

FI*RE= Interaction term of Innovative capabilities and Internal control system

The results posit that internal control system moderates the functional relationship between innovative capabilities and performance of retail stores in South-west Nigeria. Based on this result ($\Delta R^2 = 0.055$, $\Delta F = 23.792$, $P = 0.000$), this study rejects the null hypothesis four (H_{04}) which states that internal control system has no significant moderating effect on the association between innovative capabilities and performance of retail stores in South-west Nigeria, Nigeria.

4.4 Discussion of Findings

The findings from hypothesis one confirms that the level of computerized accounting systems used has a positive relationship with the performance of the retail stores in South West, Nigeria. This can be attributed to the higher efficiency that computerized systems bring into finances particularly in accounting, stock control and customer's transactions among others. Reducing errors, such as those that can exist in manual systems, as well as providing immediate access to relevant financial data to improve business decisions, these systems decrease the likelihood of mistiming business decisions. In addition, mastery in computerized systems contributes to contemporizing transparency and control, which are major factors of internal control systems, that in turn leads to improved financial performance, and increased competitiveness¹. Access to accurate information allows for figuring out the company's performance much faster and thereby adhering to the demand of financial regulation, which is deemed to be crucial to ensuring the company's credibility in the market. The implication of this finding is that adopting computerized accounting systems in the retail stores will in one way or the other enhance the operational efficiency, better resources and financial of the stores².

This research concurs with other research finding. For instance, A study noted that the implementation of computerized accounting systems help improve the overall performance of organizations since it minimizes the various financial processes henceforth; operational costs are

reduced³. In a similar vein, another study establishes that the application of account automation results in the enhancement of decisions made in a retailing context, and they remain a significant driver of strong and improved financial performance. However, some of the research done seem to offer different opinions⁴. This is also in line with a study who opined that the performance of the computerized accounting systems is pegged on the level of the staff's technicality⁵. In any case, these systems cannot bring in the expected improvements if the necessary training is not provided. In like manner⁶, pointed out that there are costs involved in implementing and maintaining such systems which in essence may prove to be more costly to the small retail business with meager resources.

The results emanating from hypothesis two show that the level of transformation associated with the internet and particularly the utilization of online trading services has a substantial impact on the retail stores in Southwest, Nigeria. This may be attributed to the current developments in the retail industry where trading firms offer the retail shops wider market access, customer convenience and efficiency in the flow of sales. Digital media help retailers in adding more products to their portfolio and reach out to the potential customers more than outlets resulting in higher sales. Besides, online trading enhances work productivity when it comes to order processing as well as payment and stock management². The use of technology to bring timely advertising and offers also helps to also retain the customer. The implication of this is that, Nigerian retail stores that deploy online trading services are likely to enhance the competitiveness, customer perception or satisfaction and organizational performance⁷.

This result is consistent with prior studies as a study established that online trading services made available needed boosting of the performance, especially by increasing the volume of sales

and profitability that retail stores derive since customers found convenience in shopping online⁸. In the same vein, another study posits that online trading enables control over inventories and marketing that exercise positive impacts on business outcome¹⁰. On the contrary, other authors' arguments are different. As a study opined, that infrastructural factors are the key barriers to the efficiency of online trading service infrastructure, including Internet connectivity and cyber threats that can prevent increased performance¹¹. Likewise, another author also discusses how on-line trading platforms might lead to a lower level of satisfaction from the buyer's side and decrease the performance of the store if the correct client support and after-sale services are not provided¹².

The result from hypothesis three confirmed that data analytics tools have a significant relationship on the performance of retail stores in Southwest, Nigeria. These positive results can be explained by the fact that data analytics through its proficiency in predicting customer behaviour, sales, and inventory contributions help tremendously. So, the effective use of data enables retail stores to make adequate decisions, anticipate the future market trends, and develop highly-customized customers' experiences and thus contribute to the growth of retail organizational efficiency and profitability⁷. Another benefit is that data analytics is useful for accurately identifying the target market with the aim of improving customers' satisfaction and loyalty that in turn generate high sales. The implication of this result is that any retail store in Nigeria that support their system with data analytics tools, the retail store would be able to improve resources, reduce cost and maximize returns, and also engage customers and make the right decisions throughout the enterprise⁹.

This result supports the findings from other works, which showed that data analysis is key to defining the outcomes in the retail business. For example, another study concluded that the application of data analytics has a positive impact on retail stores and improves the management of customer relations and – finally – financial results¹³. Also, some authors also hold a similar opinion that data analytics can discover consumer tendencies in the market, which enhance efficient stock management and marketing activities¹⁴. On the other hand, some authors have been against the excessive utilization of the data analysis tools. For instance, small retail stores in developing countries like Nigeria as opined by a study may not always have the technical know how and necessary tools to unlock the true value of data analytics¹⁵. They also said that wrong interpretation of the output can result into wrong business decisions. In the same vein, ¹²opines that the value of data analytics cannot be greatly enhanced if is not integrated into business operations.

The finding from the hypothesis four show that the internal control system enhanced the positive relationship between innovative capabilities and the performance of retail stores in Southwest, Nigeria. This conclusion indicates that internal control system has a positive relationship with the ability of these retail stores in exploiting innovative accomplishment so as to boost the general performance. It is hard to talk about internal control as about some negative aspect because discipline in terms of risk management and the company's compliance with legal requirements and the accuracy of the financial statements contribute to produced environment that makes innovations, like digital transformation or product development, more workable.

This helps to minimize operational risks and avoid wastage, therefore, increase sales volume, enhance customers' satisfaction, and increase the company's' profitability¹. The inference here is

that organisations with effective internal controls are more likely to direct their creativity towards the achievement of the retail stores' strategic goals, by passing innovations through controls to increase their chances of delivering on retail business value¹⁰. Retailers should therefore enhance internal controls so that benefits from innovation can be optimally realized and enduring.

This finding supports the idea of a study that the setting of internal control systems raises the chances for firms to capitalize on innovative technologies and practices, thus influencing financial performance⁷. In like manner, some scholars hold the view that internal controls offer a structural guideline for innovation as it has standards for managing resources¹¹. However, some authors are skeptical about this opinion claiming that too strict internal control system affects the processes of innovation. For instance, a study recommends against relying on technical control because it stifles imagination and narrows the space for maneuver whenever new ideas are being implemented¹⁵. Similarly, another study discovered that sometimes, while the internal control system offers the benefits of minimizing risk, internal control can harmfully integrate bureaucracy in decision-making processes and slow down the execution of creative plans¹².

Endnotes

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Chapter Five

Conclusion

This chapter discusses the summary of findings, conclusion, recommendations, areas for further studies and contributions to knowledge. The summary of findings summarizes the key findings as revealed in the chapter four. Also, the key findings are summarized to show the contributions to knowledge to various stakeholders and also devise means which further studies can be conducted.

5.1 Summary of Findings

The study examined the effect innovative capabilities, internal control system on performance of retailers. Innovative capabilities was measured through computerized accounting system, online digital services and data analytical tool while the performance of retailers was measured using sales growth and net profit. Moreover, internal control system was used as the moderating effect to establish a link between innovative capabilities and performance of retailers in Nigeria. The summary of the key findings are as stated below:

- i. Computerised accounting system has a significant effect on the performance of retailers in Nigeria ($\beta_1=1.079$ $R^2= 0.920$, $P= 0.000$)
- ii. Online trading services also has a significant effect on the performance of retailers in Nigeria ($\beta_2=1.001$ $R^2= 0.880$, $P= 0.000$)
- iii. Digital analytical tools showed a significant and positive effect on performance ($\beta_3=.919$ $R^2= 0.923$, $P= 0.000$)

- iv. Internal control system significant moderating the association between innovative capabilities and performance of retailers in Nigeria (IC*ICS= .2309 R²=0.090, P= 0.000***, $\beta_3= 1.854$)

5.2 Conclusion

Based on the result from the analysis, it was revealed that innovative capabilities show a statistically significant effect on performance of retailers in Nigeria. The relationship between innovative capabilities and performance can be explained by the fact that retailers who have access to technologies are better equipped to manage their business operations, make informed decisions and invest in their businesses.

The findings from this study can be explained by various theoretical and practical underpinnings, especially in relation to the evolving nature of retail operations and the adoption of innovative capabilities. The positive relationship between computerized accounting systems and the performance of retail stores (hypothesis one) can be attributed to the increasing complexity of retail management, where accurate, timely financial data is critical for strategic decision-making. Computerized accounting systems streamline this process by automating transactions, reducing human errors, and enhancing internal control processes such as transparency and accountability. This shift aligns with the Resource-Based View (RBV) theory, which posits that firms with superior resources—such as advanced technology—are better positioned to achieve competitive advantages¹. By leveraging computerized accounting, retail stores can enhance operational efficiency, meet regulatory requirements, and ultimately improve financial performance. The implication for the body of knowledge is significant, as this finding contributes to the growing understanding of how digitization in accounting enhances business efficiency, particularly in developing economies like Nigeria.

In relation to hypothesis two, the significant effect of online trading services on retail store performance is a reflection of the digital transformation in the global retail landscape. The adoption of e-commerce and online trading allows retail stores to tap into a broader market, optimize supply chain management, and offer seamless customer experiences. This finding is consistent with the Technology Acceptance Model (TAM), which explains that the perceived ease of use and usefulness of technology positively influence its adoption². The implication for retail management theory is that digitalization, particularly through online platforms, is no longer an option but a necessity for retail businesses seeking to remain competitive. This finding extends previous research on e-commerce, emphasizing the importance of technology adoption for operational efficiency and customer retention, particularly in retail markets within developing countries.

The positive result of data analytics tools on retail store performance, as seen in hypothesis three, can be explained by the increasing reliance on data-driven decision-making in the retail sector. Data analytics allows retailers to anticipate market trends, tailor customer experiences, and optimize inventory management, thus driving profitability. This finding is in line with the Dynamic Capabilities Theory, which argues that firms must continuously adapt and reconfigure their internal capabilities to match changing environments³. Data analytics enhances retailers' ability to remain agile and responsive to market fluctuations, which is critical in a highly competitive retail space. For the body of knowledge, this finding contributes to the discourse on how data-driven strategies enhance business performance, reinforcing the argument that firms with strong data analytics capabilities are better positioned to succeed.

Finally, the moderating role of internal control systems in enhancing the relationship between innovative capabilities and retail store performance (hypothesis four) highlights the importance

of governance structures in facilitating innovation. Internal controls provide the necessary discipline and risk management framework that ensures innovative initiatives are executed effectively and aligned with organizational goals. This result can be linked to Agency Theory, which posits that firms must align managerial actions with the interests of stakeholders to minimize risk and maximize returns⁴. The finding suggests that innovative capabilities alone may not yield optimal results without robust internal controls to guide and safeguard the innovation process. For the academic discourse, this provides a nuanced understanding of how innovation and internal governance are intertwined, particularly in retail management, where operational risks are high, and innovation is key to staying relevant in a competitive market.

5.3 Recommendations

The following recommendations are suggested as follows:

- i) Enhancing Computerized Accounting Systems:** It is recommended that retail stores incorporate the best and most professional brands of accounting computerized systems to improve on the performance of accounting in retail stores. This investment should also entail acquiring training for the employees in bid to be proficient in these systems. With retail stores engaging in automated transactions and financial reporting, there is reduced risk of making wrong employee decisions, which means increased compliance to financial rules and also increased performance. The systems should be continuously monitored and updated in order to meet the changing technology and the business requirements.

- ii) Adopting Online Trading Services:** Retailers should incorporate online trading services to enhance their operational capacity in addition to customer's ease. Creation of solid e-commerce platforms will also enable provision of many products as well as sale and stock

control. So, retailers should employ proper digital marketing techniques to advertise their products and the online trading platform in order to reap the benefits offered by online trading. The adoption of this approach will also increase perceived value and hence customer loyalty on the retail stores that exist in the Nigeria market hence increasing competitiveness.

iii) Integrating Data Analytics Tools: Retail stores should ensure that they embrace data analytic tools in their business management process in order to harness the customer and market information. Through using Business intelligence, retailers can improve organizational decision making, stocks management and most importantly consumers' satisfaction. Hiring and training staff in data interpretation and analytics techniques will even more enrich these employees with knowledge of how to make profitable decisions as well as to enhance their performance. This line of thinking and dedication to numbers will help ensure retail stores are on course to consistently reap increasingly larger value out of future growth even as competition hots up.

iv) Strengthening Internal Control Systems: Retailers should invest in robust internal control frameworks to enhance the effectiveness of innovative capabilities highlighted. Effective internal controls help minimize risks associated with technological adoption by ensuring accountability, transparency, and compliance with financial and operational standards. Retail stores are encouraged to establish clear procedures for monitoring, reviewing, and updating these controls to accommodate technological advancements and evolving business requirements. Additionally, regular training on internal control processes will enable staff to better manage and implement these systems, further supporting retail performance and strategic goals. Emphasizing internal control will ensure that innovation is consistently aligned with organizational objectives, thus driving higher productivity, profitability, and competitive advantage in the market.

5.4 Contributions to Knowledge

The study has contributed to knowledge from various perspectives which are discussed below:

This study contributes to the theoretical framework by integrating innovative capabilities and internal control systems with retail performance. It enhances existing theories by demonstrating how computerized accounting, online trading, and data analytics influence operational efficiency, thereby enriching the literature on innovation management and performance metrics in the retail sector.

Empirically, the study provides quantitative evidence that links the adoption of technology in retail, specifically computerized accounting and data analytics, to enhanced performance. By employing robust statistical methods, it validates prior research findings and highlights the significance of these tools in driving efficiency and effectiveness in the retail environment of Nigeria.

From a practical standpoint, the findings offer actionable insights for retail managers and stakeholders. They emphasize the need for investment in technology and robust internal control systems to improve operational performance, guiding decision-makers in resource allocation and strategic planning within the competitive landscape of the Nigerian retail market.

Conceptually, this research expands the understanding of the relationship between technology adoption and retail performance. It introduces a framework that illustrates how innovative capabilities, mediated by effective internal controls, can enhance operational outcomes, serving as a foundation for future studies exploring the dynamics between innovation and performance in retail settings.

5.5 Areas for Further Studies

This study has several limitations that should be acknowledged. Firstly, the research was limited to retailers in Ibadan and Lagos State, which may affect the generalizability of the findings to other regions in Nigeria. Additionally, the reliance on quantitative data obtained through close-ended questionnaires may limit the depth of understanding regarding the nuanced perspectives of retail managers. The sample size of 220 retail stores is relatively small, which may not fully capture the diversity of experiences within the retail sector. Consequently, the findings may not be representative of the broader retail landscape in Nigeria.

Future studies could expand on this research by including a larger and more diverse sample across different Nigerian states, employing qualitative methods to gather richer insights into the factors influencing retail performance. Investigating the impact of emerging technologies on retail innovation in other contexts could further enhance understanding and provide a more comprehensive view of the sector's dynamics.

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Bio-Data

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Place of Birth: Ibadan, Oyo State
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B. Educational Background

Educational Institutions Attended with Dates and Qualifications

- Lead City University, Ibadan (MSc.Accounting) In-View
- Lead City University, Ibadan (BSc.Accounting) 2020
- The Polytechnic Ibadan (HND Accountancy) 2010
- The Polytechnic Ibadan (OND Accountancy) 2005
- National Examination Council 2003

C. Work Experience with Dates

- **Health Plus Limited (Chain of integrated Pharmacies)**
Revenue Assurance Team Lead May 2017
- **The Learning Place**
Accountant April 2018
- **Ibadan Mall Development Company Ltd**
Finance Manager May 2018 – till date

E. Membership of Academic and Professional Bodies

- Associate, Institute of Chartered Accountants of Nigeria ICAN (2020)

The University Compliance Certification

This is to certify that this thesis **“Innovation Capabilities, Internal Control and Performance of Retail Stores in South-West Nigeria”** was written by **Abraham Adebawale OLA-ADEYEMO**, with matriculation number **LCU/PG/002240** in the Department of Management & Accounting, Faculty of Management & Social Sciences, Lead City University, Ibadan, Oyo State, in full compliance with approved University format and style.

Signature

Date

**Appendices
Questionnaire**

**Lead City University Ibadan
Departments of Management and Accounting**

Dear Respondent,

As part of the requirement for a Master's of Science degree in Accounting, I am carrying out a study on **“Innovative Capabilities, Internal Control and Performance of retail stores in the South West, Nigeria”**. This study is mainly an academic exercise as all information provided would be treated with the utmost confidentiality. In any case, you feel uncomfortable to proceed; you may withdraw your consent at no cost. Below is the questionnaire that addressed the objective of this study. Please feel free to tick the option that best express your personal views.

Thank you.

Abraham Ola - Adeyemo

SECTION A: Demographic Information

Please carefully go through each item and tick (√) as appropriate.

1. Gender: Male () Female ()
2. Marital Status: Single [] Married [] Others []
3. Years spent in service of retailing business: Below 5yrs (), 6-10yrs (), 11-15yrs () 16yrs + ()

SECTION B

Kindly (√) tick any of the options that best expresses your opinion on any of the issues raised in the questionnaire.

Key: Strongly agreed (SA) Agreed (A) Disagreed (D) Strongly Disagree (SD)

S/N	STATEMENTS OF BUSINESS PERFORMANCE	SA	A	D	SD
1.	Retail store consistently meets or exceeds sales targets.				
2.	Retail store effectively manages and minimizes operational costs.				
3.	Retail store regularly introduces new products or services to meet customer demands.				
4.	Retail store maintains a loyal customer base who frequently return for purchases.				
5.	Retail store efficiently adapts to changes in the market and consumer trends.				

S/N	STATEMENTS OF COMPUTERIZED ACCOUNTING SYSTEM	SA	A	D	SD
6	The use of computerized accounting system enhances accuracy in financial record-keeping.				
7	Computerized accounting system improves efficiency in handling financial transactions.				
8	Retail store's computerized accounting system provides timely and reliable financial reports.				
9	Computerized accounting system enhances decision-making processes regarding financial matters in retail store's				
10	Staff in retail store are adequately trained to utilize the computerized accounting system effectively.				

S/N	STATEMENTS OF ONLINE TRADING SERVICE	SA	A	D	SD
11	Customers perceive the online trading platform provided by retail store convenient to make payment.				
12	Online trading service provided by retail store offers a wide variety of products or services to choose from.				
13	Online trading service ensures secure transactions and protects customer information.				
14	Retail store's online trading service effectively communicates promotions and discounts to customers.				
15	The effectiveness of online trading service provides prompt and reliable delivery of purchased items.				

S/N	STATEMENTS OF DATA ANALYTICS	SA	A	D	SD
16	Retail store effectively utilizes data analytics to understand customer preferences and behaviors.				
17	The use of data analytics by retail store helps in identifying trends and patterns in sales and inventory management.				
18	Data analytics tools provided by retail store gave an insights that contribute to strategic decision-making.				
19	The capabilities of data analytics help in optimizing marketing strategies for better customer engagement.				
20	Retail store invests in continuous improvement of data analytics skills and tools for better performance.				

S/N	STATEMENTS OF INTERNAL CONTROL	SA	A	D	SD
21	Retail store has robust internal controls in place to safeguard assets and prevent fraud.				
22	Internal control procedures ensure compliance with regulatory				

	requirements by retail store.				
23	Internal control mechanisms effectively monitor and manage inventory levels.				
24	Internal control framework helps in preventing errors in financial reporting in retail store.				
25	Retail store regularly evaluates and improves internal control processes for enhanced performance.				

Thanks for your co-operation.

Lead City University Ibadan DO NOT COPY