



BAYERO BUSINESS REVIEW

**A Journal of Management Sciences
(BBR)**

**DEPARTMENT OF BUSINESS MANAGEMENT
BAYERO UNIVERSITY KANO, NIGERIA**

**OCTOBER 2024
VOL. 8, NO. 2**

ISSN: 0189-4684

BAYERO BUSINESS REVIEW



**A JOURNAL OF THE DEPARTMENT OF
BUSINESS ADMINISTRATION AND
ENTREPRENEURSHIP, FACULTY OF
MANAGEMENT SCIENCES, BAYERO
UNIVERSITY, KANO, NIGERIA**

October, 2024

BAYERO BUSINESS REVIEW
DEPARTMENT OF BUSINESS ADMINISTRATION
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BAYERO BUSINESS REVIEW

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Published by the Department of Business Administration and Entrepreneurship, Bayero University, New Campus Gwarzo Road, P.M.B, 3011
Kano, Nigeria

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September, 2023

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ISSN: 0189-4648

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Bayero Business Review

Published By:

The Department of Business Administration and Entrepreneurship,

Bayero University, Kano Nigeria

P.M.B. 3011

EDITOR – IN – CHIEF NOTE

Dear Readers,

It gives me great pleasure to extend a warm welcome to you as the Editor-in-Chief of *Bayero Business Review (BBR)*, a platform dedicated to exploring and advancing knowledge in the field of business and management sciences. As we embark on this journey together, we aim to foster a dynamic exchange of ideas, insights, and perspectives that will contribute to the growth and development of both academia and industry. Through rigorous research, thoughtful analysis, and engaging discourse, we aspire to be a catalyst for innovation and progress in the ever-evolving field of business.

Bayero Business Review (BBR) is committed to upholding the highest standards of scholarship and professionalism. We encourage interdisciplinary collaboration and embrace diversity in thought and perspective. Our goal is to create a vibrant intellectual community where scholars, practitioners, and students alike can come together to explore new frontiers of knowledge and make meaningful contributions to society. The editorial board is glad to inform you that the journal has established an online page via a website that is user friendly () aimed at ensuring wide access to the journal in line with the global best practice, and our team is working on indexing in various global data bases.

I would like to express my gratitude to all those who have contributed to the success of *Bayero Business Review (BBR)*, including our dedicated editorial board, peer reviewers, authors, and readers. Your support and involvement are essential to our continued growth and success. I invite you to explore the pages of the current edition/issue, engage with our content, and join us in our mission to advance the field of business and management sciences. Together, we can shape a brighter future for business education and practice.

Thank you for your interest in the *BBR*. We look forward to embarking on this exciting journey with you.

Warm regards,

Professor Mukhtar Shehu Aliyu
Editor-in-Chief
Bayero Business Review
Bayero University, Kano-Nigeria

TABLE OF CONTENTS

Preliminary Page.....i

1. A Survey Of Customers’ Intention To Adopt Islamic Banking Services In Nigeria: Evidence From Jaiz Bank Plc, Abuja1
Abdulkadir Usman, Adamu Mohammed, Muhammad O. Aisha Sulaiman Abdul Liman, Mohammed Ibrahim Giddi, Mustapha Yarima, Mahmood Musa Mahmood, Salihu A. Abdulwaheed And M. A. Mawoli

2. Imperative Of Store Atmosphere In Building Customer Relationship In Retailing Business21
Adeyemi Abdulwasiu

3. Revenue Generation And Stamp Duty On Economic Growth In Nigeria (2015-2023)35
Ali Dalha Haruna

4. Capital Structure, Liquidity and Financial Performance of Listed Consumer Goods Companies in Nigeria44
Jibril Ramalan, Inuwa Jamilu, Olatoke Taofiq and Usman Adamu Babayayi

5. Determinants of Food Security In Sub-Saharan Africa: Effect Of ICT And Financial Improvement60
Adeyinka Emmanuel Adeyemi

6. Human resource management practice and the efficiency of Listed deposit Money Banks in Nigeria.76
Nicodemus Urube Ola

7. Assessing The Influence Of Audit Quality On Share Prices In The Financial Services Sector: The Roles Of Audit Fees, Audit Tenure, And Audit Firm Size.89
Ogbu, Godwin Otseme

8. Sustainability Disclosure And Market Value Of Banks In Nigeria: The Mediating Role Of Investors106
Dr.Utile Bem Josep

9. Human capital (HC) Development and SMES Performance: A Conceptual Review.123
Dr. Ahmed Abdulkazeem

10. Moderating Role Of Environmental Management Adoption On The Relationship Between Green Innovation And SMES Performance In Kano State Nigeria.....138
Ahmad Adamu Ibrahim

11. Effects Of Islamic Financial Products On The Profitability Of Selected Women Entrepreneurs In Nigeria.....154
Sumayya Adam Ahmad

12. Revisiting the Impact Of Audit Committee Attributes On Audit Lag In The Banking Sector Of The Nigerian Exchange Group170
Musa Musa Muhammad Idris Adamu Adamu, Alasan Ali Ibrahim

13. Long Run Effect Of Trade Openness On Unemployment In Nigeria181
Mohammad Adamu, Ahmad Isah Ammani, Ahmed Inusa Baba

14. Self- Efficacy and Career Enhancement Of Bayero University Dental Graduates ...195
Shukurat M. Bello, Babatunde O. Bamgbose, & Muazu H.Muazu

15. Competitive Capabilities And Performance Of Small And Medium Manufacturing Enterprises: Empirical Evidence From Southwestern Nigeria	210
Oladoye Muritala Oyetola, Osulale Olatunde Misbaudeen&Akinlo Ilemobayo	
16. Technological Acceptance & Efficiency Of Small And Medium Enterprises In Kwara State.....	225
Salau Alhaji Abdulazeez, Brimah Nassir Aminu, Yusuf Ismail and Mosinmilelouwa Paul Adejo	
17. Foreign Exchange Rate Unification and Foreign Portfolio Investment Inflows: Evidence from Nigeria.....	240
Mohammed Aminu Bello, Kabiru Umar	
18. Effects of Dynamic Capability on SMEs Performance in Kano State.....	254
Auwal Kabir Abdullahi	

A Survey Of Customers' Intention To Adopt Islamic Banking Services In Nigeria: Evidence From Jaiz Bank Plc, Abuja

By

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ABSTRACT

This study attempts to examine the major factors that affect banking customers' intention to adopt Islamic banking services in Nigeria. The study is premised on quantitative analysis. Four hundred (400) questionnaires were administered on JAIZ Bank customers and three hundred and eighty (380) questionnaires were retrieved from respondents, representing 95% return rate. The study uses multiple regressions to test the research hypotheses through SPSS 22 version. The findings revealed that awareness and perceived compatibility has significant effect on customers' intention to adopt Islamic banking services in Nigeria; while religiosity and relative advantage has no significant effect on customers' intention to adopt Islamic banking services in Nigeria. More so, the study found out that the level of banking customers' awareness of Islamic banking services in Nigeria is low. The study therefore, recommends that each Islamic bank in the country should engage in massive public awareness and enlightenment campaigns on the Islamic financial products and services they offer and their relative advantage over conventional banking products and services.

Keywords: Islamic Banking, Adoption, Awareness, Religiosity, Relative Advantage

Introduction

Islamic banking, also known as Islamic finance or Sharia-compliant finance, continues to operate under the core principle of adhering to Islamic law (Sharia), with a key focus on avoiding riba (usury or interest). The industry is experiencing global significant growth, with projections estimating it to reach \$3.5 trillion by 2024 (Global Finance Magazine, 2023). Islamic banking operation in Nigeria is a growing segment with market share of 0.7% in 3Q20 and has total assets of about USD 732 million. Islamic banks contribute about 2% to GDP in 2021 and estimated to contribute about 2.8% in 2022 (Bashir & Saif, 2022). This expansion is accompanied by a rise in technological adoption, allowing Islamic banks to offer Sharia-compliant financial products and services more efficiently (Mambu, 2024). Notably, there is a growing interest in ethical

investments, particularly among younger generations, and Islamic banking aligns well with this focus on ethical finance (Mambu, 2024). In essence, while the core definition of Islamic banking remains stable, the industry is actively adapting to meet the demands of a growing and increasingly tech-savvy customer base.

One of the major pillars that drive the economic growth and development of any country in the world is the banking sector. Banking sector serves as intermediary between those that have surplus and those who need fund to finance their engagements. Conventional banks perform the role of intermediary with consideration of interest. Apart from the prohibition of interest, Islamic banks do not partake in transactions that involve uncertainty (Gharar) and financing of things that are

prohibited in Islam – gambling, prostitution, alcoholic etc. They only engage in things that are Halal (permissible) in Islam. In Islam, an individual's social, economic and religious activities have strong ties with one another and as such, should be in line with the Islamic rulings (Qur'an 6:162).

According to Ahmad as cited in Jibril, Ibrahim and Umar (2019) Islamic banks are financial institutions whose Sharia rules and procedures clearly state commitment to principles governing Islamic Sharia law, which bans payment or receipt of interest on its operations. Money in Islam is not considered as asset but as a medium of exchange. Islamic banking is an emerging phenomenon in the West African region of African continent (Bananuka, Kaawaase, Kasera & Nalukenge, 2019). Majority of countries in the West Africa are secular states and are very conscious about their religious diversity. Islamic banking segment of the banking sector in Nigeria has remained underdeveloped considering the verse potential customers it can exploit. It is still a niche market and its penetration is still low in many African countries (Kaabachi & Obeid, 2016). The

Research Hypotheses

The study intends to test the following null hypotheses.

Ho₁: Awareness has no significant effect on customers' intention to adopt Islamic banking services in Nigeria.

Ho₂: Religiosity has no significant effect on customers' intention to adopt Islamic banking services in Nigeria. **Ho₃:** Relative advantage has no significant effect on customers' intention to adopt Islamic banking services in Nigeria.

banking sector in Nigeria has been dominated by the conventional banks despite the potential huge market share Islamic banks have since its introduction in 2012. The capacity of the Islamic banks in Nigeria to gain substantial market share is challenged with inadequate information at the disposal of potential customers largely because of poor marketing strategies aim at creating awareness in banking customers.

Furthermore, Islamic banking, which is an extract of Islamic Sharia law, is often seen as a way of Islamization agenda by non - Muslims in Nigeria. This belief has made the adoption of Islamic banking services onerous despite its contributions in other climes that are not Islamic states like the USA, the UK, Russia, Australia, India, Germany, South Africa etc. This study therefore, intends to fill this gap by way of evaluating the significant variables that influence adoption of Islamic banking in Nigeria through a clear understanding of potential customers' behaviour, attitudes and perceptions as they relate to adoption of Islamic banking.

Ho₄: Perceived compatibility has no significant effect on customers' intention to adopt Islamic banking services in Nigeria.

Literature Review

Concept of Islamic Finance

The term Islamic finance or Sharia compliant finance is a financial model that involves banking or financing activity that complies with Islamic rules and regulations. Islamic finance, a modern form of Sharia-compliant banking, has evolved from a niche market to a more

mainstream and competitive form of financial intermediation, attracting significant interest from Muslim-majority countries worldwide (International Monetary Fund, 2020).

The advent of non-interest banking is a clear diversion from the practices of traditional banks. Interest based activities are out rightly prohibited in Islam as it is expressly ordered in the holy Qur'an (Olalekan and Aruna, 2020). Specifically, Allah the most high prohibits interest (usury) in Suratul Baqara verse 275 (Q 2:275) which state thus:

Those who devour usury will not stand except as stand one whom the Evil one by his touch Hath driven to madness. That is because they say: "Trade is like usury," but Allah hath permitted trade and forbidden usury. Those who after receiving direction from their Lord, desist, shall be pardoned for the past; their case is for Allah (to judge); but those who repeat (The offence) are companions of the Fire: They will abide therein (for ever).

The first interest (usury) to be annulled in Islam was the interest charged by Abbas bn Abdulmuttalib (the Prophet's uncle) in year 10AH (632 AD) during the Hajjatul-Wada (the farewell Pilgrimage) in Makkah when Prophet Muhammad (S.A.W) said " all cases of interest (usury) during the pre-Islamic period of ignorance is annulled and the first interest I annulled is our interest, the interest of Abbas bn Abdulmuttalib, for it is all abolished" (Muslim – Hadith 1218 & Abu Dawud - Hadith 1905). The punishment for giving or receiving interest is so grave that the Prophet said in one Hadith that

"Interest is seventy types (of sins), the least which is equal to one marrying (or having sexual intercourse with) his mother" (Ibn Majah – Hadith 2274). In another Hadith, the

prophet was reported saying that "may Allah curse whoever consumes interest, whoever pays it, the two who are witnesses to it, and the scribe who records it" (Ibn Majah – Hadith 2277).

Also, there are about 19 Bible verses that prohibit interest ((Exodus 22:25; Leviticus 25:35-37; Deuteronomy 23:19; Psalm 15:5; Ezekiel 18:8; Ezekiel 18:13; Ezekiel 22:12; Luke 6:30; Proverbs 28:8; Jeremiah 15:10; 1 Timothy 6:9; Deuteronomy 15:8; Psalm 112:5; Luke 6:35; Nehemiah 5:6-11; Deuteronomy 23:20; Deuteronomy 15:1-11; Matthew 25:27; Luke 19:23) some of these verses read thus:

Deuteronomy 23:19

You shall not charge interest to your countrymen: interest on money, food, or anything that may be loaned at interest.

Psalm 15:5

He does not put out his money at interest, Nor does he take a bribe against the innocent. He who does these things will never be shaken.

Ezekiel 18:13

He lends money on interest and takes increase; will he live? He will not live! He has committed all these abominations, he will surely be put to death; his blood will be on his own head.

Luke 6:35

But love your enemies, and do good, and lend, expecting nothing in return; and your reward will be great, and you will be sons of the Most High; for He Himself is kind to ungrateful and evil men.

Nehemiah 5:6

Then I was very angry when I had heard their outcry and these words. I consulted with myself and contended with the nobles and the rulers and said to them, "You are exacting usury, each from his brother!" Therefore, I held a great assembly against them. I said to them, "We according to our ability have redeemed our Jewish brothers who were sold to the nations; now would you even sell your brothers that they may be sold to us?" Then they were silent and could not find a word to say.

Islamic Banking Products and Services

The different products and services offered by Islamic banks are considered to be well-suited to the economic needs of their customers, particularly those seeking Sharia-compliant financial solutions (Iqbal & Molyneux, 2015). These products and services differ fundamentally from conventional banking as they adhere to Islamic law (Sharia) principles, prohibiting activities like interest and promoting profit-sharing mechanisms (Ahmed, Hassan, & Mat Yusoff, 2018). Some of these various Islamic finance products and instruments are available to investors in the money and capital markets, this includes, among others:

i. Murabahah: this is an Islamic contract where a buyer approaches an Islamic bank with a specification of the product (Home, car, equipment, machine etc) that he wants from the bank; the bank then purchases the item and charge cost plus markup. Both buyer and the seller have to agree on payment modalities – instalments or in a lump sum.

ii. Musharakah: This is a joint venture partnership that is base on profit and loss sharing arrangement. Here, each venture contributes capital to the business and share profit and loss on agreed ratio.

iii. Mudaraba: in this type of product, two parties are involved. One party provides money (called Rabbul-mal) for the business and do not take part in the management of the business, while the other party provides expertise and management (called Mudarib). Both the Rabbul-mal and the Mudarib have to agree on profit sharing ratio e.g. 50%:50% or 60%:40%.

In the event of loss, the Rabbul-mal loses the investment while Mudarib loses his effort and energy invested in the business.

iv. Ijarah: this typically means contract of renting or leasing. The contract can be hiring of labour or property for a given period of time on an agreed price.

v. Salam: this is a contract where the buyer makes payment in-advance and receives delivery of the goods in the future. Payment for yet to be manufactured goods can be made in-advance, but the time of delivery in the future has to be specified when entering into the agreement.

vi. Sukuk: this simply means Islamic Bond where investors gain partial ownership on an asset. It is an alternative to the conventional bond that is not Sharia compliant.

vii. Takaful: Takaful (Islamic insurance) is a risk sharing scheme based on brotherhood, solidarity and mutual assistance which is provided for financial aid and assistance to the participants mutually agreed to share the risks (Bello, et. al., 2024).

Here, members contribute money into a pool to guarantee each other against damage or loss. It is a kind of co-operative system to safeguard against loss. In Takaful, the policyholders are joint investors with the insurance company who manages the funds on behalf of the policyholders. Profits and losses are share between the policyholder and the insurance company (Takaful operator).

viii. Wakala: this is a principal and agent contract. The principal is called the ‘Muwakkil’ who appoints a representative/ agent called ‘Wakil’ to undertake transaction on his behalf.

The Wakala contract can involved other forms of Islamic products such as Musharaka, Mudaraba, Murabaha, Ijarah, Salam etc.

ix. Kafala: simply means surety. The surety is a third party who accepts responsibility of fulfilling existing obligation of someone’s liability.

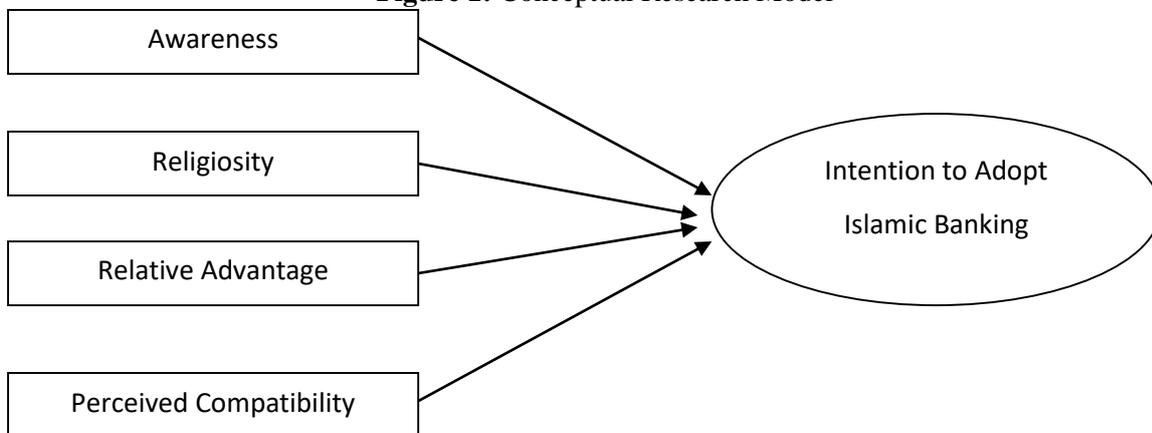
x. Rahn: this product simply means collateral. Rahn is use to serve as security for liability taken by the debtor.

xi. Qardul Hassana: this means benevolent loan which is interest free given to the needy people. Islamic banks may take deposit from customers and may give them gift in consideration of the deposit not on any agreed rate and it is not an obligation of the account/loan agreement (Abdullahi & Chee, 2010).

Conceptual Framework

Islamic banking is an emerging market in the global economy. Many studies by scholars have revealed that factors such as awareness, religiosity, relative advantage, perceived compatibility, pricing policy, quality of service, social influence, uncertainty, normative belief, self-efficacy, attitude, subjective norm, bank reputation, perceived risk and observability play significant influence in customers’ intention to adopt Islamic banking products and services (Kaabachi & Obeid, 2016;) Abdelghani & Hassanudden, 2012; Sudarsono et al., 2021; Qaisar & Dayang, 2018; Nurudeen, Safeza, Norhazlina & Syadiyah, 2021; Bananuka et al. 2019). Figure 1 depict research model for the study.

Figure 1: Conceptual Research Model



Source: Researchers’ Conceptualization (2024)

Empirical Review

Haruna, Oumbé, and Kountchou (2024) explored the adoption of various Islamic finance products—including murabaha, musharakah, mudarabah, salam, ijara, istisna, and Qard Hassan—by small and medium-sized enterprises (SMEs) in Cameroon, a non-Islamic nation in Sub-Saharan Africa. They gathered

primary data from a cross-sectional survey of 1,358 SMEs across eight regions of Cameroon using self-administered structured questionnaires. To streamline analysis and interpretation, these products were grouped into four categories based on specific characteristics. A multivariate probit model was applied to consider the interactions between the

different Islamic finance products. The study identified that the desire to adhere to Sharia law, alongside awareness, attitude, and intention, were key determinants in the adoption of Islamic finance products by Cameroonian SMEs. Conversely, factors like perceived behavioural control, subjective norms, enterprise characteristics (size, age, location), and the socio-demographic traits of the entrepreneur (gender, age, marital status) were less impactful. By employing the multivariate approach, the study calculated predicted probabilities, uncovering a synergy effect among the different Islamic finance products. This indicates that Cameroonian SMEs often utilize a mix of Islamic finance products concurrently based on their needs, particularly combining partnership-based products (Musharakah and Mudarabah) with manufacture/rent products (Istisna and Ijara).

Febriandika, Harun, Hakimi, and Masrizal (2023) investigated the factors influencing Islamic bank customers' willingness to adopt Islamic mobile banking services. They expanded the Technology Acceptance Model (TAM) theoretical framework by incorporating new factors such as internet connection quality, bank reputation, and awareness. An online survey was conducted using a questionnaire, garnering 265 responses from Islamic Mobile Banking users in Indonesia. The data was analyzed using the PLS-SEM method. The findings revealed that perceived utility, internet connection quality, consumer awareness, and bank reputation significantly positively

impacted customers' intentions to use Islamic mobile banking services. However, perceived usability did not have a significant positive effect. Understanding these factors can help stakeholders in the Islamic finance sector develop and implement strategies to enhance financial services for both current and potential users.

Nimsith, Rooly, and Ilma (2023) examined the factors affecting the demand for Islamic banking products in Sri Lanka. They collected primary data using questionnaires distributed to 650 customers of Amana Bank PLC across its 33 branches nationwide, utilizing convenience sampling techniques. The data analysis was performed using the Statistical Package for Social Sciences (SPSS), employing statistical methods such as regression analysis, correlation analysis, and a reliability test. The results demonstrated a strong correlation between factors like religiosity, attitude, awareness, and reputation, and the demand for Islamic banking products in Sri Lanka. Regression analysis identified awareness as having the most significant impact on the demand for Islamic banking products, followed by reputation, attitude, and religiosity, in descending order of influence.

Sonko (2020) examines the customers' perceptions on Islamic banking in Gambia. The major aim of the study was to determine the factors that influence customers' to adopt conventional banks or Islamic banking system.

Customers' religious commitments, knowledge of Islam, awareness of Islamic banking products, are among variables that were examined. The population of the study were four conventional banks and the only Islamic bank {Arab Gambia Islamic Bank (AGIB)} in the country. The study used quantitative research design. Questionnaire instrument was given to 150 respondents that were sample size for the study. 75 respondents each from the conventional banks and AIGB respectively were selected using purposive random sampling technique. The study used descriptive statistics and logistic regression method for data analyses. The findings of the study revealed that the customers of AGIB are more religiously committed compared to the customers of the conventional banks. Also, the customers of AGIB have more knowledge of Islam and Islamic banking compared to their counterparts from the conventional banks. However, the level of awareness and usage of Islamic banking products is very poor among all the categories of the banking customers.

Sudarsono, Tumewang and Kholid (2021) investigated the factors that influence customer intention to adopt Islamic banking services in Indonesia. The study used quantitative design to collect data from respondents through the use of questionnaire. The study used purposive sampling technique to administered 550 questionnaire to the study sampling size. The measuring variables for independent variable consists of bank reputation, perceived complexity, perceived compatibility, perceived risk, relative advantage, religiosity and social influence. Meanwhile, customer intention to

adopt Islamic banking services is considered as the dependent variable. The study used partial least square – structural Equation model technique (PLS-SEM) through Smart PLS Software. The findings of the study revealed that awareness and perceived compatibility have a positive effect on customer intention to adopt Islamic banking services. Religiosity and social influence have positive and significant effect on customer intention to adopt Islamic banks. On the other hand, bank reputation and perceived complexity have no effect on customer intention to adopt Islamic banking services. While perceived risk has a negative and significant effect on customer intention to adopt Islamic banking services in Indonesia.

Qaisar, Hakimah and dayang (2018) conducted a study on empirical investigation of Islamic banking adoption in Brunei. The objective of the study was to explore the understanding level of various Islamic banking concepts and determine the factors that impact the adoption of Islamic banks in Brunei. The study used quantitative design. The data for the study was collected from 245 sample size using questionnaire instrument. The questionnaires were administered to the sample size through convenience non-probability technique. The study used multiple linear regression analysis for data analysis. The findings of the study revealed that customers understanding level of Islamic bank concepts were below average among banking customer. Furthermore, the multiple regression analysis indicated that all the measurement variables of independent variable have positive effect on the adoption of Islamic banking services.

Bananuka, Kaawaase, Kasera and Nalukenge (2019) studied the determinants of the intention to adopt Islamic banking in a non-Islamic developing country: the case of Uganda. The main aim of the study was to investigate the contribution of attitude, subjective norm and religiosity on the intention to adopt Islamic bank in emerging economy like Uganda. The study used cross-sectional and correlation research designs. The study used hierarchical regression analysis to test the study hypotheses. The findings of the study revealed that attitude and religiosity are significant determinants of customers' intention to adopt Islamic banks. While subjective norm can significantly determine customers intention to adopt Islamic banks when its subsumed in attitude.

Nurudeen, Safeza, Norhazlina and Syadiya (2021) investigated the conceptual framework for the adoption of general Takaful among MSME owner-managers in North-west Nigeria: The role of MSME owner-manager characteristics. The objective of the study was to propose a conceptual framework to study the factors that influence general Takaful adoption among MSMEs owner-managers' in North-west Nigeria. The findings of the study revealed seven conceptual models that can be used to investigate adoption of Takaful thus: relative advantage, compatibility, complexity, uncertainty, awareness, social influence and government support. The study concluded that the conceptual framework proposed are based on Diffusion of Innovation theory (DIT) and the Unified Theory of Acceptance and use of Technology (UTAUT)

Theoretical Framework

This study considered two theories that have relationship with behavioural determination and adoption of new ideas which were applied respectively. Theory of Reason Action (TRA) by Fishbein and Ajzen (1975) was adopted for behaviour determination, while Rogers (1962) Diffusion of Innovation Theory (DIT) was considered for acceptance of new idea. The Theory of Reasoned Action (TRA) originated from Fishbein and Ajzen (1975) as a development over Information Integration Theory. The TRA is a consumer behaviour theory that focuses on the relationship between marketing and pre-existing attitude brought forth to purchasing decisions, in which case consumers exploit on deeds they perceive will bring about certain outcome that may be conversant or otherwise (Hagger, 2019).

The theory is however premised on the assumption that behavioural intention is confirmed by attitudes and subjective norm: where attitudes are either adverse or helpful evaluation of acting the conduct in future, while subjective norms exhibit perception that several others would prefer them to carry out the behaviour. The theory expresses basis for relationship or otherwise of circumstantial influences to certain behaviour.

Although the theory is limited by reasonable jeopardy of confusion between norms and attitude and also the assumption that one can act limitlessly once having formed the intention to act, TRA is applicable to this study, because it eases the ability to know if customers intention towards Islamic banking

are determined by their attitude and perception or by what significant

others would want them do. Fauzi et al, 2022: Wandan et al 2021: and Resty and Idayat, (2021) applied TRA using attitude factors & subjective norms which revealed significant effect on behavioural intention.

On the other side of the coin, the diffusion of innovation theory was propounded by Evereth M. Rogers (1962) which actually expresses the outline of speediness to which new Ideas, Practices and or Products spreads through a population (Rogers,1962, as cited in Puah et al (2022). DOI theory has interacting elements such as: Innovation, Communication channels, Time factor and social system going through the stages of Awareness, Persuasion, Decision, Implementation and Continuity by the main players such as Innovators, Early adopters, early/Late majority and Laggards (Rogers, 2003:12)

The theory is quite relevant to organizations as well as individuals as it views innovation as an Idea or practice/product while diffusion is seen as a process of communicating innovation to social system for member's acceptance and or rejection (Ezeh & Nnkamnebe, 2018). The DOI theory is to the best of my knowledge widely used by authentic scholars on recent and related studies appearing to be the preference of researchers in adoption of innovation studies despite the limitations of working better for behaviour acceptance than behaviour termination. Puah et al, 2022; Ezeh and Nkamnebe, 2022; Elmallouli and Sassi, 2021; Sudarsono et al, 2021; Jamshidi and Kazemi, 2020; Alim et al, 2019 Modified and applied the

theory to suit their work respectively and found that all five attributes of DOI theory are absolutely and significantly associated to customer adoption of Islamic banking and hence making it suitable for this study.

Methodology

Research Design, Population, Sample Size and Sampling Technique

The study employs a survey research design using quantitative research approach. Quantitative research involves the collection and analysis of numerical data to identify patterns, relationships, or trends within a population. This approach is suitable for studies that aim to quantify variables and generalize results from a sample to a larger population. The population of the study are 53,688,528 banking customers in Nigeria as indicated by data from the Nigeria Inter-Bank Settlement System Plc (NIBSS) as of March 20, 2022. The sample size is 400 banking customers, using the sample size estimation formula of Guilford and Fruchter (1973). The sample size was selected using purposive random sampling technique. This technique involves selecting a sample that is most beneficial to the purpose of the study, ensuring that the sample members are chosen with a specific intention.

Data Collection Instrument and Measurement of Variable

The study uses a structured questionnaire to collect primary data from group of respondents. The questionnaire was grouped into two sections. Section 'A' focused on bio-data while section 'B' focused on the study variables build on 5 – point Likert's scale statements.

The independent variable was measured using four measurement variables: awareness, religiosity, relative advantage and perceived compatibility. The awareness scale consists of 6 items adapted from the works of Kaabachi and Obeid, 2016 and Sudarsono, Tumewang, and Kholid, 2021. The second measurement scale – religiosity consist of 7 items adapted from the works of Kaabachi and Obeid, 2016; Bananuka, Kaawaase, Kasera, and Nalukenge, 2019 and Sudarsono et al. 2021. The third measurement scale – relative advantage is made up of 5 items adapted from the works of Faisal, Akhtar, and Rehman, 2014; and Sudarsono et

al. 2021. The fourth measurement scale – perceived compatibility consists of 4 items adapted from the works of Kaabachi and Obeid, 2016. The dependent measurement scale – intention to adopt Islamic banking consist of 4 items adapted from the works of Kaabachi and Obeid, 2016; Bananuka et al. 2019 and Sudarsono et al. 2021. Table 1 shows the summary of the study measurement instrument.

Table 1 Summary of measurement scales

Construct	Measures	Sources
Awareness	<ol style="list-style-type: none"> 1. I have received information about non-interest banking 2. I have generally received enough information about the features of Islamic banking 3. I have received enough information about benefits of using Islamic banking services 4. I have received information that Islamic banks charge cost plus mark-up instead of interest in ‘Murabaha’ financing scheme 5. I have received information that Islamic banks share profit with customer instead of charging interest in ‘Mudarabah’ financing scheme 6. I have received information that Islamic banks collect rent instead of interest in ‘Ijarah’ (equipment leasing) financing scheme 	Kaabachi and Obeid, 2016 and Sudarsono, Tumewang, and Kholid, 2021
Religiosity	<ol style="list-style-type: none"> 1. I try to follow the commands of my religion in everything in my life 2. I always try to avoid minor and major sins as my religion teaches 3. I am conversant with the teachings of my religion 4. I have firm belief in all basic ideological dimensions of my religion 5. I feel sadness and dissatisfaction when I do something contrary to my faith 6. I am comfortable with both the Qur’an and Bible verses that speak against charging interest 7. Investing with Islamic banking does not conflict with my religion as USA, UK, Canada, China, India, South Africa etc also practice Islamic banking 	Kaabachi and Obeid, 2016; Bananuka, Kaawaase, Kasera, and Nalukenge, 2019 and Sudarsono et al. 2021
Relative advantage	<ol style="list-style-type: none"> 1. Financing on the basis of profit and loss sharing between the lender and borrower will be more beneficial to both parties 2. Islamic banks are more profitable comparing with the interest in conventional banks 3. Islamic banks provide lower cost products and services compared to conventional banking (lower service fees) 4. Islamic banks are not only concern about the customer’s ability to bring returns but also ensure that the client business is viable 5. Islamic banks offer attractive products more than conventional banks 	Faisal, Akhtar, and Rehman, 2014; and Sudarsono et al. 2021
Relative Compatibility	<ol style="list-style-type: none"> 1. Islamic banking is in line with my value 2. Islamic banking products and services suit my needs 3. Islamic banking well fit to my lifestyle 4. Islamic banking services is very compatible with the way I manage my money 	Kaabachi and Obeid, 2016
Intention to Adopt Islamic Banking	<ol style="list-style-type: none"> 1. I intend to use Islamic banking services in the future 2. I predict that I will frequently use Islamic banking products and services in the future 3. I would highly recommend others to use Islamic banking services 4. Islamic banks can be alternative bank for me 	Kaabachi and Obeid, 2016; Bananuka et al. 2019 and Sudarsono et al. 2021

Reliability Test

Table 2 presents the outcomes of the Cronbach's alpha reliability test, which assesses

Table 2. Reliability Test

the internal consistency of various scales used in the study.

Variable	Number of items	Scale reliability coefficient
Awareness	6	.872
Religiosity	7	.891
Relative advantage	5	.811
Perceived compatibility	4	.899

The result shows that the awareness scale demonstrated a high reliability with a Cronbach's alpha of 87.2%, indicating that the items on this scale consistently measure the awareness construct. The religiosity scale showed an even higher reliability at 89.1%, ensuring the robustness of the measurements related to religious beliefs and practices. The relative advantage scale also exhibited substantial reliability, with a score of 81.1%, reflecting consistent measurement of perceived benefits. The perceived compatibility scale had the highest reliability at 89.9%, underscoring the consistency in measuring how well Islamic banking fits with customers' values and experiences. Lastly, the intention to adopt Islamic banking scale showed strong reliability at 87.7%, indicating that the items effectively capture the customers' propensity to use Islamic banking services. These high reliability scores across all scales confirm the dependability of the measurements used in the study.

Method of Data Analysis and Decision Rule

The study used descriptive statistics (mean, standard deviation) and inferential statistics (ANOVA, correlation and multiple linear regression analysis). Any mean score between 1.00 - 3.00 entails poor level of awareness, 3.01 - 3.49 low level of awareness, 3.50 – 3.99 moderate level of awareness, 4.00 – 5.00 high level of customers’ awareness of Islamic banking services. In the aspect of inferential statistics, the study used multiple regressions at

5% level of significance. Any p – value above 0.05 means the model has no significant effect and such, the null hypothesis is accepted or otherwise rejected and alternate hypothesis accepted and vice versa. The data analysis was aided through the use of Statistical Packages for Social Sciences (SPSS 22). The regression model is given below:

$$IAIB = \beta_0 + \beta_1A + \beta_2R + \beta_3RA + \beta_4PC + e$$

Where:

IAIB = Intention to adopt Islamic banking; β_0 = constant; β_1 to β_4 - coefficients; A – Awareness; R – Religiosity; RA – Relative advantage; PC – Perceived compatibility; and e – error term.

Data Presentation and Analysis Characteristics of the Respondents

Table 2 shows the respondent’s demographic profile. The result of the study revealed that 250 respondents are males while 130 are females.

The data analysis revealed that the majority of the respondents are between the ages of 26 - 40 years with population of 168 respondents representing 44.2%. Next are 94 respondents in the age bracket of 18 – 25 years representing 24.7%. Follow by 78 respondents aged between 41 – 50 years representing 20.5%. 40 respondents aged between 51 years and above representing 10.5%.

The analysis of highest qualification revealed that majority of the respondents has HND/ Degree qualifications which is 181 respondents representing 47.6%. The next is Diploma/NCE holders who are 110 respondents representing

28.9%. Follow by 45 respondents who have SSCE representing 11.8%. Follow by Master Degree holders with population of 36 respondents representing 9.5%. 8 respondents representing 2.1% have PhDs.

The analysis of place of work indicated that 191 respondents work in government sectors representing 50.3%. 102 respondents work in private sectors representing 26.8%; while 87 respondents are students representing 22.9%.

The analysis of religion of the respondents showed that 274 respondents are Muslims

representing 72.1%. 105 respondents are Christians representing 27.6%; while 1 respondent representing 0.3% practice traditional religion

The table further showed that 263 respondents representing 69.2% has conventional bank account. 39 respondents representing 10.3% has Islamic bank account; while 78 respondents representing 20.5% have both conventional and Islamic bank account

Table 3: Demographic Characteristics of Survey Respondents

Variable	Category	Frequency	Percent
Sex	Male	250	65.8
	Female	130	34.2
	Total	380	100.0
Age	18 - 25 years	94	24.7
	26 - 40 years	168	44.2
	41 - 50 years	78	20.5
	51 years & above	40	10.5
	Total	380	100.0
Highest Qualification	Ssce	45	11.8
	Diploma/NCE	110	28.9
	hnd/BSC	181	47.6
	Masters	36	9.5
	PHD	8	2.1
	Total	380	100.0
Occupation	Government Sector	191	50.3
	Private Sector	102	26.8
	Student	87	22.9
	Total	380	100.0
Religion	Islam	274	72.1
	Christianity	105	27.6
	Others	1	.3
	Total	380	100.0
Type of Bank Account	Conventional Bank Account	263	69.2
	Islamic Bank Account	39	10.3
	Both	78	20.5
	Total	380	100.0

Level of awareness of Islamic banking Product and services in Nigeria

Table 4

data analysis showed the mean scores for each of the 6 items/determinant of customers'

awareness of Islamic banking services in Nigeria

Table 4 Respondents view on Awareness of Islamic Banking Services

Statement item	Mean	Std. Dev	Ranking
I have received information about non-interest banking	3.81	1.312	1 st
I have generally received enough information about the features of Islamic banking	3.61	1.241	3 rd
I have received enough information about benefits of using Islamic banking services	3.69	1.278	2 nd
I have received information that Islamic banks charge cost plus mark-up instead of interest in ‘Murabaha’ financing scheme	3.18	1.311	6 th
I have received information that Islamic banks share profit with customer instead of charging interest in ‘Mudarabah’ financing scheme	3.37	1.357	4 th
I have received information that Islamic banks collect rent instead of interest in ‘Ijarah’ (equipment leasing) financing scheme	3.25	1.329	5 th

Grand mean of 3.485

The mean scores for I have received information about non-interest banking is 3.81 (std deviation = 1.321); I have generally received enough information about the features of Islamic banking is 3.61 (std deviation = 1.241); I have received enough information about benefits of using Islamic banking services is 3.69 (std deviation = 1.278); I have received information about ‘Murabaha’ financing scheme is 3.18 (std deviation = 1.311). I have received information about ‘Mudarabah’

financing scheme is 3.37 (std deviation = 1.357). I have received information about ‘Ijarah’ (equipment leasing) financing scheme is 3.25 (std deviation = 1.329). Overall, banking customers’ level of awareness of Islamic banking Product and services in Nigeria is low with **Grand mean of 3.485**. This finding is in line with the findings of Ramdhony (2013); Qaisar et al (2018) and Sanko (2020) which indicated that customers’ level of awareness of Islamic banking services is below average.

Regression Analysis Result

Table 5 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.818 ^a	.670	.666	1.92599

a. Predictors: (Constant), Perceived Compatibility, Religiosity, Awareness, Relative Advantage

b. Dependent Variable: Intention to Adopt Islamic Banking
 The regression result from model summary^b table 5 shows a multiple correlation of R = .818, R Square = .670, Adjusted R Square = .666 and Std Error of the estimate = 1.92599. **R value of 0.818** indicates a good level of prediction. The R Square value of 0.670 shows that the independent variable explains 67% of the variability of the dependent variable – Intention to Adopt Islamic Banking (IAIB). The adjusted R Square indicates that 66.6 % of the variability in Intention to Adopt Islamic Banking (dependent variable) is accounted for by the Perceived Compatibility, Religiosity, Awareness, and Relative Advantage.

Table 6 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2814.634	4	703.658	189.694	.000 ^b
	Residual	1387.329	374	3.709		
	Total	4201.963	378			

a. Dependent Variable: Intention to Adopt Islamic Banking

b. Predictors: (Constant), Perceived Compatibility, Religiosity, Awareness, Relative Advantage

The ANOVA table 6 indicated that the model is statistically significant with F value (189.694) and P – value (.000^b). We can conclude that the

4.4 Test of Hypotheses

The results regarding test of research hypotheses are presented in tables 7, 8, 9, 10, 11 and 12 below:

four independent variables together predict the changes in the dependent variable (Intention to Adopt Islamic Banking).

Ho₁: awareness has no significant effect on customers’ intention to adopt Islamic banking services in Nigeria.

Table 7: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.676	.623		5.898	.000
Awareness	.072	.021	.132	3.435	.001
Religiosity	-.031	.026	-.049	-1.221	.223
Relative Advantage	.062	.040	.074	1.561	.119
Perceived Compatibility	.686	.040	.714	17.280	.000

a. Dependent Variable: Intention to Adopt Islamic Banking

Table 7 revealed that Awareness has positive and a significant effect on the customers’ intention to adopt Islamic banking services in Nigeria. ($\beta_1 = .072$; $t = 3.435$; $p = .001 < \alpha = 0.05$). This indicates that an increase in customers’ Awareness by 1 unit will increase customers’ intention to adopt Islamic banking services in Nigeria by 0.072 units. With this result, the null hypothesis is therefore rejected and the alternate accepted. This finding is in line with the findings of Abdelghani and Hassanudden (2012); Wahuni and Arifin (2013); Kaabachi and Obied (2016); Sudarsono

et al (2021); Haruna *et al.*, (2024); Nimsith *et al.*, (2023); Febriandika *et al.*, (2023). However, the finding is in contrast with the finding of Abd. Aziz, Echchabi, Housseem, Ayedh, Musse, and Azouzi (2015) study revealed that awareness has no significant effect on banking customers’ intention to adopt Islamic banking services.

Ho₂: Religiosity has no significant effect on customers’ intention to adopt Islamic banking services in Nigeria.

Religiosity has negative and no significant effect on customers’ intention to adopt Islamic

banking services in Nigeria. ($\beta_2 = -0.031$; $t = -1.221$; $p = .223 < \alpha = 0.05$). This indicates that an increase in Religiosity by 1 unit will mean that the effect will be insignificant to affect customers' intention to adopt Islamic banking services in Nigeria by -0.031 units. With this result, the null hypothesis is therefore accepted and the alternate rejected. This finding is in agreement with the findings of Ezeh and Nkamnebe (2022) and Nimsith *et al.*, (2023) that religiosity has no effect on customers' intention to adopt Islamic banking services in Nigeria. However, the finding is in disagreement with the findings of Souiden and Jabeur (2015); Kaabachi and Obied (2016); Bananuka *et al* (2019); and Sudarsono *et al* (2021) that religiosity has significant effect on customers' intention to adopt Islamic banking services.

H₀₃: Relative advantage has no significant effect on customers' intention to adopt Islamic banking services in Nigeria.

Similarly, Relative advantage (Relative_Advantage) has no significant effect on the customers' intention to adopt Islamic banking services in Nigeria. ($\beta_3 = 0.062$; $t = 1.561$; $p = .119 < \alpha = 0.05$). This indicates that an increase in Relative advantage (Relative_Advantage) will not lead to any increase in Intention to Adopt Islamic Banking by 0.062 units. With this finding, the null hypothesis is therefore accepted and the alternate rejected. This finding is in line with the findings of Abdelghani and Hassanudden (2012); Abd. Aziz, *et al* (2015); Kaabachi and Obied (2016); Qaisar *et al* (2018) and Ezeh and Nkamnebe (2022). However, the finding is in contradiction with the findings E

of study Echchabi, Olorogun and Azouzi (2014); and Sudarsono *et al* (2021) revealed that relative advantage has no significant effect on banking customers' intention to adopt Islamic banking services.

H₀₄: Perceived compatibility has no significant effect on customers' intention to adopt Islamic banking services in Nigeria.

The study's findings indicate that perceived compatibility has a positive and significant effect on customers' intention to adopt Islamic banking services in Nigeria. Practically, this means that when customers feel that Islamic banking is compatible with their values, beliefs, and existing financial habits, they are more likely to intend to use these services. The statistical result ($\beta_4 = .686$; $t = 17.280$; $p = .000 < \alpha = 0.05$) shows a strong and significant relationship, suggesting that for every unit increase in perceived compatibility, the intention to adopt Islamic banking services increases by 0.686 units. Consequently, the null hypothesis, which posited no significant effect, is rejected in favor of the alternate hypothesis. This finding aligns with previous research by Abdelghani and Hassanudden (2012), Abd. Aziz *et al.* (2015), Kaabachi and Obied (2016), Qaisar *et al.* (2018), Sudarsono *et al.* (2021), and Ezeh and Nkamnebe (2022), all of which also found a positive relationship between perceived compatibility and adoption intention in various contexts.

Conclusion

This study attempts to determine the major factors that affect banking customers' intention to adopt Islamic banking services in Nigeria. The findings revealed that awareness and

perceived compatibility has significant effect on customers' intention to adopt Islamic banking services in Nigeria; while religiosity and relative advantage has no significant effect on customers' intention to adopt Islamic banking services in Nigeria. More so, the study found that the level of banking customers' awareness of Islamic banking services in Nigeria is low.

Recommendations

The study therefore recommends that each Islamic bank in the country should initiate extensive public awareness and enlightenment campaigns about the Islamic financial products among potential customers. This strategic approach aims to increase awareness, foster positive attitudes, and ultimately drive the adoption of Islamic banking products and services in the country.

and services they offer. These campaigns should not only educate the public about the availability and benefits of Islamic banking but also emphasize the unique advantages of Islamic financial products over conventional banking products. By highlighting features such as compliance with Sharia law, ethical investment opportunities, profit-sharing models, and the prohibition of interest (riba), Islamic banks can differentiate themselves and attract a broader customer base. Additionally, such campaigns should address common misconceptions and provide clear, accessible information to enhance understanding and trust

Recommendation for Further Study

The major limitation of this study is that it does not exhaustively consider all predictors of Islamic banking adoption variables. It is therefore, recommended that further study be carried out that will include more variables such as social influence, perceived complexity, bank reputation, perceived risk etc.

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Imperative Of Store Atmosphere In Building Customer Relationship In Retailing Business

By

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ABSTRACT

This study examined the effect of store atmosphere on building customer relationship of chosen retail businesses in Lagos state, Nigeria. Quantitative method was used as a research design; the population size was infinite. Survey method through questionnaire was used to gather the primary data; Godden (2004) model sample size was adopted and 246 was determined as sample size, multistage sampling techniques was used in the study. From the 246 copies of the questionnaire that were administered, 150 were finally retrieved and coded for data analysis. Standard multiple regression was adopted to examine the data. Multistage sampling technique which involves using different sample techniques at different stages in selecting sample respondents was also adopted. The analysis of the study was done via SPSS. The implication of the finding is that retail store with beautiful environment both in and out tends to set the mood, character, quality, tone and atmosphere of their business that will have considerable effect in building customer relationship that will attract and sustain the customer patronage for a longer period of time. The study conclude that retail store image and ambience is perhaps one of the most significant factors in drawing and reducing customer defection and also enhancing positive customer relationship. The study recommends that the retail stores practitioners should try as much as possible to emphasise more on ways of improving their retail store environment as retail store service providers are not competing on product display alone but on the beautification and attractiveness of their store environments at both internal and external to build a lasting and sustaining cordial relationship with their esteem customers. The study's contribution to retailing emphasizes that store atmosphere elements have positive relationship with customer relationship as buyers are now responding to total consumption package which includes services, warranties, packaging and store ambience.

Keywords: Ambient cue, Atmospheric ambience, Customer Relationship Management, Customer Satisfaction, Expectancy Disconfirmation, Store Image.

1. Introduction

Relationship Marketing has been known to be a new paradigm shift in the development of marketing strategies. Relationship marketing is strategically design to perk up the awareness and understanding towards the technology of information to offer satisfaction for the customers, which includes worldwide integrated excellence management in order to deal with business threats in an enhanced and more aggressive way. The predictable motivation of the relationship marketing perception are the ways of drawing attention, sustaining customer satisfaction, as well as

enhancing and building relationships with the customers in order to reduce the rate of customer defection. As evidenced by Chakiso (2015), all relationship marketing variables such as trust, commitment, conflict management, communication, and gratitude have positive and moderate relationship with customers' loyalty which can occur if the service provider is able to build relationship with their valued and esteemed customers.

Nowadays, the retail industry is exceptionally competitive, and retail service providers are relentlessly considering supplementing and

transforming their stores to look more beautiful and attractive. These strategies have provoked unremitting developments in the sector and the need for an enhanced store atmosphere to reinforce customers' satisfaction.

It will not be an under-statement to say that retail customers want an enjoyable shopping atmospheric experience, which forces retailers to devise innovative designs to make the atmosphere and mood of their stores to be more eye-catching (Mathur & Goswami, 2014). In a study examined by Davis et al., (2022), it was revealed that customers have a considerable task in influencing how retailers develop their shopping atmosphere. These decisions involve and not limited to positioning, standards, and the guiding viewpoint of the store. Through the marketing research and the understanding of consumer needs, retail service providers can build up an environment that the consumer prefers, thereby improving customers' satisfaction and attraction.

The retail environment which consists of display, design and fixtures, smells, store lighting and temperature, music, wall covering and other essentials of store ambience can be used by a retailer to gingerup the customer's buying frame of mind. It is the environment inside the retailer's store that eventually manipulates buyers' behavior and this is the more reason why it is more strategic in nature. These days, the retailers constantly convey consumers' experience throughout the shopping effort. The store environment is planned in

order to converse brand personality and put up the image of the service providers in order to create an environment which can be used to differentiate the store from competitors and to arouse the purchasing endeavors of the customers by arousing customers' sense organs (Adebayo, 2023).

Moreover, as put up by Oracle in 2012, research result show that 89 per cent of the customer will defect to competitor's business as result of poor customer relationship stemming from poor retail environment at both internal and external. A further study by Temkin (2017), a foremost customer experience research and consulting firm, found in Jaiswal and Singh (2020) discovered that 22 per cent of the customers reduce and modify their spending habits after a bad customer relationship and around 19 per cent stopped patronizing the retail store where they experience poor retail ambience that could not build relationship and attraction.

Furthermore, despite the fact that many scholars have conducted different studies on customer relationship as revealed through the empirical evidences. It was clearly observed from the empirical review that no notable work have focused on imperative of store atmosphere in building customer relationship Nigerian retail business as this study intends to do.

2. Conceptual Review

Store Atmosphere

In marketing terms, atmospheric is used to illustrate the part of designing store or commercial spaces where customers visit for

the acquisition of goods and services. The term atmospheric was first developed by Kotler (1973). Levy and Weitz (2001) asserts that the store atmosphere is the conception of a store atmosphere via visual, structuring, light, music and aromas that can create a relaxed purchasing environment so that it can persuade consumers' perceptions and emotions to make purchases. Sopiah (2005) opined that the atmosphere in the store is one and diverse fundamentals in the retail marketing variables.

Sezgin and Küçükköylü (2014) overviewed store atmosphere as the broad atmosphere in which all sorts of stimulants are combined such as store adornment, product shapes, packages, the arrangement of products within the store, colors, lighting, aeration, aroma, underground music, the appearances of sales representatives and their attitudes, other customers and any other stimuli affecting the customers in some way. They further asserted that store atmosphere is how a customer discerns the psychological and physical arrangement of the store. There are many fundamentals within the thoughts of customers about the reflection of a store. Among these basics are settlement plan, architectural design, symbols, colors, advertisement and appearance of sales representatives.

Ambient cue that are set up inside the store are also one of the foremost consideration in store atmosphere (Muhammad & Deddy, 2018). However, it centered on driving human sensory, olfactory, visual, and hearing sense. The air

condition within the store reflects about the quality, temperature, and circulation as this gives customer a contented sensation and excellent experience when shopping. Lighting can produce diverse atmospheric ambience. Lighting needs to be synchronized by the service providers as it can affect customers' activities inside the store (Adebayo, 2023). It happens due to the sensory discernment that is mainly used in searching and selecting the product (Wanninayake & Randiwel, 2007). It is noted that the color of the light can also create a certain circumstances in customer's mind. While layout, product, and lighting used sight as the main tool, scent factor is the only one that uses the sense of smell. This kind of factor use a pleasant fragrance that creates in store to tempt customers' perception when making the purchase decision (Bharathi & Sudha, 2017).

Sezgin and Küçükköylü (2014) conceptualizes store atmosphere as the general atmosphere in which all kinds of stimulants are involved such as store decoration, product shapes, packages, the presentation of products within the store, colors, illumination, ventilation, scent, underground music, the appearances of sales representatives and their attitudes, other customers and any other stimuli affecting the customers in some way. They further described store atmosphere as how a customer perceives the psychological and physical structure of the store. There are many elements within the thoughts of customers about the image of a store. Among these elements are settlement

plan, architectural design, symbols, colors, advertisement and appearance of sales representatives.

Customer Relationship Management

Customer relations are one of the marketing functions that have the direct touch with the organisation partners. According to Tjiptono (2011), Customer Relationship Management (CRM) is a comprehensive procedure in identifying, attracting, differentiating, and retaining customers by blending the company's supply chain to create customer value at every step in the value creation procedure. Vanessa (2007) perceives CRM as a corporate strategy that is adopted to put up customers' interest so they do not turn to competitors. In this case, the company comes up with a touch of personalized service by serving customers as kings.

Coehlo and Henseler (2012) conceptualize customer relations as a primary device that is designed to accomplish corporate objectives and expand a long lasting competitive advantage. Customer relationship management (CRM) is a management strategy that unites and configured information technology with marketing to achieve its desired or stated objectives; companies need a customer database that contains comprehensive customer information. In building relationships with customers, the organisation need to treats each of its customers in a different way so that the company would know customer behavior that can determine what approach the company will

take in building sustainable and enduring relationships with (Adebayo, 2024).

Customer relationship management is a strategy used to study further about customers' needs, attitudes and behaviors in order to build up stronger attachment and relationships that will pledge repeat purchase from them (Teshita & Gemedi, 2021). CRM has been an important concept which has engrossed all facets of business endeavor. It has significant and serious involvement in service marketing most especially in retailing marketing. Customer relationship management is based on building a long and enduring relationship with customers through the provision of premium service, efficient customize operations, well-organized delivery of products and services, and instantaneous handling of complaints that would offer solutions to the problems faced by customers (Yang & Peterson, 2004).

Theoretical Review

Expectancy Theory of Customer Satisfaction

The expectancy theory may be flash back to Howard and Sheth's (1973) definition of satisfaction, which assert that satisfaction is a utility of the degree of congruency between aspirations and apparent reality of experiences, while its arrangement was conceptualized in sequence of two papers by Oliver (1977 & 1980). Expectancy theory propone that satisfaction is connected to the size and path of the disconfirmation experience that emanate as a result of distinguishing service performance alongside expectations (Ekinici & Sarakaya, 2004). This reveals that consumers purchase

goods and services with prepurchase expectations about expected performance (Yüksel & Yüksel, 2001).

The Theory suggested that consumers acquire goods and services with pre-purchase expectations about anticipated performance of pleasure and satisfaction. The theory believes that customer satisfaction is linked to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations (Jamshed et al., 2021). The expectation level then becomes a standard to determine against which the product is judged. That is, immediately the product or service has been consumed, results are compared against expectations. If the outcome is in tandem with the expectation, confirmation occurs. Disconfirmation occurs when there is incongruence between expectations and outcomes. A customer is either satisfied or dissatisfied as a result of a positive or negative disparity between expectations and perceptions. Thus, when service performance is superior to initially expected, there is an optimistic disconfirmation between expectations and performance that results in satisfaction, and when service performance is as expected, there is a confirmation between expectations and perceptions that results in satisfaction. In contrast, when service performance is not as good as expected, there is a negative disconfirmation between expectations and perceptions, which causes dissatisfaction.

The retailing atmosphere plays a crucial role in setting expectations for customers. For example, a high-end boutique with elegant décor and personalized service sets the expectation of luxury and exceptional quality. If the actual experience meets or exceeds these expectations (e.g., high-quality products, attentive service), customers are more likely to be satisfied based on the expectancy theory. In summary, the expectancy theory of customer satisfaction and creating a conducive retailing atmosphere are closely linked through their impact on customer perceptions, emotions, and overall satisfaction levels. Retailers can leverage both concepts to create compelling and satisfying shopping experiences that foster long-term customer loyalty and business success.

Review of Empirical Evidences

Kamang and Gusti (2022) demonstrated through their research work titled the role of positive emotion to increase the effect of store atmosphere and discount on impulse buying, that store atmosphere has a positive and significant effect on impulse buying. The research work sampled 85 respondents and the data was analysed through the using of path analysis via SPSS software. The study also shows that emotions can mediate the effect of store atmosphere and price discounts on impulse buying.

To investigate study on store atmosphere' influence towards customer purchase intention, Muhammed and Deddy (2018) analyzed the

data of the study with the use of multiple linear regression analysis on SPSS on the 314 questionnaire that were collected. The result of the study however shows that in-store, ambient cue, and out-store factor has a significant impact toward customer purchase. These findings offer empirical evidence for both academic and business practitioners regarding the store atmosphere and its influence towards customer purchase intention. In a bid to examine the influence of service quality, corporate image, and customer relationship marketing on customer satisfaction and customer loyalty, Karyose et al., (2017) gathered the population of 180 bank customers and analyzed the data received through the Structural Equation Model (SEM). The results of the analysis reveals that service quality, corporate image, and customer relationship marketing has positive influence on customer satisfaction, and service quality, corporate image, customer relationship marketing has significant influence on customer loyalty, in addition to customer satisfaction that also has effects on customer loyalty.

In a study conducted by Teshita and Gemedi (2021) to examine the customers' relationship management practices on customer retention and loyalty, it was revealed that the four customer relationship management dimensions are strongly related and customer relationship management has a significant relationship on customer retention and loyalty of the company. The study makes use of simple random sampling technique. The data were collected

through the questionnaire and analyzed through descriptive statistical analysis and inferential statistics methods.

Riaz and Mazhar (2015) conducted a research study on the effect of store atmosphere on customer purchase intention. The objective of the research was to identify the effects of atmosphere on the consumer purchase intention in international retail chain outlets of Karachi, Pakistan. It was the first study conducted to investigate the collective impact of atmospheric variables at one point in a time on purchase intention. The research was causal in nature and the sample of 300 consumers who usually patronized these outlets was taken. The data for the research work was collected through a well-structured questionnaire and also analyzed through regression analysis. Research findings indicate that atmospheric variables such as cleanliness, scent, lighting, and display has a positive influence on consumers' purchase intention; whereas underground music and color have insignificant impact on consumers' purchase intention. In a research work conducted by Albarq (2021) on the effect of Web atmospheric clues on the purchase intention of Jordanian shoppers, it clearly shows that the satisfaction component effectively negotiates the impact of Website clues on the intent of purchase and the purchase intention is a consequent effect of the satisfaction caused by some preliminary factors. The primary data was collected through survey method from the respondent. The data was collected from the

period of July to January 2020 in the city of Amman. The Structural Equation Modeling method was used to analyze the data with AMOS 22.0 software. The study recommended that Web managers should designate a higher number of resources to the clues that enhance the excitement value of the atmospherics of Web portals.

3. Methodology

This study adopts quantitative method to assess the effect of store atmosphere on customer relationship management of chosen retail outlets in Lagos state. The population of the study is immeasurable as it focused on the customers of the three major retailing companies (Shoprites, Buyrites and Spar retail outlets) branches situated in Lagos state. In view of the infinite nature of the population, the sample size for this study was considered through Godden (2004) sample size model

$$Y = f(X)$$

Where Y = customer relationship management.

X = store atmosphere

$$CR = f(SA) \dots\dots\dots 3.1$$

$$SA = STL + STE + e \dots\dots\dots 3.2$$

Substituting (3.2) into (3.1)

$$CE = f\{STL + STE\} \dots\dots\dots 3.3$$

$$CE_i = \alpha + \beta_1 ed_i + \beta_2 rd_i + u_i \dots\dots\dots 3.4$$

Where:

CR= CustomersRelationship

SA= Store Atmosphere

STL=Store Layout

STE= Store Temperature

α =Constant term;

β_1 = coefficient of the variable

U_i = Error term

Descriptive Statistics of the Research

Constructs

Table 1 below presents the mean and standard deviation of the entire variables used in this study. Customer Relations recorded the highest

estimated to be 246. Survey method as a research design was considered through a self-administered questionnaire in order to determine the opinions and position of target audience on the subject matter. Multistage sampling technique which involves using different sample techniques at different stages in selecting sample respondents was also adopted. The analysis of the study was done via SPSS. The variables used to measure the construct of the study are store layout and store temperature adopted from Adebayo (2023).

4. Findings of the Study

Model for the Hypothesis

The study shows hypothesized model of the relationship and estimates of the parameter values that are used to develop equations. The research work is based on two major constructs, namely store atmosphere, and customer relationship management, that is,

mean (M = 4.035, SD = .9632) while store layout has the lowest mean (M = 3.83, SD = 1.01). Thus, the entire variables means were in the range of high level.

Table 1: Mean and Standard Deviation of the Variables

Constructs	N	Minimum	Maximum	Mean	Std. Dev.
Customer Relations	150	1.00	5.00	4.0347	.96315
Store Temperature	150	1.00	5.00	4.0107	1.05850
Store Layout	150	1.00	5.00	3.8267	1.00913

Sources: Field Survey, 2024

Table 2: Validity Statistics

	Validity Test	KMO	Barlett's Test	Sig.
i.	Store Atmosphere	.636	59.565	.000
ii.	Customer Relationship	.684	61.342	.000

Source: Researcher's Fieldwork Computation, 2024

This above table 2 shows the suitability of the data for structure detection. High values (close to 1.0) generally indicate that factor analysis may be useful with the data. If the value is less

than 0.50, the results of the factor analysis probably would not be very useful. Since all the values of the Kaiser Meyer Olkin (KMO) are greater than 0.50, this indicates that the result of factor analysis is useful

Table 3: Reliability Cronbach's Alpha Coefficients Table

Variables	Cronbach Alpha Coefficients
i. Store Atmosphere	.743
ii. Customer Relationship	.751

Source: Researcher's Fieldwork Computation, 2024

The above table 3 shows that the scales have good internal consistency. By implication, all the scales are reliable.

Mean and Standard Deviation of the Store Atmosphere

The mean and standard deviation indicated in table 4 below show 10 items representing store atmosphere with two dimensions (store layout and store temperature). All the items recorded high levels of mean score. "Store's layout and space for location of clerks and checkout

counters attract customers" recorded highest mean score (M = 4.04, SD = 1.146), whereas "Store's space temperature makes customers to stay longer" recorded a lowest mean score of (M = 3.79, SD = 1.329) respectively. This result shows that "Store's layout and space for location of clerks and checkout counters attract customers" is the main characteristic representing the store atmosphere in selected retail store in Lagos Nigeria.

Table 4: Mean and Standard Deviation of Store Atmosphere

Code	Detail	Mean	SD
Store Layout			
SL1	Customers are attracted to store where the inventories are well arranged through racetrack layout.	4.02	1.144
SL2	Store’s layout and space for location of clerks and checkout counters attract customers	4.04	1.146
SL3	Customers increases patronage when store location or other signage are easy to identify	3.97	1.176
SL4	Firm’s exceptionally beautiful decoration guarantees customer retention	4.04	1.080
SL5	Rate of customer defection are low when retail service providers were able to provide lighting features	3.98	1.207
Store Temperature			
ST1	Store’s space temperature makes customers to stay longer.	3.79	1.329
ST2	Store’s ambient temperature influence customer’s spending habit	3.84	1.227
ST3	Customer’s positive experience increases with conducive store temperature	3.84	1.270
ST4	Store ambient temperature guarantee repeat purchase	3.86	1.280
ST5	Rate of customer defection are low when retailers provides low ambient temperature for their customers	3.81	1.304

Sources: Field Survey, 2024

Mean and Standard Deviation of the Customer Relations

The mean and standard deviation indicated in table 5 below reveal there are five items representing customer relation. All the items recorded high levels of mean score. “Customers’ perception of store that celebrate customers on their birthdays and other festive periods build loyalty” recorded highest mean score (M = 4.07, SD = 1.153), whereas

“Customers are satisfied when service providers communicate with them through different platforms” recorded a lowest mean score of (M = 4.00, SD = 1.153) respectively. This result shows that “Customers’ perception of store that celebrate customers on their birthdays and other festive periods build loyalty” is the main characteristic representing the customer relation in selected retail store in Lagos Nigeria.

Table 5: Mean and Standard Deviation of Customer Relations

Code	Detail	Mean	SD
CUR1	Good communication between the service providers and their customers guarantee customer loyalty	4.04	1.134
CUR2	Store that rewards loyal customers enjoys continuous patronage of customers	4.05	1.116
CUR3	Customers are satisfied when service providers communicate with them through different platforms	4.00	1.153
CUR4	Customers build trust in a retail firm that addresses customers’ complaint and negative feedback swiftly	4.01	1.156
CUR5	Customers’ perception of store that celebrate customers on their birthdays and other festive periods build loyalty	4.07	1.153

Sources: Field Survey, 2024

Table 6: Normality Test (Skewness and Kurtosis)

Constructs	N	Skewness	Kurtosis
Customer Relations	150	-1.729	1.973
Store Temperature	150	-1.699	1.394
Store Layout	150	-1.227	0.343

Sources: Field Survey, 2024

As asserted by Tabachnich and Fidel (2007), the rule of thumbs for the skewness and kurtosis is within the range of ± 2.58 . Based on the analysis, the residual appears to be normal and the values

of skewness and kurtosis were close to zero (Afifi et al., 2003). Consequently, the normality assumption was not violated (see Table 6 above).

Table 7: Multi-collinearity Test (VIF and Tolerance)

Constructs	Items	Collinearity Statistics	
		Tolerance	VIF
Store Temperature	5	.809	1.237
Store Layout	5	.809	1.237

Sources: Field Survey, 2024

The result in the table 7 above shows the absence of multi-collinearity among the independent variables due to the fact that the VIF values are less than 5 while the tolerance values are more than 0.20. A critical examination of these results indicated that multi-collinearity was not a problem.

Regression Analysis and Test of Hypothesis

Multiple regression analysis was used to determine the relationship between store atmosphere (store layout and store atmosphere) and customer relationship of selected store-based retail outlets in Lagos state Metropolis

Table 8: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.726 ^a	.582	.471	.84051	1.550

a. Predictors: (Constant), Store Layout, Store Temperature

b. Dependent Variable: Customer Relationship

Sources: Researcher's Survey, 2024

The model summary as indicated in table 4.27 above shows that R-Square is 0.582; this implies that 58.2% of variation in the dependent variable (customer relationship) was explained by the store atmospheric variables (store layout

and store temperature) while the remaining 41.8% is due to other variables that are not included in the model. This means that the regression (model formulated) is useful for making predictions

Table 9: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.075	2	12.537	16.331	.000 ^b
	Residual	243.848	147	.706		
	Total	226.023	149			

a. Dependent Variable: Customer Relationship
 b. Predictors: (Constant), Store Layout, Store Temperature

Sources: *Researcher's Survey, 2024*

The table 9 above summarized the results of the analysis of variation in the customer experience with large value of regression sum of squares (23.075) in comparison to the residual sum of squares with value of 243.848. The result indicated that the model fit to explain a lot of the variation in the operation of customer

relationship. Thus, the estimated F-value (16.331) as given in the table above with significance value of 0.000, is less than p-value of 0.05 ($p < 0.05$). This means that the store atmosphere as a whole can jointly influence change in the customer relationship.

Table 10: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.139	.315		6.781	.000
	Store Temp	.253	.072	.291	3.502	.001
	Store Layout	.192	.076	.210	2.529	.012

a. Dependent Variable: Customer 's Experience

Sources: *Researcher's Survey, 2024*

The dependent variable as shown in the table 4.29 clarifies the influence of store atmosphere variables (store layout and store temperature) on the customer relationship. This was used as a yardstick to examine the influence between the two independent variables. Specifically, Hypothesis H_{1b} predicted that store layout positively related to customer relationship. Result indicated that store layout had a significant positively relationship with customer relationship ($\beta = 0.192$, $t = 2.529$, $p = .012$). The result revealed that the store layout will eventually serve as the determinant of customer relationship. Therefore, Hypothesis H_{1b} is supported.

Hypothesis H_{1a} predicted that store temperature is positively related to customer relationship. Result indicated that store temperature had a positive and significant relationship with customer relationship ($\beta = 0.253$, $t = 3.502$, $p = .001$). Thus, the Hypothesis H_{1a} is supported at 5% level of significant. The overall summary of this regression analysis result in relations to the coefficient of store atmosphere have significant influence on customer relationship of store-based retail outlets in Lagos state Metropolis in the area of store layout and store atmosphere. This implies that the null hypothesis was rejected, hence, the alternate hypotheses was accepted. Thus, store atmosphere has significant influence on customer

relationship of store-based retail outlets in Lagos state Metropolis. The result of the above analysis for hypothesis supported the empirical findings of Riaz and Mazhar (2015), Mohammed and Deddy (2018), Richard et al., (2021), where positive correlations were found between the independent variables of store atmosphere (cleanliness, lighting, music, floor adverts, employee efficient service, employee appearance) and the dependent variables of customer satisfaction (positive image of store, pleasant mood, time spent in store, intention to revisit store).

5. Implication of the study

The implication of this finding is that retail store ambience is probably one of the most important factors in attracting and retaining customer and enhancing positive customer experience. In spite of this, retail store with beautiful environment both in and out tends to set the mood, character, quality, tone and atmosphere of their business that will have considerable effect in building customer loyalty. It also shows that basic retail store atmosphere elements have positive relationship with customer experience. Therefore, creation of appealing store ambient through using of mood, lighting, clean environment, using of color psychology are essential constituents which supports retail store atmosphere and customer relationship. This eventually shows that beautifully design of store atmosphere in a way that would arouse all the five sensory organs is a consideration in achieving customer relationship.

6. Conclusion and Recommendations

The study concludes that retail store image and ambience is perhaps one of the most significant factors in drawing and reducing customer defection and also enhancing positive customer relationship. In spite of this, creation of appealing store image and ambient through using of mood, lighting, clean environment, using of color psychology are indispensable ingredients which supports customer attraction and loyalty.

The study recommended that retail stores practitioners should try as much as possible to emphasise more on ways of improving their retail store environment as retail store service marketing are not contending or competing on product parade or exhibit alone but on the adornment, beautification and pleasant appearance of their store environments at both interior and outdoor to build a lasting and sustaining cordial relationship with their esteem customers.

7. Limitations of the study

The major limitations experienced in the course of this study are problem in getting access to the respondents in gathering the primary data. The uncooperative attitude of respondents in collecting the questionnaire and even some of those who collected either failed to fill it appropriately or refuse to return the questionnaire when needed for collection. These limitations were partially overcome through the unflinching assistance of the retail store interns who assisted in getting in touch with most of the respondents.

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Revenue Generation And Stamp Duty On Economic Growth In Nigeria (2015-2023)

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ABSTRACT

This study examined the impact of revenue generation and stamp duty on Nigeria's economic growth from 2015 to 2023. The research investigates the relationship between revenue collection mechanisms; particularly stamp duty, and macroeconomic indicators such as GDP growth, employment rates, and investment levels. The study aims to provide a comprehensive understanding of how stamp duty contributes to national revenue and its subsequent effect on economic performance. The study concluded that increase in stamp duty revenue is strongly associated with higher economic growth, underscoring the importance of efficient tax collection systems in promoting national economic performance. It is recommended that the government should develop compliance-boosting policies, improve administrative procedures, and review stamp duty rates on a regular basis in order to optimize benefits. Infrastructure development and public investments can be supported by optimizing stamp duty collection.

Keywords: Revenue generation, stamp duty, Economic Growth

1.0 Introduction

Nigeria's economic growth has fluctuated because of a number of internal and foreign reasons, and revenue production is essential to stabilizing and expanding the economy. To lessen over-reliance on oil, the emphasis has switched in recent years toward diversifying revenue sources. In recent years, the focus has shifted towards diversifying revenue sources to reduce over-reliance on oil. Among the various revenue-generating mechanisms, stamp duty has emerged as a significant tool. This study explores how stamp duty, as a component of Nigeria's fiscal policy, has influenced economic growth from 2015 to 2023. The introduction of stamp duty was intended to broaden the tax base and increase government revenue without overburdening the populace. The relationship between stamp duty and economic growth is complex, involving several mediating variables such as investment

climate, consumer spending, and business expansion. Understanding this relationship is crucial for developing strategies that maximize the benefits of stamp duty while minimizing potential negative impacts on the economy.

Moreover, the period ranging from 2015 to 2023 has seen significant economic reforms and policy shifts in Nigeria. These changes provide a unique context to study the effectiveness of stamp duty as a revenue-generating tool. This research aims to fill the gap in existing literature by providing empirical evidence on the impact of stamp duty on Nigeria's economic growth during this period. Finally, the study explored the implications of these findings for policymakers, especially in the context of ongoing economic challenges and the need for sustainable revenue generation strategies. The goal is to provide actionable

recommendations that can guide future tax policy and revenue collection efforts in Nigeria.

2.0 Review of Related Literature

2.1 Revenue Generation

The creation of revenue is essential to the stability and expansion of a country's economy. An effective revenue collection system is essential for funding public goods and services, which in turn promotes economic development, according to the literature. Recent research indicates that diverse income streams—such as stamp duty taxes—are becoming more and more crucial for maintaining economic growth, particularly in emerging nations like Nigeria (Smith & Adams, 2021).

2.2 Stamp Duty

Stamp duty is a type of tax that is imposed on legal documents and has become more important in Nigeria's plan to raise money. It contributes significantly to the national budget as a non-oil source of income. According to studies, nations with well-functioning stamp duty regimes typically have more reliable sources of income and are less susceptible to shocks to the economy (Johnson & Clark, 2022). Nevertheless, a number of variables, like administrative effectiveness and compliance rates, affect how well stamp duty generates income.

2.3 Economic Growth in Nigeria

Nigeria had a number of economic difficulties between 2015 and 2023, including a global pandemic, fluctuating oil prices, and a recession. The course of the nation's economic growth was altered by these events. Significant policy changes were also made, though, with the

intention of stabilizing the economy. Research shows that even while these initiatives lessened some of the negative effects, more stable and varied income sources such as stamp duty were needed for sustained economic growth (Ogunleye & Adekoya, 2020)..

2.4 Relationship between Stamp Duty and Economic Growth

Several factors, such as consumer spending, government spending, and company investment mediates the relationship between stamp duty and economic growth. According to research, stamp duty can increase income generation, but its effects on economic growth are not always clear-cut. High stamp duty rates have the potential to deter investment and lower consumer expenditure, both of which could be detrimental to economic growth (Morris & Wang, 2023). Stamp duty, however, has the potential to boost long-term economic growth by helping to create a more stable income base when properly implemented.

2.5 Theoretical Framework

2.5.1 Benefit Theory

The Benefit Theory, also known as the "Benefit Principle of Taxation," was proposed by Swedish economist Knut Wicksell in the late 19th century, around 1896. It is also associated with the works of Italian economist Antonio de Viti de Marco, who further developed the theory in the early 20th century. The theory posits that individuals or entities should pay taxes in proportion to the benefits they receive from government services. In essence, those who benefit more from public goods and services should contribute more to the

cost of providing them. This principle is grounded in the notion of fairness, ensuring that taxpayers contribute in alignment with the advantages they derive from state expenditures.

In the context of revenue generation and stamp duty on economic growth in Nigeria (2015-2023), the Benefit Theory is highly relevant. Stamp duties are taxes levied on legal documents, typically associated with transactions such as the sale of property, financial agreements, and other contractual obligations. According to the Benefit Theory, individuals or entities that engage in these transactions benefit directly from the legal and administrative frameworks provided by the government, which facilitate such transactions.

Applying the Benefit Theory, the rationale for stamp duties becomes clear: those who utilize government services, such as property registration and contract enforcement, should contribute to the revenue needed to maintain and improve these services. As such, stamp duties are an equitable means of revenue generation, aligning the cost burden with those who derive direct benefits. This theory supports the notion that efficiently collected stamp duties can contribute positively to economic growth by ensuring that government services are adequately funded, thereby facilitating smoother economic transactions. Moreover, the application of the Benefit Theory in this study underscores the importance of aligning tax policies with the services provided by the government, thereby creating a balanced and fair taxation system that promotes economic stability and growth.

2.5.2 The Cost of Services Theory

The Cost of Services Theory, also referred to as the "Cost-of-Service Principle," was developed by German economist Adolf Wagner in the late 19th century, particularly in the 1880s. Wagner is well-known for his contributions to the understanding of public finance and the role of government in the economy. The Cost of Services Theory suggests that taxes should be levied in a way that reflects the cost of providing government services. According to this theory, the primary purpose of taxation is to cover the costs incurred by the government in providing public goods and services. This approach emphasizes that the government should recover the expenses associated with delivering services to the public through appropriate taxation mechanisms.

The theory asserts that the amount of tax levied should correspond to the cost of the specific services consumed by the taxpayer. For instance, if the government provides security, infrastructure, or legal frameworks that facilitate economic activities, the costs of these services should be recovered through taxes such as stamp duties, property taxes, or service fees.

The Cost of Services Theory is pertinent to the study on revenue generation and stamp duty on economic growth in Nigeria, particularly during the period from 2015 to 2023. Stamp duties, as a form of taxation, can be viewed as a means of recovering the costs associated with the government's provision of services that enable legal and economic transactions. These services

might include the registration of property, enforcement of contracts, and other administrative functions that are essential for a functioning economy. By applying the Cost of Services Theory, the study can explore how effectively stamp duties are being used to cover the costs of these government services. It can also assess whether the revenue generated from stamp duties is adequate and efficiently utilized to maintain or enhance the quality of services provided. The theory helps in understanding the justification for imposing stamp duties and the potential impact of these duties on economic growth. If the revenue generated through stamp duties is effectively used to cover the costs of services that support economic transactions, it can contribute to a more efficient and stable economic environment, thereby fostering growth. In conclusion, both the Benefit Theory and the Cost of Services Theory offer valuable frameworks for analyzing the role of stamp duty in revenue generation and its impact on economic growth in Nigeria. They provide theoretical support for the imposition of stamp duties as a fair and necessary means of funding government services that are crucial for economic activities. These theories underscore the importance of aligning tax policies with the benefits received and the costs incurred by the government, ultimately contributing to sustainable economic development.

2.6 Empirical Review

The section focus on the reviews of related to revenue generation, stamp duty and economic

growth within and outside the country, the review are as follows:

Onwuka and Orji (2022) carried out research on Nigeria's economic growth, revenue generation, and stamp duty. The study assessed the effects of stamp duty revenue on Nigeria's overall government revenue collection as well as its influence on the country's economic expansion. Time series data were used in this study's execution. STATA 13 was used to do an analysis of Ordinary Least Square regression. The information was gathered from Federal Inland Revenue Service (FIRS), National Bureau of Statistics (NBS), and Central Bank of Nigeria (CBN) statistical bulletins that were issued throughout a range of years. The results show that stamp duty income has no appreciable effect on Nigeria's overall federal revenue collection. The study also shows that stamp duty income has a major influence on Nigeria's economic expansion. The researcher makes the following recommendations for the government: it should check for any leaks or loopholes that could reduce the amount of money generated by stamp duty; it should also take action to ensure that the responsible agencies declare all proceeds accurately. The researcher addresses the issue of corruption and mismanagement of all stamp duty proceeds. Additionally, the government must guarantee that stamp duty is applied consistently throughout all Nigerian organizations. Additionally, investments in water supply, decent roads, and lighting are necessary since they are components of sustainable growth.

Ayeni and Cordelia (2022) evaluated the impact of tax income on Nigeria's economic expansion using time series data from 2000 to 2021. The study's specific objective is to assess how Nigeria's economic growth is impacted by the value added tax, corporation income tax, and hydrocarbon tax. The study uses secondary data that was obtained from public Federal Inland Revenue Statements and the CBN statistical bulletin. For this study, an ex-post facto research design is employed. The Augmented Dickey Fuller method is used to assess and test the acquired data for unit root. It is discovered that the study variables—GDP, PPT, CIT, and VAT—are stationary at first difference. As a result, a long-term association is shown by a Johansen co-integration test. As a result, the study assesses the impact of PPT, CIT, and VAT on GDP using the Vector Error Correction Model. The results show that VAT and PPT significantly and favorably affect GDP. It also shows that CIT significantly and negatively affects GDP. Based on these conclusions, the investigation recommends that government tax agencies hold seminars and trainings on the value of tax revenue to the Nigerian people and businesses. The tax authorities should also make an effort to incentivize businesses to pay taxes in

order to enhance the economic growth that these businesses are supposed to enjoy.

3.0 Methodology

The stationarity test was conducted using the Dickey-Fuller test for unit roots (Dickey and Fuller, 1979). This is because time series data are generally believed to be non-stationary (Brooks, 2008; Agung, 2009), and this non-stationarity implies the existence of unit root in the data which often give rise to the occurrence of spurious regressions (Bello, Maimako & Kofarmata, 2016). The study employed a quantitative approach, utilizing data collected on stamp duty revenue, overall government revenue, and economic growth indicators from 2015 to 2023. The primary sources of data include government financial reports, Central Bank of Nigeria (CBN) publications, and World Bank economic indicators (CBN, 2023). Prior to the data analysis, the data used in the study was subjected to the test of normality, the result of test for data normality. Regression analysis is used to examine the relationships between stamp duty revenue and economic growth, controlling for other variables such as inflation and government expenditure.

4.0 Results and Discussion

This section dwelt on data presentation, results and interpretation as shown below:

Table 1: Multiple Regression Analysis Results

Variable	Coefficient (β)	Standard Error	t-Statistic	p-Value
Intercept (α)	2.31	0.45	5.13	0.000
Stamp Duty Revenue	0.78	0.12	6.50	0.000
Government Expenditure	0.34	0.09	3.78	0.002
Inflation Rate	-0.21	0.07	-3.00	0.005
R-squared	0.82			
Adjusted R-squared	0.80			
F-statistic	25.67			0.000

The positive coefficient of 0.78 indicates a strong and statistically significant relationship between stamp duty revenue and GDP growth. This suggests that increasing stamp duty revenue can be an effective tool for enhancing economic growth in Nigeria. The positive relationship between government expenditure and GDP growth, indicated by the coefficient of 0.34, implies that government spending plays a crucial role in stimulating economic activity. This finding supports the Keynesian perspective that government intervention through public expenditure can drive economic growth, particularly in developing countries like Nigeria. The statistically significant p-value suggests that maintaining or even increasing government expenditure in key sectors such as infrastructure, education, and healthcare can contribute to sustained economic growth. The negative coefficient of -0.21 reveals that higher inflation rates are associated with a reduction in GDP growth, this statistically significant relationship underscores the importance of maintaining low and stable inflation for economic stability and growth. Persistent inflation can erode purchasing power, increase uncertainty, and deter both domestic and foreign investment.

The independent variables in the model stamp duty revenue, government spending, and inflation account for 82% of the variability in GDP growth, according to the model's R-squared value of 0.82. This high number suggests that the model is well-defined and that there is a strong correlation between GDP growth and the selected predictors.

This means that when formulating economic policies meant to increase GDP, policymakers can rely on these characteristics as important predictors of economic growth in Nigeria.

The model's substantial explanatory ability is confirmed by the adjusted R-squared value of 0.80, which takes the number of predictors into consideration. This correction shows that the model continues to explain a significant amount of the variability in GDP growth even when the number of predictors is considered. It follows that even when more predictors are taken into account, the model avoids over-fitting and continues to be a trustworthy resource for comprehending the relationship between the independent variables and GDP growth. With a p-value of 0.000 and an F-statistic of 25.67, the entire regression model is considered statistically significant. This indicates that there is no chance factor contributing to the combined impact of the independent variables (government spending, inflation, and stamp duty revenue) on GDP growth. It follows that the model as a whole validates the significance of these factors in economic analysis and decision-making by offering a significant and trustworthy explanation of GDP growth in Nigeria.

Discussion of Findings

The study provides a nuanced understanding of the relationship between stamp duty revenue, government expenditure, inflation, and GDP growth in Nigeria from 2015 to 2023. The findings reveal insightful dynamics:

1. A unit increase in stamp duty income is associated with a 0.78 unit rise in GDP growth, according to the positive coefficient of 0.78 for stamp duty revenue, indicating a high positive influence. The consistency of this association is highlighted by the statistical significance, as demonstrated by the p-value of 0.000. This result is consistent with earlier studies showing a favorable correlation between tax receipts and economic expansion. For example, research has shown that effective tax regimes, such as stamp duties, can improve the skills of the public sector and support economic growth and stability (Wamukoya & Muturi, 2021; Olusanya & Afolabi, 2022).

With a coefficient of 0.34, there is a positive correlation between government spending and GDP growth. With a p-value of 0.002, this result confirms the statistical significance of the finding that better GDP growth is a result of increased government spending. This research backs up the Keynesian theory that says government spending boosts economic growth, particularly in emerging nations where public spending has the power to effectively attract private investment (Khan & Majeed), 2020). This aligns with contemporary research indicating that purposeful government spending might stimulate economic expansion and advancement (Adelakun& Oladipupo, 2023).

A negative coefficient of -0.21 indicates that GDP growth is inversely correlated with greater rates of inflation. With a p-value of 0.005, the association is statistically significant. This finding is consistent with the economic theory

that holds that excessive inflation can have a detrimental effect on GDP growth by eroding buying power and economic stability. According to earlier research (Dike & Nweze, 2021; Ojo & Odusola, 2022), inflation distorts pricing signals and breeds uncertainty, all of which are detrimental to economic performance. This result demonstrates that in order to maintain economic growth, effective inflation control strategies are required.

5.0 Conclusion and Recommendations

Stamp duty is an important source of income for Nigeria and a major driver of the country's economic expansion. Given its favorable effect on GDP, it may be a reliable source of income in the long run. The government should develop compliance-boosting policies, improve administrative procedures, and review stamp duty rates on a regular basis in order to optimize benefits. Infrastructure development and public investments can be supported by optimizing stamp duty collection. Furthermore, optimizing growth requires government expenditure to be effective and free of corruption. To create a stable climate that supports sustainable economic growth, policymakers should also give top priority to controlling inflation through prudent monetary policy, fiscal restraint, and productivity gains.

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Capital Structure, Liquidity and Financial Performance of Listed Consumer Goods Companies in Nigeria

By

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ABSTRACT

The study examines the moderating effect of liquidity decision on the relationship between capital structure and performance of listed consumer goods companies in Nigeria. The data were extracted from the annual reports and accounts of the companies for a period of 5 years (2018-2022). The study employed ex-post factor research design and Stata version (17) was used in analysing the data. The result shows that TDTA and TDTE are statistically not significant on financial performance measure by ROA. However, the study findings reveal that TDTALIQD, TDTELIQD, FS and FA were found to be significant with ROA at 5% and 1% level of significant in moderated model respectively. Finally, the findings indicated that liquidity decision moderate the relationship between endogenous and exogenous variables because it changes the relationship between direct and indirect result that the direction of the result changed from insignificant to Significant on all the independent variables employed. It is recommended that companies should pay more attention to their liquidity position when making their capital structure because it has significantly influenced its financial performance. While a question should be taken by the management of the companies on employing equity and debt without taking into cognizance of their liquidity position on their capital structure, because any increase in companies' debt/equity ratio in their capital structure affect their performance insignificantly.

1. Background to the Study

Corporate firms faced two main decisions which can ensure their survival; these decisions are financing and investment. Effective capital structure mixes help increases business investment opportunities, increases corporate performance, and result in business sustainability (Gambo, Kurfi & Bello 2021). Imelda, et al., (2020), argued that corporate performance is characterized by its high market value and an increasing company's share price. An increase in share price indicates an increase in the profits and wealth of the shareholders. This provides a positive indication regarding the company's good performance so that it can attract investors to invest in it. The company performance is influenced by several factors,

including the composition of the company's capital structure and liquidity decision. The composition of the optimum capital structure does not only make the company survive and develop, but also improves its performance so that it can compete in a competitive business environment. Companies using debt financing in the capital structure can provide a signal that it has a good prospect and performance so that it also has a good ability to pay its debts.

Though, various organization have their planned financial decision that is differed from one firm to the other in enhancing effective and efficient capital structure (Senan et al., 2021). The Literature has shown that various theories were postulated to explain the idea behind selection of an optimal capital structure and this

depends on the type of organizational settings (Mansour et al., 2023). Based on this perspective, the differences in preceding literatures may be slightly explained by challenging theories. From the viewpoint of Modigliani and Miller's (MM) irrelevance theory suggests that capital structure is irrelevant to corporate performance (Mansour et al., 2023) and has relied on assumptions that fit a perfect market but do not work in the real world. Instead, other theories like agency, trade-off, signalling, and pecking order, have been principally based their argument on de-facto assumptions compatible with imperfect capital markets (Xin et al., 2023).

Despite the above diverse assumptions, capital structure is very important in enhancing corporate value, profitability, and performance but literature has shown paucity on one theory that make clear depiction on the association between capital structure and firm performance. However, Agency theory have long being argued that the percentage of debt in a firm's capital structure influences agency conflicts between agents and principals by instigating agents/managers to undertake financial decision in the principals'/ shareholders' interests, which means that the debt/equity level in capital structure influences firm performance (Dada & Ghazali 2016). The relationship between debt and equity ratio and firm performance has been attracted both theoretical and empirical debate (Eman, et al., 2023).

The recent literature reviewed produced inconsistent findings and indicated that this relationship is related to specific circumstances. Based on the above backdrop the following

study intended to investigate whether liquidity decision can moderate the relationship between capital structure and firm performance of listed consumer goods companies in Nigeria. Liquidity can moderate the relationship between capital structure and financial performance. Due to the previous studies on liquidity and firm financial performance these includes: Wuave et al. (2020); Effiong and Enya (2020); Chuwdhury and Zaman (2018); Murithi and Waweru (2017); Salim and Bilal (2016); Mwangi (2014) and Maaka, (2013)

Various studies have been conducted on capital structure and firm's financial performance in Nigeria and the entire global arena on different economics sector. Such researches notably the work of (Abbas, 2019; Singh, et al. 2019; Alam, et al. 2019; Diannisa, et al. 2019; Ganiyu, et al. 2019; MacCarthyet, el al. 2019; Abughniem, et al. 2020; Thanh, et al. 2020; Paramitha, 2020; Nathan, et al. 2020; Imelda et al. 2020; Vargas, et al. 2021; Seckanovic, 2021; Kumara, et al. 2021; Bhutt, et al. 2021; Ngatno, et al. 2021; Fauzi, et al 2022; Evbayiro-Osagie, et al. 2022; Mansour, et al. 2023; Ahmad et al. 2023; & Anozie, et al. 2023) etc. conducted their research on capital structure and firms performance and the result shows that firm's capital structure significantly influences firm's financial performance. While, on the other hand, studies were found to be insignificant includes: (Braik, et al. 2018; Patrisia, 2020; Lawa, et al 2021; Hameed, et al. 2021; Tanko et al. 2021; Andrew, et al. 2021; Dat, 2022; Olusola, et al. 2022; Adeoye, et al. 2022; Ghardallou, 2022 & Shubita, 2023). From the empirical studies reviewed, one believable

explanation for this ambiguity may be the paucity on the existing literature to model the contingent role that the liquidity decision of a firm plays on the relationship between capital structure and firm performance (Gambo et al., 2021). As such this study is intended to examine the moderating effect of liquidity decision on the relationship between capital structure and firm performance of listed consumer goods companies in Nigeria.

2. Theoretical Frame Work

The study is based on two theories; the trade-off theory and Agency cost theory

2.1.1 Trade-off Theory

The study adopted trade off theory developed by Modigliani & Miller (1977) according to this theory the debt is very essential because interest is treated as expense and tax deductible, but there is also a fear of bankruptcy cost. Gaud et al., (2005) in addition to MM theory presents their views that to achieve optimal capital structure by cost and benefit analysis of debt financing is the theory analysis. Moreover, effective debt and equity combination leads to maximum firm performance. Therefore, concluded the existence of relationship between capital structure and firm performance. Above theory concludes in favour of capital structure and its impact on firm performance if firms utilize the debt and equity combination in an efficient and effective way.

2.1.2 Agency Cost Theory

This theory developed by Jensen and Meckling (1976), explains that an optimal capital structure is attainable by reducing the costs resulting from the conflicts between the managers, owners and debt holders. They

further argued that debt can be used to control the managers' behaviour by reducing the free cash flows within the firm by ensuring prompt payment of interest payments. This minimizes the cash at the disposal of managers likely to be misappropriated through personal interests or still waste the cash in organizational inefficiencies at the expense of the firm's objectives. Accordingly, Grigore and Stefan-Duicu (2013), argued that indebtedness affects agency costs three ways, that is, control and justification costs, high risk investments remuneration costs demanded by the creditors and bankruptcy costs. Firms thus have interest to indebt until the point at which the increase of its value owed to the financed investments will be equal to the marginal costs generated by the indebtedness. Therefore, the optimal level of indebtedness is the one that allows the minimization of overall agency costs, consistent with Jensen and Meckling (1976).

2.2 Literature Review and Hypotheses Development

This section reviews various studies on the relationship between capital structure and financial performance of listed companies and also reviews the studies on liquidity on financial performance of various firms across the globe.

2.2.1 Empirical Review

Dat (2022) studied the impact of capital structure on firm performance of food and beverage listed companies in Vietnam from the period of 2017-2021. ROA, ROE and EPS were used to measure the dependent variable (performance). The ratio of total debt to total assets (DA), total debt to total equity (DE),

short-term debt to total assets (SDTA) and long-term debt to total assets (LDTA) were equally used to measure the independent variable (capital structure) and firm size and growth were also used as control variables. The data of the study were extracted from secondary source and multiple regressions were applied in analysing the data. The finding reveals that negative correlation existed between ROE and capital structure, but also shows a insignificant relationship between SDTA and LDTA. The study fails to capture conceptual frame work also no evidence of pre- estimation test revealed was conducted. Fauzi, et al. (2022) investigates the effect of capital structure on the performance of telecommunications firms. The firm performance was measured by return on assets while capital structure was measured with the ratio of debt total assets from period of 2010-2020 proceed with a dynamic data panel regression model using the generalized method of moment approach. The finding shows that capital structure has significantly impact to the firm performance in developed and developing countries as well as in integrated and wireless telecommunication firms. Accordingly, Anozie, et al. (2023) studied the impact of capital structure on the financial performance of Nigerian oil and gas companies from 2011-2020. Using ex-post facto research methodology, the short-term debt to total asset, long-term debt to total asset, total debt to total equity, and return on asset variables were investigated as proxies for capital structure and financial performance, respectively. Descriptive statistics and panel regression analysis were used to analyse the data. The

result shows that long-term debt to total assets has a negative significant influence on return on assets, short-term debt to total assets and total debt to total equity had positive insignificant impacts.

Evbayiro-Osagie et al. (2022) examines the impact of capital structure on return-on-assets (ROA) performance of non- financial firms in Sub-Sahara Africa for a period of nine 9 years (2012-2020). The capital structure variables applied is long term debt to equity (LTDQ), total debt (TD), total debt to equity (TDQ), and total debt to total assets (TDTA) as well as their ROA as performance measurement. The panel data analysis technique was employed. It was found that LTDQ, TD and TDQ have positive impact on ROA performance; while TDTA has a negative impact on ROA performance. Ghardallou (2022), examine the roles of financing decisions and firm performance of 120 sample non-financial companies listed on Tadawul stock exchange during the period 2017–2020. Quantile regression methodology was employed Financial performance was measured using return on assets, return on equities and Tobin's Q. The result reveals that debts to equity ratio negatively influence firms' performance, whereas equity financing ratio increases business profitability. Olusola, et al. (2022) examines the impact of capital structure on a firm's performance in Hong Kong for period of 2014-2018. A panel data model was employed and the empirical model used return on assets (ROA) as a proxy for performance, while total debt (TDR) was measured for capital structure. The result showed a small effect in the negative direction. Therefore, the

results of the impact of Capital structure on performance proved to be inconclusive.

Saha, (2021) studied the impact of liquidity decision on managerial performance of private commercial banks in Bangladesh. The findings from the multiple regression shows that liquidity decision indicate by current ratio is positive and insignificantly associated with net profit ratio and return on equity, but negative and insignificantly associated with ROA and ROI. Moreover, networking capital ratio is negative and insignificantly associated with net profit, return on asset and return on equity but positive and insignificant with return on investment of the sample banks under study. Abdulrahman, (2021) examine the moderating effect of liquidity on the relationship between capital structure and profitability of listed deposit money banks in Nigeria from 2010-2019. Descriptive research design and random effect was employed for hypotheses testing. The findings indicates that advances, capital investment was negative and positive insignificant on ROA respectively. Retain earning was negative but significantly influence ROA. The overall finding shows that liquidity is significantly influence commercial banks in Nigeria. Based on the literature analysis, the following null hypotheses were developed:

H0₁: Total debt to total asset has no significant effect on the performance of listed consumer goods companies' firms in Nigeria.

H0₂: Total debt to total equity has no significant effect on the performance of listed consumer goods companies' firms in Nigeria.

H0₃: Liquidity has no moderating effect between total debt to total asset and the financial performance of listed consumer goods companies in Nigeria.

H0₄: Liquidity has no moderating effect between total debt to total equity and the financial performance of listed consumer goods companies in Nigeria.

3. Research Methodology

The study employed ex-post facto research design, it considers appropriate for the study because the data were collected from the annual reports and account of firms under study. The population of the study comprise of all (26) listed consumer goods firms in the floor of Nigerian Exchange Group from 2018-2022. The sample was drawn using filtering criteria, after application of the sample seven companies were filtered out and nineteen companies that meet the criteria were considered as sample of the study. Panel multiple regressions were used for data analysis after employing the assumption of regression using Stata Version 17.

Table 3.1 Sample of the Study and Remove Firms

S/NO	Consumer Goods Companies	Companies Sticker	Year of Listing
1	Cadbury Nigeria Plc	CADBURY	1976
2	Champion Breweries Plc	CHAMPION	1983
3	Dangote Sugar Refinery Plc	DANGSUGAR	2007
4	Bua Food	BUA FOODS	2011
5	Flour Mills Nigeria Plc	FLOURMKILL	1979
6	Golden Guinea Breweries Plc	GOLDBREW	1979
7	Guinness Nigeria Plc	GUINNESS	1979
8	Honeywell Flour Mills Plc	HONYFLOUR	2009
9	International Breweries Plc	INTBREW	1995
10	Northern Nigeria Flour Mills Plc	NNFM	1978
11	Nestle Nigeria Plc	NESTLE	1973
12	Nascon Allied Industries Plc	NASCON	1992
13	Nigerian Breweries Plc	NB	1973
14	Nigerian Enamelware Plc	ENAMELWA	1978
15	PZ Cussons Plc	PZ	1974
16	Uniliver Nigeria Plc	UNILIVER	1973
17	Union Dicon Salt Plc	UNIONDISCON	1993
18	McNichols Plc	MCNICHOLS	2009
19	Vita form Plc	VITAFORM	1978

Source: Nigerian Stock Exchange Fact Book 2022.

The above table 3.1 shows the sample size of 19 companies out of the total population considered in this study with their companies' stickers and their listing age. Seven (7) consumer goods companies were filtered out

for not meeting the filtering criteria they include: Multi-Tax Integrated Food Plc, DN Tyre & Rubber Plc, 7UP Bottling Company, Big Treat Plc, Premier Breweries, U T C Nig Plc and Vono Products Plc

Table 3.2 Variable Measurement

Variables	Abbreviations	Operationalizations
Financial Performance	ROA	Income divided by Total assets (Bello & Umar, 2019; Kajola, Adewumi & Oworu, 2015).
Equity Ratio	TD/TE	Total equity divided by Total Equity (Usman, 2019 & Afroze & Khan, 2022).
Debt Ratio	TD/TA	Total debt divided by Total Assets (Salim &Yadav, 2012; Afroze and Khan, 2022).
Liquidity	LIQ	Current assets/Current Liability (Albitar 2015; & Das 2017)
Firm Size	FS	Logarithm of Total assets (Abeywardana & Panditharathna 2016; & Das 2017)
Firm Age	FA	Listing years (Das 2017; Ofoegbu & Odoemelam 2018)

Source: Rresearcher, 2024.

3.2 Model of Specification

$$Z_{it} = \beta_0 + \beta X_{1it} + \beta X_{2it} + \beta X_{3it} + \mu \dots \dots \dots \text{Equation (i)}$$

From the above general multiple linear regression models, the equation was modified

to reproduce the panel regression model for the study. This study focused on two econometric models, one of which is shown in equation 1 below, and investigates the direct link between capital structure and financial performance.

$$ROA_{it} = \alpha + \beta_1 TDTA_{it} + \beta_2 TDTE_{it} + \beta_3 LIQ_{it} + \beta_4 FS_{it} + \beta_5 FA_{it} + \mu \dots \dots \dots \text{Equation (1)}$$

$$ROA_{it} = \alpha + \beta_1 TDTA_{it} + \beta_2 TDTE_{it} + \beta_3 LIQ_{it} + \beta_4 TDTA * LIQ_{it} + \beta_5 TDTE * LIQ_{it} + \beta_6 FS_{it} + \beta_7 FA_{it} + \mu \dots \dots \dots \text{Equation (2)}$$

The second model above, equation 2, explains the role of liquidity as a moderator variable on the relationship between capital structure and firms' financial performance in the study based on the suggestion of (Baron & Kenny, 1986).

Where:

- FP = ROA_{it} (Return on Assets)
- TD/TA_{it} = Total Debt/Total Assets
- TD/TE_{it} = Total Debt/Total Equity
- LIQ_{it} = Liquidity Decision
- FS_{it} = Firm Size

Shapiro–Wilk W test for normal data

Variable	Obs	W	V	Z	Prob>z
roa	95	0.49202	40.187	8.171	0.00000
tdta	95	0.89744	8.114	4.631	0.00000
tdte	95	0.77584	17.734	6.361	0.00000
liq	95	0.90221	7.737	4.526	0.00000
tdta*liq	95	0.39998	47.468	8.539	0.00000
tdte*liq	95	0.93716	4.971	3.548	0.00019
fs	95	0.94741	4.161	3.154	0.00081
fa	95	0.84814	12.014	5.500	0.00000

Source: Generated from Sampled Firms Annual Reports using Stata Version (17), 2024.

From the normality table above, the Shapiro wilk residuals p-value of the entire variables are less than 0.05 at 5% level of significance. Thus, the null hypotheses that the residuals of the model variables for the study are normally distributed are accepted.

4.2 Heteroskedasticity Test

The heteroskedasticity test was conducted to check whether the variability of the error term in the regression function is homoscedastic (same variance). Breusch–Pagan/Cook–

Fage_{it} = Firm Age

β₁–β₅ = Coefficient of the explanatory variables (i.e., the slope)

α = Intercept

£ = Error term

i = Individual firms

t = Time period (i.e., the years)

Source: (Gambo etal, 2021).

4. Discussion of Findings

4.1 Normality Test

The study adopted Shapiro Wilk test for normal data to find statistical evidence as to whether the data of the study variables follow the trend of normal curve or not. The results of the data normality test of the variables are presented below:

Weisberg test for hetero-skedasticity

Assumption: Normal error terms was performed. The result shows value of Chi² of 8.99 with p-value of 0.003, which is significant at 1%, indicating that the data is not homeskedastic as shown in the table below. This means the original OLS could not suit the study. Hence, robustness was run and shows that the model can be relied upon for drawing statistical inferences (Gujurati, 2004).

Heteroskedasticity Table:

Breush-Pagan/Cook-Weisberg

Chi2	8.99
Prob.> Chi2	0.0027

Source: Generated from Sampled Firms Annual Reports using Stata Version (17), 2024.

4.3 Descriptive Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
roa	95	0.0900189	0.406763	-2.3599	1.87
tdta	95	0.5899095	0.2241467	0.0275	1.7939
tdte	95	1.676316	1.24655	0.2401	7.8201
liq	95	1.150898	0.7120995	0.0002	3.5924
tdtaliq	95	0.8471895	1.184652	0.0003	8.63
tdteliq	95	1.760059	1.245673	0.0001	6.7553
fs	95	7.979437	0.965002	4.7581	9.7054
fa	95	32.51579	11.53151	9	46

Source: Generated from Sampled Firms Annual Reports using Stata Version (17), 2024.

The above descriptive statistic table describe the performance (ROA) of listed consumer goods companies in Nigeria. Their average ROA is 0.0900 with std. div. of 0.4068, meaning that the data deviate from the mean by 0.4068, indication of no wide range of dispersion between the mean and std. div. As such the mean value shows that the performance of listed consumer goods companies is 09.00%, an indication of one of the listed firms under study made a profit of 0.9 he companies recorded a negative minimum of -2.3590 and maximum of 1.87.

However, the total debt to total asset has a mean of 0.5899 indications that tdta of firms recorded 0.5899% within a particular year with the minimum of 0.0275 and maximum of 1.7939. The std. div. recorded of 0.2242 indication of lower level of dispersion between the mean value of tdta and ROA of the listed consumer goods companies. The mean value of tdte of 1.6763 and a SD of 1.2466, indicates no wide range of dispersion between the mean value and SD of tdte of listed firms under study, and produce the minimum value of td/te of 0.2401

with a maximum of 7.8201. Furthermore, the means value of liquidity decision (moderator) is 1.1509 with a std. div. of 0.7121 shows a no wide range of dispersion between the mean value and the std. div of the moderator (liquidity), with a minimum 0.0002 and a maximum of 3.5924. Moreover, the mean value of tdtaliq is 0.8472 with a std. div. of 1.1847 indication of wide dispersion between the mean value and moderated tdtaliq of listed consumer goods firms; it recorded a minimum of 0.0003 and a maximum of 8.63. The mean value of tdteliq is 1.7601 with a std. div. of 1.2457 indication of no wide dispersion between the mean value and moderated tdteliq of listed consumer goods firms; it recorded a minimum of 0.0001 and a maximum of 6.7553. However, the mean value of firm size is 7.9794 and the std. div. of 0.9650, with a minimum value of 4.7581 and maximum of 9.7054. The descriptive statistics of firm age recorded the mean of 32.5158 and a std. div. of 11.5315 with a minimum of 9 and maximum of 46 years on listing of consumer goods companies in Nigeria

4.4 Correlation Matrix

Variable	roa	tdta	tdte	liq	fs	fa	VIF	1/VIF	
roa	1.0000								
tdta	0.2277	1.0000					1.30	0.766985	
tdte	0.0571	0.4600	1.0000				5.03	0.199001	
liq	0.1397	-0.0546	-0.2361	1.0000			3.15	0.317809	
fs	0.3591	0.0120	-0.0405	0.0703	1.0000			1.08	0.922353
fa	-0.2347	-0.1382	-0.1473	-0.0477	-0.0738	1.0000	1.06	0.944057	
tdte*liq							5.52	0.181145	
tdta*liq							1.12	0.894239	
Mean VIF					2.61				

Source: Generated from Sampled Firms Annual Reports using Stata Version (17), 2024.

The correlation coefficient shows the association between the dependent, intervening and explanatory variables. The values of the correlation coefficients range from -1 to 1. The sign of the correlation coefficient determines the bearing of the relationship, whether positive or negative. The absolute value of the correlation coefficient indicates the strength, with larger values indicating strong coefficient between ROA and tdte of 0.0571 is weak, implies that 1% increases in tdte will increase ROA by 5.7%. Also, the correlation coefficient between liquidity and ROA is weak of 0.1397, implies that a percentage of increase in firm liquidity result in increase in ROA by 13.97%. Firm size recorded a moderate coefficient of 0.3591, meaning that an increase in 1% of firm size lead to increase in ROA by 35.91%. The table indicated a coefficient of firm age by -0.2347; implies that an increase in firm age result in decrease of firm's relationship with ROA by -0.2347.

The result from correlation table indicated that the correlation coefficient among the explanatory variables reveals a positive and negative relationship. However, from the above correlation result reveals that both positive/negative, strong, moderate and weak

relationships. The correlation coefficients on the main diagonal are 1.0, because each variable has no perfect positive linear relationship with itself. The above correlation table indicates a weak positive association between the tdta and ROA from the coefficient of 0.2277. This implies that an increase in tdta by 0.2277 will lead to proportionate increase ROA. The table also shows the correlation relationship existed among the explanatory variables. The finding shows no extreme multicollinearity among the regressors despite the negative association of some explanatory variables. The study leveraged upon the assumption that none of the variable reaches a threshold of 0.8, as suggested by Hair, et al., (2010). The table further explain the multicollinearity result of collinearity of the variable using VIF and tolerance. The theoretical demarcation of the VIF ranges from 1 to 9 as suggested by some scholars and 1 to 5 by other scholars. However, this study adopted the range of 1 to 9 for the VIF of each explanatory variable. Therefore, any variable with VIF greater than 9 indicates the existence of Multicollinearity, this in in line with Gujarati (2004).

4.5 Regression Result of Moderation Effect

Panel Multiple Regression Results (PCSEs)

Dependent Variable ROA

Variables	Coefficient	Z-statistics	P-value
tdta	0.4089163	1.25	0.212
tdte	-0.0999793	-1.88	0.060
liq	-0.0497573	-0.97	0.334
tdta*liq	-0.0343708	-2.69	0.007***
tdte*liq	0.1055681	2.15	0.031**
fs	0.1511771	2.13	0.033**
fa	-0.005723	-3.59	0.000***
_cons	-1.103251	-1.66	0.096

No. of observations 95, No. of groups 19, R-squared= 0.2483 ,Wald Chi2 Statistics = 67.31

F- Statistics = 0.000 ,Hausman Test Chi2 = 40.14

P-value of Chi2 = 0.0000

Note: ***, **, denotes 1% and 5% level of significance

Source: Generated from Sampled Firms Annual Reports Using Stata Version (17), 2024.

Above table 4.6 is the summary of the panel data regression results of the model used by the study. The Hausman specification test result reveals a Chi2 of 40.14 and the p-value of chi2 0.0000 which is significant at 1% level of acceptance therefore, the null hypothesis of hausman specification test stated that if null hypothesis is accepted random will be preferred and if the null hypothesis is rejected the fixed effect will be preferred. From the result in the above regression table the null hypothesis is rejected because the p-value of hausman specification test is at (0.0000), meaning that it is significant at 1% level of acceptance as such existence of heteroschedasticity problem that requires to be checked. However, Gujurati (2004) stated that when fixed-effect model is favoured in the presence of Heteroskedasticity, Panel Corrected Standard Error (PSCE) Regression should be run to check the problem of heteroschedasticity. Therefore, this study

conducted the PCSE regression and hypotheses were tested based on the PCSE regression results. The R^2 is the multiple coefficients that give the proportion of complete variation in the dependent variable, which is simultaneously explained by the independent variable. From the PSCE result, the coefficient of R^2 is 0.2483 implies that 24.83% of the complete variation of ROA of listed consumer goods companies in Nigeria is explained by tdta, tdte, liquidity decision, firm size and firm age while the remaining 75.17 is explain by other factors not captured in this model. However, the result shows the value of the wald chi2 of 67.31 with F-stat. of 0.0000 which is significant at 1%. This implies that the model fitted the study variables. It further signifies that the selected variables are among the capital structure variable that influenced the financial performance of listed consumer goods companies in Nigeria.

4.6 Discussion of Findings

The first objective of this study is to examine the effect of equity ratio on the financial performance of consumer goods companies in Nigeria. From the study findings using pcse regression result total debt to total equity had a negative coefficient of -0.09998 with a negative Z-statistics of -1.88 and p-value of 0.060, which is statistically not significant at 5% level of acceptance. This mean that an increase in consumer goods companies' equity by -0.09998 and financial performance of this companies will decrease by -1.88 Therefore, the null hypothesis postulated which stated that the equity ratio has no significant effect on consumer goods companies in Nigeria is hereby accepted. The finding is in line with the study finding of Ekwueme and Ogbogbo (2018), (Afroze & Khan, 22); Mutua and Atheru (2020), Zang, Lin, Chen and Zhaoh (2022) which indicated that equity ratio has negative insignificant effect on firm performance.

The second objective of this study is to examine the effect of debt ratio on the financial performance of listed consumer goods companies in Nigeria. The study findings using pcse regression result revealed that total debt to total asset had a positive coefficient of 0.40892 with a positive Z-value of 1.25 and p-value of 0.212, which is statistically not significant at the level of acceptance. This mean that an increase in debt ratio of the companies under study by 0.41% will lead to insignificantly increase in companies' financial performance by 1.25. Therefore, the null hypothesis postulated which stated that the debt ratio has no significant effect on consumer goods

companies in Nigeria is hereby accepted. The finding is in line with the study finding of Sebastain and Onuegbu (2018), Daud, Normani, Mansor and Endut (2016), Ogbonnaya and Chimara (2016) which indicated that debt ratio has no significant effect on firm performance.

The third objective of this study is to determine the moderating effect of liquidity on the relationship between equity ratio and performance of consumer goods companies in Nigeria. The study empirical finding shows positive coefficient of moderator (liquidity) on equity ratio and financial performance of 0.10556, with a Z-statistics of 2.15 and the P-value of 0.031, which is statistically significant at 5% level of acceptance. This implies that a unit increase in liquidity by equity ratio by 0.10556 would bring about a significant increase in the financial performance of the companies 2.15%. It is in line with evidence that keeping optimal liquidity can increase agency costs and, consequently, a high liquidity decision is promising businesses is linked to higher financial performance. The result supports the findings of those who documented significant and positive relationships between liquidity decision and a firm's financial performance Wuave et al. (2020); Effiong and Enya (2020); Salim and Bilal (2016). The fourth objective of this study is to determine the moderating effect of liquidity on the relationship between debt ratio and performance of consumer goods companies in Nigeria. The study empirical finding reveals negative coefficient of moderator (liquidity) on

debt ratio and financial performance of -0.03437, with a Z-statistics of -2.69 and the P-value of 0.007, which is statistically significant at 1% level of acceptance. This implies that a unit increase in liquidity by debt ratio of -0.03437 would bring about a significant negative decrease in the financial performance of the companies -2.69%. This implies that a unit increase in liquidity by debt ratio would bring about a decrease in the financial performance of the companies. It is in line with evidence that a highly liquid profitable business opportunities can decrease agency costs and, consequently, high liquidity decision is non-promising businesses is linked to lower financial performance. The result supports the argument of those who documented significant and negative relationships between liquidity decisions and a firm's financial performance Chuwdhury and Zaman (2018); Murithi and Waweru (2017); Mwangi (2014) and Maaka, (2013). Finally, the control variables were used in the study to account for differences among the units of analysis. Firm Size (FS), and Firm Age (FA) are the control variables used. The study's findings reveal a statistically strong positive/negative association between firm size and firm age and financial performance measured by ROA respectively as shown in the above table 4.6.

5. Conclusion and Recommendations

The study provides empirical and statistical evidence on the significance of explanatory variables that constitute capital structure in explaining the performance of listed consumer goods firms in Nigeria moderating role liquidity decision. On one hand, TDTA explanatory

variable found to have positive insignificant influence on the firm's performance. This signifies that diluting firm capital structure with debt financing does not significantly influence the firm financial performance. Equally, the TDTE found to have negative insignificant influence on the firm's performance. On the other hand, TDTALIQ found to have negative but statically significant with firm financial performance. Also, TDTELIQ was found to be positive and statistically significant in influencing financial performance of the listed firms under study. The control variable used Firm size and Firm age were found to have both positive and negative significant influence with the firm financial performance respectively on listed consumer goods firm in Nigeria. However, the moderator has statistically indicated significant influence on TDTA and TDTE on firm performance. As such the study recommended that the companies should give more emphasis on TDTA, TDTE and liquidity decision because they affect their firm's financial performance significantly.

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Determinants of Food Security In Sub-Saharan Africa: Effect Of ICT And Financial Improvement

By

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ABSTRACT

Several issues have been identified as reasons for food security in Sub-Saharan African countries but the influence of information and communication technology (ICT) as well as financial improvement on food security cannot be ascertained. Sequel to this, the study investigates the influence of ICT and financial improvement on food security. The study selected 39 sub-Saharan African Countries to carry out the investigation. The study employs System GMM to take care of unobserved heterogeneity and potential endogeneity of the exogenous variables. Variables such as fixed broadband subscriptions, fixed telephone subscriptions, mobile cellular subscriptions, and secure internet servers are used to capture ICT; domestic credit to the private sector is used to capture financial improvement; while the food production index is used to capture the food security using data from year 2000 to 2020. The empirical results show that fixed telephone subscriptions is positive and statistically influence the food production index (food security), while its interaction with domestic credit to the private sector also significantly influences food security. This shows that the effect of change in the fixed telephone subscriptions has a positive impact on food security sequel to an increase in domestic credit to the private sector. The same can be said of mobile cellular subscriptions, the effect of change in mobile cellular subscriptions has a positive impact on food security as a result of an increase in domestic credit to the private sector. It is recommended that telephone and mobile cellular subscriptions should be improved to improve food production because information can easily be disseminated via the medium. Domestic credit to the private sector should also be increased in other to finance and improve food production.

Keywords: Information & Communication Technology, Financial Improvement, Food Security.

I

Introduction

The Agricultural sector is one of the most essential sectors of the development of countries' economies in the provision of raw materials, employment, food security, and enhancing investments (Bello et. al. 2024). The sector has been playing its role in improving economies of many nations over the decades. This is the sequel to its provision of employment, provision of food to the populace, and contribution to the balance

of payment of the nation to mention but a few. For several decades in the globe, agriculture has been the main source of livelihoods for the developing world subsisting for a significant portion of their nations. It has been the key sector providing employment opportunities for nearly seventy percent of the rural population and contributing the largest share to their national gross domestic product (GDP) (Abegaz, 2017).

Sub Saharan Africa is afflicted by many forms of poverty. Human Development Index scores in most countries of the region have stagnated or declined since 1990, leaving this region as the poorest in the world (Bello & Sagagi, 2017). Indeed, 28 of the 31 low human- development countries are in Sub Saharan Africa (UNDP, 2014). It is generally believed that any nation that desire to reduce the incidence of poverty on its citizens should improve the agricultural sector, in order to achieve food security. Globally, food and nutritional insecurity remain an important matter of concern for both developed and developing nations (Bashir et al., 2012; Todaro & Smith, 2015; Gwanda et al., 2020). Importantly, food insecurity is directly related to poverty at various levels (FAO, 2013). According to the Food and Agriculture Organization (FAO, 2010), the decline in hunger the world has been enjoying over the past decades due to doubling world food production was at an end, in that the absolute number of undernourished people continues to rise, albeit slowly. Currently, more than 820 million people around the world are undernourished, thus posing a challenge to realizing the zero hunger (Goal number 2) target of Sustainable Development Goals by 2030 (FAO, 2019). The report further revealed that about 2 million people in the world experience moderate or severe food insecurity which puts them at a greater risk of poor health and malnutrition. Globally, the lack of regular access to nutritious and sufficient food remains the major cause of malnourishment. Bashir et al.

(2012) reported that malnourishment is an indication of food insecurity existing when the caloric intake of a household goes below the minimum dietary energy requirement. Food security is achieved at individual, household, national, regional, and global levels, when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 2019). Some factors have been identified as reasons for food insecurity in Sub-Saharan African countries. As cited by Abegaz (2017), “Limited rural development, insecurity, weak infrastructural development of power, road, and market access aggravate food insecurity in SSA. Weak government policy that adversely afflicted the agricultural sector is another factor contributing to food insecurity in the region. Poor health condition also poses its impact on food insecurity. The region is also characterized by the prevalence of contagious and fatal but preventable diseases of HIV/ AIDS, malaria, tuberculosis (TB), and other diseases. This reduces rural labor participation in agriculture and of-farming activities contributing to food insecurity. Moreover, rising global commodity prices and climate change will likely further exacerbate food insecurity in the region. Agricultural productivity in SSA, as measured by grain yield, is only about 40% of the rest of the world’s developing countries, and the gap has widened over the years (Tobin, 2009; Ingram et al, 2008).

In recent times, major agricultural interventions and efforts have been geared toward increasing productivity in SSA (Usman & Olagunju, 2019). For example, the development, dissemination, and adoption of improved crop varieties and fertilizer technologies have been widely promoted across the region (Abdoulaye et al. 2018; Ogunniyi et al. 2015; Lunduka et al. 2017). However, low productivity still characterizes the agricultural sector in the region (FAO 2004). Apparently, interventions may be significant in increasing the level of outputs in a certain context, but such increments are prone to inefficiency, especially when the available technology is not efficiently utilized. As such, it could be argued that it is quite more cost-effective to exterminate existing inefficiency than to introduce interventions as a means of increasing agricultural households' outputs (Tefaye & Beshir 2014).

Several studies on the causes of food security/insecurity concentrated much on micro-socioeconomic factors (Godrich et al, 2017; Abegaz, 2017; Opaluwa et al, 2018; Gwada et al, 2020; Kabir et al, 2020; Hakim et al, 2021; Nour & Abdalla, 2021; Sarkar et al, 2021; Ingutia & Sumelius, 2022), the nutritional factors: (Maitra & Rao, 2018; Opaluwa et al, 2019), rather than the macroeconomic factors.

Godrich et al (2017) consider factors such as price, promotion, quality, location of outlet, and variety as determinants of food security. While Abegaz (2017) sees rain shock, crop shock as well as extension workers visit and income as

factors that affect agricultural productivity, Opaluwa (2018) examines education, households' size, farm size, and household income as factors that affect food security. Furthermore, most studies consider factors such as women farmers, access to irrigation, effect of cooperative, distribution channel, household size, land size, gender as determinants of food security of agricultural productivity. Beside the fact that the aforementioned factors are microeconomic variables, they are also socio-economic variables. With this, one cannot say as per the factors that determine the food security or food productivity in an economy at large. This leaves us with many questions: what are the determining factors that affect food security in Sub Saharan Africa? What is the role of financial improvement on food security? Can ICT influence food security in Sub Saharan African Countries?

II. Objective of the Study

The overall objective of this study is to investigate the effect of ICT and financial improvement on food productivity/security. The specific objectives are stated thus:

To investigate the influence of ICT on food productivity/security;

1. To examine the effect of financial improvement on food productivity; and
2. To examine the combine effect of ICT and Financial improvement on food security in Sub Saharan Africa countries.

III. Relevant Literature and Hypothesis Development

This section looks into the concept of food security, the relevant theories, as well as the empirical literature in order to connect food security to technology and financial improvement.

a. Concept of Food Security.

Food security concept is believed to have originated three decades ago in the mid-1970s in the first world food conference and was narrow in its coverage and definition. This concept initially paid attention to the national and international level and was defined from the perspective of the food supply with special attention to stable food price and food availability (Young et al, 2001; Abegaz, 2017).

Food and Agriculture Organization (FAO) analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation (Nour & Abdallah, 2017). Thus, it is meant to ensure that all people at all times have both physical and economic access to the basic food that they need (FAO, 1983). The widely accepted definition of World Food Summit (1996) indicates that food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. This widely accepted definition reinforces the different dimensions of food security and includes food access, availability, food use and stability: food availability: the availability of sufficient quantities of food of appropriate quality, supplied

through domestic production or imports (including food aid); food access: access by individuals to adequate resources (income) for acquiring appropriate foods for a nutritious diet; utilization: utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security; stability: to be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity)".

b. Determinants of food security

Mota et al, (2019) assess food insecurity and its determinants in the rural households in Damot Gale Woreda, Wolaita zone, southern Ethiopia. They use cross-sectional household survey and use primary data from 155 randomly selected households and use HFIAS and use bivariate and multivariate logistic regression analyses. The results of the study revealed that the majority (71.6%) of rural households in the study area were food insecure. The HFIAS shows that HH cannot cover the required daily food from the production generated from their agriculture as well as other activities. Households with large family size, households who cannot read and write and old household heads are more likely to be food insecure than their counterparties. Similarly low land size, lack of livestock, not having confidence to overcome food insecurity of

HH, borrowing money from informal rural money lenders and not using farm input by the HH are significantly associated with food insecurity. Finally, promoting income-generating activities, enhancing the micro-financing efficiency, initiating family planning, strengthening the inter resettlement programs, enhancing saving habits, creating employment opportunities at local areas to deter unskilled labor migration on-farm diversification”.

Abegaz (2017) looks at the position of food security and also investigates the determinants of food security in Ethiopia by employing binary multivariable logistic regression. Conducting Ethiopia Rural Household Survey, pooled data were gathered. The results of the study show that most households are not secured in terms of food and also, food security is significantly determined by rain, income, and region of the households.

Ingutia and Sumelius (2022) investigate the determinants of food security by focusing on women farmers in Kenya. The study also looks into the determinants of access to irrigation technology which can also influence food security. The study employs regression analysis using logistic, probit and linear endogenous treatment model to carry out its investigation. The results show that women who are members of cooperative have access to credit which helps in improving food security. The study exposes the fact that women who are not member of cooperative determine less food security compare to those who are cooperative members. Extension

services is determining factor of access to irrigation.

Sarkar et al (2021) examined the determinants of food security by considering effective utilization of food, food availability, and food access during the COVID-19 pandemic. The quantitative data used in this research were collected from a survey covering the agricultural food supply industry in China (Shaanxi Province). The survey was conducted from November to December 2020. The core analytical assumptions were made by employing exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM). It was found that the determinants of the effective utilization of food were positively related to the determinants of food access and food availability, and the determinants of food availability were positively related to the food access determinants. Nour and Abdalla (2021) paper focuses on the determinants of food security in Kassala state using the measurement of Household Food Insecurity Access Scale (HFIAS), using new primary data from a food security household survey in Kassala state and using the multinomial logistic regression analysis and both ordered logit and ordered probit regression to examine the determinants of food security. The results show that family-owned production significantly determined the food insecurity. It is revealed that other factors that affect household food insecurity include improvement in agricultural services, marketing, banking services, and road feature. Hakim et al (2021) measure technical efficiency

of rice production on food security and its determinants using two limit tobit. The technical efficiency is measured by using data envelopment analysis (DEA). The results show that the technical efficiency of rice farming is very low in East Java. Government assistance, irrigation, and extension have a significant effect on technical efficiency. Meanwhile, membership of farmer organization has no effect on technical efficiency. Around 69% of farmers can be categorized as food secure households. The estimation of logit regression shows that household size, income, land size, education, age, and gender significantly influence food security in East Java. Meanwhile, credit and technical efficiency did not have any significant effect.

Kabir et al (2020) assessed the determinants of food security among forest-based households in Oyo state, Nigeria by obtaining data from 240 respondents. Data obtained were subjected to descriptive statistics and logit regression model. The results revealed that most respondents produced food by themselves, some of them take two square meals per day and some skip meals as a coping strategy due to insufficient food. The logistic regression model reveals that sex, household size, household's head income and land ownership have significant effects on rural household food security in the study area.

Gwada et al (2020) examine the determinants of food security among smallholder soybean households in Butere Sub-County, Kenya. The study adopted the exploratory research design. A multi-stage sampling procedure was used to

select a sample of 201 respondents. Cross-sectional data were gathered through face-to-face interviews using pretested semi-structured questionnaires and analyzed using an ordered logistic regression model. Household Food Insecurity Access Scale was used to measure and categorize the soybean household food security status. The results revealed that the household food security status differed across soybean households and was greatly influenced by interplay of socio-economic, market, and institutional factors. Age of the household head negatively influenced food security, whereas the level of soybean commercialization, education, livestock units, network density, extension visits, and credit access were positively associated with household food security.

Danso-Abbeam (2022) examines household food security and its determinants in the rural areas of Southern and Northern provinces of Rwanda. Using cross-sectional data collected from 534 farming households, the study estimated household food security status by Food Consumption Score (FCS) and Food Insecurity Experience Scale (FIES) and applied ordered Probit model to identify drivers of household food security. The results indicate that a significant proportion (74.4%) of households had an acceptable FCS, but 36.52% of the farming households experienced moderate and severe food insecurity when assessed with FIES. Ownership of livestock was identified as a key determinant of food security using both metrics,

which affirms the importance of combating hunger and food insecurity in Rwanda.

Obayelu (2012) analyzes the determinants of household food security status in the North–Central Nigeria. This study employed a cross-sectional survey of 396 households in North–Central Nigeria and used multivariate-ordered logit analyses. The results from the ordered logit revealed that geographical location, marital status, gender of the household head, household size, food dietary diversity, total household expenditure, level of education, occupation of household head, household dependency ratio, social capital, and agricultural land-holding size significantly affect households' food security status. Oke (2015) examines the determinants of national food security in Nigeria. The study found that the various problems encountered by the food sector in the economy include policy ineffectiveness, high cost of production, high exchange rate, increasing population, etc. These factors cause inflationary pressures on food prices, and they are the reasons why food security in Nigeria has worsened in the country over the years. Muktar (2011) investigates the determinants of food insecurity in Nigeria, using an application of the binary choice modeling technique; it estimates the likelihood of food insecurity among some selected households in Kano State of Nigeria using the binary choice modeling technique, specifically the logit. The result obtained showed that household income, educational qualification, gender, size of household, assets owned by households, and

access to credits are among the major determinants of food insecurity. Amaza et al. (2006) identify and analyze food security measures in Borno State, Nigeria, using a multi-stage sampling technique and using the logit model method as analytical techniques for the study. Major determinants of this food insecurity factors are, household size, gender, educational level, farm size and type of household farm enterprise” (Nour and Abdalla, 2021).

c. ICT and Food Security

ICT has been playing a developmental role in most economies of the world especially developed economies and in recent years, this impact is being felt in African economies. ICT played an important role in Africa's development process. However, incorporating ICT to a sector like agriculture, which contributes immensely to the economic development in Africa, clearly defined ideas are required (Ejemeyovwi, 2021).

Syien and Raj (2015) researched to determine the amount of access to and use of ICTs among farmers in the Indian state of Meghalaya. The majority of the farmers had cell phones, as well as television and radio, according to the data. The mobile phone was the most commonly used ICT. Farmers utilized mobile phones extensively for social communication, contacting middlemen for crop sales, and contacting specialists on a real-time basis for agricultural recommendations.

Chavula (2014) studied the role of ICT in agricultural production in Africa from 2000 to 2011 using panel data from 34 African countries. The study found that ICT plays a significant role

in enhancing agricultural production. However, the study further concluded that mobile phones have relatively fewer roles; yet, main lines contribute significantly to agricultural growth. Likewise, Namubiru, Ngaka, and Picho (2018) examined the effect of ICT on household food security in Uganda giving special reference to Acoholi sub-region. Cross-sectional and descriptive design was utilized, and the results indicated an average of 18.2% of the households in Acholi sub-region used ICT for food security while 31.9% did not use ICT for food security. Although Chavula (2014) found that mobile phones have less role, Namubiru, Ngaka, and Picho (2018) found the complete opposite as the majority of the population do have access to food through mobile phones”.

Olaniyi and Ismaila (2016) used a binary logit regression to analyze ICT usage and household food security status of maize crop producers in Ondo State, Nigeria. Cell phones, radio, and television were found to be the most widely used ICT methods for getting information on food security, according to the study. Household size, involvement in social organizations, farm size, cell phone usage, and impression of the contribution of ICT usage were shown to have substantial effects on household food security.

Ejemeyovwi et al. (2021) investigate the relationship between household ICT usage and food security in Nigeria, utilizing logit regression as the empirical analytic method. According to the findings, ICT use in male households has a statistically significant and favorable relationship

with food security. However, there is a negligible and negative relationship between food security and female families. It was also shown that among male household users, a 1% increase in ICT usage results in an increase in food security in Nigeria.

Anser et al. (2021) use a system Generalized method of moments (GMM) technique on panel data to explore the influence of the relationship of governance and information and communication technologies (ICT) adoption on food security in West Africa. The findings demonstrate that effective government and effective anti-corruption control may improve food security. It's also been shown that increased ICT use can help with food security. The interplay of ICT and government effectiveness has a favorable impact on food security, whereas the interaction of ICT and corruption control has a positive impact on food security.

Much literature has looked into the impact of financial development on growth and it is revealed that financial **Model** development can impact positively on growth. There is also the tendency that financial improvement can impact food security.

IV. Methodology

a. Specification

The study involved panel data from 39 Sub-Saharan African countries. Drawing vision from the empirical work of Anser et al (2021), the model was modified and the estimated models are specified in the Equations below:

$$\log fpi_{it} = \alpha_0 + \alpha_1 \log gdp_{it} + \alpha_2 \log infl_{it} + \alpha_3 \log rint_{it} + \alpha_4 \log domcre_{it} + \alpha_5 \log fixb_{it} + \alpha_6 \log fixtel_{it} + \alpha_7 \log mobcel_{it} + \alpha_8 \log secint_{it} + e_{it} \text{ ----- Eq 1}$$

Where, fpi is the food production index; gdp is the gross domestic product per capita; infl is the rate of inflation; rint is the real interest rate; domcre is the domestic credit to the private sector; fixb is fixed broadband subscriptions; fixtel is fixed telephone subscriptions; mobcel is mobile cellular subscriptions; secint is the secure

internet servers while log represents natural logarithm of the variables. This study intended to employ System GMM to take care of unobserved heterogeneity and potential endogeneity of the exogenous variables. Therefore, equation 1 is transformed below:

$$\log fpi_{it} = \alpha_0 + \phi \log fpi_{it-1} + \alpha_1 \log gdp_{it} + \alpha_2 \log infl_{it} + \alpha_3 \log rint_{it} + \alpha_4 \log domcre_{it} + \alpha_5 \log fixb_{it} + \alpha_6 \log fixtel_{it} + \alpha_7 \log mobcel_{it} + \alpha_8 \log secint_{it} + e_{it} \text{ - Eq 2.}$$

Where, ϕ is the lag of food production index; ϕ is the coefficient of food production index; α_0 is intercept; $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6, \alpha_7, \alpha_8$ are the coefficients of independent variables; and e_{it} is the error term.

b. Scope of Study

Countries, to investigate the influence of ICT and financial improvement on food security in the

This study selected 39 Sub Saharan African region. The data year span from year 2000 to year 2020

V. Analysis of Results

This section deals with the interpretation and discussion of the findings obtained via the data. It

contains the descriptive statistics analysis, correlation analysis, and the generalized method of moment (GMM).

Table1: Descriptive Statistics

Variable		Mean	Std.Dev	Min	Max	Observations
fpi	overall	86.093	19.679	29.43	154.57	N = 741
	between		10.394	67.733	111.541	n = 39
	within		16.788	35.888	133.64	T = 19
domcre	overall	17.257	16.460	0	106.260	N = 788
	between		15.561	3.876	81.966	n = 39
	within		5.169	-8.208	44.388	T = 20.2
infl	overall	9.146	27.267	-9.616	513.906	N = 786
	between		11.929	1.619	60.675	n = 39
	within		24.791	-50.784	462.378	T = 20.1
rint	overall	8.190	10.889	-60.781	52.437	N = 560
	between		6.698	-0.285	32.545	n = 32
	within		8.594	-53.903	45.854	T = 17.5
gdppc	overall	1.518	4.439	-36.556	28.676	N = 818
	between		1.449	-0.858	5.837	n = 39
	within		4.203	-34.794	27.585	T = 20.9
fixb	overall	0.977	3.471	0	35.553	N = 564
	between		2.463	0.003	11.757	n = 38
	within		2.249	-10.380	24.774	T = 14.8
fixtel	overall	2.771	6.166	0	37.640	N = 787
	between		6.074	0.024	29.997	n = 39
	within		0.877	-3.526	10.414	T = 20.1
mobcel	overall	50.221	44.54	0	198.152	N = 799
	between		25.750	13.493	118.268	n = 39
	within		36.539	-35.994	133.804	T = 20.4
secint	overall	1612.068	16000.33	0	264256.6	N = 421
	between		8888.72	0.394	55466.78	n = 39
	within		13320.14	-53787.87	210401.9	T = 10.8

Source: Researchers' Computation, 2024.

From the table above, the overall average value of the food production index (fpi) stood at 86.093; while that of domestic credit to the private sector (domcre), inflation rate (infl), real interest rate (rint), and gross domestic product per capita (gdppc), are 17.257, 9.146, 8.190, and 1.518 respectively. Also, ICT variables such as fixed broadband subscriptions (fixb), fixed telephone subscriptions (fixtel), mobile cellular subscription (mobcel), and secure internet servers

(secant) have overall average values of 0.977, 2.771, 50.221, and 1612.068 respectively.

Moreover, the table showed overall values at which the variables deviated from their mean values. The food production index (fpi) deviated by 19.679; domestic credit to private sector (domcre) by 16.460; inflation rate (infl) by 27.267; real interest rate (rint) by 10.889; and gross domestic product per capita (gdppc) by 4.439 respectively. While ICT variables such as

fixed broadband subscriptions (fixb), fixed telephone subscriptions (fixtel), mobile cellular subscription (mobcel), and secure internet servers

(secant) have overall deviation values of 3.470, 6.165, 44.54, and 16000.33 respectively.

Table 2: CORRELATION MATRIX

	fpi	domcre	infl	rint	gdppc	fixb	fixtel	mobcel	secint
fpi	1								
domcre	0.1009	1							
infl	-0.0301	-0.1574	1						
rint	0.0868	-0.2117	0.0559	1					
gdppc	0.0504	0.0739	-0.2798	-0.0744	1				
fixb	0.0439	0.6268	-0.1636	-0.052	0.1341	1			
fixtel	0.1077	0.741	-0.1756	-0.0813	0.1679	0.9276	1		
mobcel	0.2256	0.546	-0.3033	-0.2153	0.0691	0.5767	0.6241	1	
secint	0.0238	0.046	-0.0493	0.0075	-0.0033	0.4396	0.2405	0.2713	1

Source: Researchers' Computation, 2024.

The table above is the correlation matrix for our series. It informs the study of potential relationships between food production indices and other variables. The table shows a positive relationship between food production index and domestic credit to private sector (domcre). Moreover, real interest rate (rint), gross domestic product per capita (gdppc), fixed broadband

subscriptions (fixb), fixed telephone subscriptions (fixtel), mobile cellular subscription (mobcel), and secure internet servers (secant) have positive relationship with food production index (fpi). However, there is a negative relationship between food production index (fpi) and inflation rate.

Table 3: System GMM Estimates

Variables	[1]	[2]	[3]	[4]	[5]	[6]
Constant	1.4347 (0.000)***	1.5857 (0.000)***	1.1596 (0.000)***	1.6703 (0.000)	2.1062 (0.000)	3.2163 (0.000)
logfpiL1	0.6786 (0.000)	0.6290 (0.000)	0.7269 (0.000)	0.6133 (0.000)	0.4686 (0.000)	0.2548 (0.000)
loggdppc	0.0215 (0.000)	0.0234 (0.000)	0.0235 (0.000)	0.0186 (0.000)	0.0143 (0.010)	0.0056 (0.001)
loginfl	-0.0091 (0.012)	-0.0087 (0.014)	-0.0093 (0.001)	-0.0093 (0.002)	-0.0096 (0.002)	-0.0192 (0.000)
logrint	0.0081 (0.000)	0.0099 (0.001)	0.0133 (0.001)	0.0080 (0.032)	0.0130 (0.002)	0.0139 (0.007)
logdomcre		0.0238 (0.000)	0.0208 (0.000)	0.0198 (0.000)	0.0175 (0.000)	0.0645 (0.000)
logfixb			-0.0004 (0.940)			
logfixtel				0.0149 (0.000)		
logmobcel					0.0614 (0.000)	
logsecint						0.0013 (0.696)
No of obs	316	313	247	305	313	169
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes
No of Instruments	159	160	158	161	161	107
Sargan/Hansen Test	1.000	1.000	1.000	1.000	1.000	1.000

Source: Researchers' Computation, 2024.

The table 3 above shows the results of the dynamic model. The first column (1) shows the results of the effects of other macroeconomic variables such as lagged of food production index (logfpiL1), gross domestic product per capita (loggdppc), inflation rate (loginfl), and real interest rate (logrint) on food production index (logfpi). Column 2 shows the results of the effects of financial improvement on food production index along with other macroeconomic variables, while columns 3 to 6 show the measure of ICT and the interactions with financial improvement in determining the food productivity.

From the first model, it is shown that lag of food production index is positive and significant (0.6786) at the 1 percent level. It is also revealed from the results that gross domestic product per capita is positive (0.0125) and significant at the 1 percent level, while inflation rate is negative (-0.0091) but significant at the 1 percent level. However, real interest rate is positive (0.0081) and statistically significant at 1 percent level.

It can be observed from model 1 to 6 that the lag of food production index is positive and statistically significant across the model. This indicates that past food production index significantly influences the present food production. Likewise, the same can be said of gross domestic product per capita as it is positive and significantly influences the food production index across the models. However, inflation rate is negative across the models, but it is significant across the models. Moreover, real interest rate is positive and significant in all the models. This

shows the consistency of all these variables and their significance on the food production in the region.

The financial improvement is significant in all the models. This is evident with the coefficients of domestic credit to the private sector (0.0238, 0.0208, 0.0198, 0.0175, and 0.0645) which are positive and statistically significant. However, the coefficient of fixed telephone subscriptions (0.0149) is positive and statistically significant at the 1 percent level, while its interaction with domestic credit to the private sector is 0.0198. This shows that the effect of change in the fixed telephone subscriptions has a positive impact on food production index sequel to an increase in domestic credit to the private sector. The same can be said of mobile cellular subscriptions which its coefficient 0.0614 is positive and statistically significant at the 1 percent level while its interaction with domestic credit to the private sector is 0.0175. The implication is that the effect of change in the mobile cellular subscriptions has a positive impact on the food productivity index as a result of increase in domestic credit to the private sector.

The findings from this study indicate that the lag of the food production index, gross domestic product per capita, and real interest rates are positive and statistically significant across all models, signifying their consistent impact on food production in the region. These results are in line with existing empirical studies that emphasize the role of economic factors and ICT in enhancing agricultural productivity. For

instance, Chavula (2014) highlighted the significant role of ICT in agricultural production across 34 African countries, which aligns with the positive impact observed in this study for fixed telephone subscriptions and mobile cellular subscriptions on food production. This conformity suggests that ICT plays a crucial role in boosting food production when combined with financial improvements such as increased domestic credit to the private sector.

Ejemeyovwi et al. (2021) found that ICT use in male households positively influences food security in Nigeria, further supporting the positive relationship between ICT (both fixed and mobile subscriptions) and the food production index observed in this study. The interaction between ICT and domestic credit suggests that financial improvements amplify the positive effects of ICT on food productivity, echoing the findings of Anser et al. (2021) who demonstrated that the interaction of ICT and government effectiveness improves food security in West Africa. Moreover, the negative and significant impact of inflation across the models in this study is consistent with the broader understanding that economic instability can adversely affect food production, even when ICT and financial improvements are present. This observation is aligned with the conclusions drawn by Olaniyi and Ismaila (2016) and Namubiru et al. (2018), who emphasized the role of economic variables alongside ICT in determining food security and production outcomes.

VI. Conclusion and Recommendation

Our empirical results show that past food production index can influence the present food production index as shown on all six models. The implication is that food production index of present can help in securing food in the following year. Aside the past food production, other factors such as gross domestic product per capita, inflation rate and real interest rate significantly impact food security. The significant influence of the gross domestic per capita reveals the influence of income on food security, which conforms to the studies by Abegaz (2017); Kabir et al (2020); and Hakim (2021) which opined that food security is significantly determined by income.

It is shown from our empirical results that financial improvement – represented by domestic credit to the private sector significantly influence food security in the region. This conformed to the study by Ingutia and Sumelius (2022) that access to credit helps in improving food security.

The empirical results also shown that fixed telephone subscriptions is positive and statistically influences food production index (food security), while its interaction with domestic credit to the private sector is also significantly influences food security. This shows that the effect of change in the fixed telephone subscriptions has a positive impact on food security sequel to an increase in domestic credit to the private sector. The same can be said of mobile cellular subscriptions, the effect of change in the mobile cellular subscriptions has a positive

impact on the food security as a result of increase in domestic credit to the private sector. This confirmed the studies by Syien and Raj (2015) and Olaniyi and Ismaila (2016) that mobile phone is commonly used ICT and that it significantly influences food security.

Based on the empirical literature and our results, it could be concluded that ICT and financial improvement influence the food security in the Sub Saharan African countries. Sequel to this, it

is recommended that telephone and mobile cellular subscriptions should be improved in order to improve food production because information can easily be disseminated via the medium. Moreover, domestic credit to the private sector should be increased in other to finance and improve the food production. With these, food production will be secured especially in the region

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Human resource management practice and the efficiency of Listed deposit Money Banks in Nigeria.

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ABSTRACT

The study examined the effect of human resource management practice on the efficiency of listed deposit money banks in Nigeria. Human resource management practice was proxy by staff recruitment and training (RT), staff remuneration (SR), health care and safety (HCS) while organizational efficiency is measure by return on asset. Using an ex-post facto research design, the requisite data for analysis was obtained from the annual reports of ten (10) deposit money banks listed on the Nigerian Exchange Group (NGX) from 2012 to 2021. Descriptive analysis, correlation and regression analysis were used for data analysis. The study found that recruitment, training of staff and provision of health and safety of staff significantly affect the efficiency of Nigerian listed deposit money banks positively while staff remuneration exert significant negative effect on the efficiency of Nigerian listed deposit money banks. The study therefore, conclude that human resource management practices affect the efficiency of Nigerian listed deposit money banks and consequently, recommends that the management of Nigerian listed deposit money banks should ensure that employees are well trained to acquire the needed skills and knowledge for the discharge of their responsibilities to enhance organizational efficiency. Again, the management should ensure that the employees' health and safety is of utmost priority as it positively influences organizational efficiency.

Keywords: Efficiency, Human, management, practice, resource, recruitment, training, remuneration.

1. Introduction

Organizations are working towards having a competitive advantage against the pressure posed by globalization, as such aims at generating the kind of performance that can bring more profit bearing in mind that the objective of all organizations is to improve profitability while reducing cost; this is referred to as organizational efficiency. Kibrige et al. (2019) explains efficiency as the proportion of output to input. Where output is the outcome of interest depending on the organization and the inputs refer to what can be used to produce the output. Therefore, organizational efficiency aligns with how an organization utilizes its resources (total assets) to achieve its objective of maximizing profit.

This can possibly be realized through the human resource element of the organization (Osman, 2013) as they are the ones capable of learning changing innovations and providing creative thrust that can drive organizational efficiency in challenging economies like Nigeria.

Organizations depend greatly on its human resource as the other assets cannot work by themselves to maximize profit. Hence, organizations desire to get skilled employees to put in their best efforts towards a substantial organizational output (Georgopoulos, 2019). To achieve this, the organizations put up some Human Resource Management Practices (HRMP). HRMP deals with all the facet of how

people are recruited and managed in a particular organization. According to Govand and Nabaz (2021) human resource management practice (HRMP) includes but not limited to tasks like strategic recruiting, employee training, growth compensation management and health care of employees. It also means policies and practices put in place to improve organizational efficiency.

In the face of challenges like economic recession, organizations depend comprehensively on trained staff that can quickly respond to changes and fashion out tactics for organizational efficiency. Human resource management practice ensures careful selection and training of staff with the necessary skills needed to attain efficiency. Also, an organization desiring to succeed in a competitive business environment like the banking sector; should also compensate its skilled staff and give them assurance of safety needed to motivate them for absolute commitment. Most especially in times of rapid and continuous change, human resource must be trained and retrain for the organization to remain productive and efficient in the management of the organizations assets (Akujuru & Enyioko, 2015). Though training is very important yet, it is not carried out or carried out sparingly because it's considered as a waste of money and organizations focus more on output (profit) rather than training their employees with relevance skills that can make them more efficient. Also, employees need to be constantly reassured of their health care and safety on the job especially where banks are prone to robbery. Constant remuneration/reward is also a good motivational ingredient practiced in human resource management that is capable of making the

employees committed to their work for an efficient performance (Govand & Nabaz, 2021).

Research has also shown that effective application of the human resources management practices enable organization employee to be committed to their work which in turn yields efficient organizational performance (Jashari & Kutllovci, 2020). Organizations such as banks that are perceived to be the engine room of any economy ought to continually improve on their services to achieve efficiency in order to be ranked among the world class banks. To achieve this, it needs to acquire resources such as capital and technology but, these resources cannot operate by themselves hence, it needs to initiate human resource management practices to attract experience staff, train its staff, compensate them and ensure that its employees work with full commitment having the sense of the availability of their healthcare services and safety on the job.

Banking jobs are perceived to be one of the riskiest jobs as minor errors can lead to injurious effect on the efficiency of the organization as such, employee's mindset should constantly be elated, healthy and free from fear of insecurity to avoid any form of error. It is worth to note that, the risk of security and safety on the job is high as rubbers can break into the bank unexpectedly consequently, if employees are given another job opportunity, they would always desire to abandon the banking job and move on to the next job. Hence, they seem to be the need for banks to train their employees, give mouth watery salaries and constantly assure the staff of their healthcare and safety on the job; these may likely prompt employees' commitment and loyalty

to the job which is capable of improving organizational efficiency (Ola, 2015).

Though numerous researches have been carried out on human resource management practices and organizational performance (Sheela & Jesura, 2022; Jashari & Kutllovci, 2020; Hamid et al., 2017; Rashid et al., 2013) but it is pertinent to carry out more research on human resource management practices and organizational performance as it pertains to efficiency of the utilization of total resources in the listed deposit money banks in Nigeria. Most of the prior studies drew inferences from individuals' opinion however; this current study intends to bridge this gap by drawing its inferences from already existing data on the cost of human resource management practices decision implemented by the listed deposit money banks in Nigeria and ascertain its effect on the efficiency of the listed deposit money banks in Nigeria. The result of this study is of great significance to the Nigerian banks management as it will provide them the knowledge of how the implementation of their decision on human resource management practices of recruiting and training, compensation and healthcare and safety of their staff on the job is affecting the efficiency of their operations.

2.1 Conceptual Clarification and Hypotheses Formulation

Human resource management practice (HRMP) is an aspect of management that deals with all facets of how people are employed and managed in an organization. According to Miranda and Fernando (2020) HRMP are business strategies employed by an organization in the management of its human resource. Otoo (2019) views HRM practices as consistent policies and practices designed and implemented internally in order to ensure that the

human capital add to the attainment of business objectives of an organization. These strategies or practices may include analyzing and designing of jobs, deciding on how many employees with a particular knowledge and skills that are needed (human resource planning), selecting and recruiting potential employees, educating employees on how to perform their jobs as well as preparing them for the future (training & development), evaluating their performance (performance management), rewarding employees (compensation) and creating a positive and healthy work environment (employee relations). To Govand and Nabaz (2021) Human resource management practice (HRMP) includes tasks like human resource preparation, strategic recruiting, employee training, growth compensation management, worker relations, health care, employee satisfaction as well as provision of employee services. It is also postulated by Miranda and Fernando (2020) that an organization performs utmost when all of these practices are managed well. This seems to substantiate the view of Govand and Nabaz (2021) as they opine that HRMP are policies and practices put in place to improve organizational efficiency.

Ilona and Evelina (2013) explain that efficiency relates to the most favorable use of resources to achieve the desired output. That is, efficiency measures the relationship between inputs and outputs. Therefore, the fewer the inputs utilized in the production of outputs, the greater the efficiency of the organization. Pinprayong and Siengthai (2012) put forward Return on Assets (ROA) as an appropriate measure of overall company performance, since it discloses the extent of the profitability of an organization's assets in

generating revenues. Total asset turnover ratio is adopted in this study as it is a measure of how well an organization uses its assets to efficiently generate sales; hence it can be referred to as efficiency.

Efficiency cannot just be achieved without the human resource especially, in a delicate industry like the banking sector where human resource is most needed for supervision, correction of errors, innovation in the face of challenges and changes which an artificial intelligence that is gradually taking over the place of the human resource with the growing technologies may not be able to handle. Thus, it is pertinent for organizations to put up various HRMP that will help in attracting and keeping human resource in order to reduce employee rotation and reduce the cost of recruiting and training new hands-on regular basis; with an implication of an improved organizational efficiency. Onikoyi (2023) also expressed that, organizations with records of high performance usually have strong human resource management practices set in place. Expectedly, organizations like banks with high expectations for efficiency, ought to put in place HRMP of recruiting and training the right people for the job; considering the high level of workload and needed employee involvement, a good rewarding system should be in place. Govand and Nabaz (2021) substantiate the notion that organizational efficiency can be achieved where staff health and safety is not neglected by an organization. Staff recruitment entails series of actions by an organization to entice applicants with the required skills and attitudes.

Recruitment process aims at creating a pool of candidates that are adequate for managers to choose the employees they require (Govand & Nabaz,

2021). All organizations hire qualified staff and put them up for training in order to acquire necessary knowledge and skill needed to manage organization's specific task as well as challenging ones when they arise. Organizations such as banks seems to rely on the improved skills, knowledge and capability gained from training its staff in order to achieve a competitive advantage over other firms in the industry (ShuRung & Chun-Chieh, 2017). Additionally, proper training of staff is essential to employees in carrying out their duties effectively. According to Jaoude (2015), businesses that optimally train their staff triple their profits when compared to their rivals. Ali and Nada (2018) also opine that educating and training of staff have a notable impact on an organization's performance.

Remuneration is also viewed as compensation or a gift given to someone for work done. Earning money through wages or other forms of compensation is one of the reasons why people take up a job. Remuneration involves determining salary levels and other benefits that meet the local law requirements. Hanan (2017) posit that what matters in employee motivation is not just the salary level but consistency in offering the compensations and benefits, and Yinka (2017) believe that employee remuneration relates greatly to performance.

According to Muchemedzi and Charamba (2016) people perform better when they are physically and emotionally able to work and want to work thus, health and safety of staff are an unavoidable aspect of human resource that must be handled with utmost care as employees will perform their duties to the fullest if they are sure that they will be taken good care of in case of an accident or occurrence of any health challenge in the course of discharging their

duties. It suffices to note that the state of health and level of safety of an employee is directly related to his level of performance; therefore, a healthy worker is a productive worker (Onikoyi, et al., 2023). Accordingly, the following hypotheses are formulated:

Ho₁: Recruitment and training of staff has no significant effect on the efficiency of listed Deposit Money Banks in Nigeria.

Ho₂: Staff remuneration has no significant effect on the efficiency of listed Deposit Money Banks in Nigeria.

Ho₃: Health care and safety of staff has no significant effect on the efficiency of listed Deposit Money Banks in Nigeria.

2.2 Theoretical Framework

A number of theories explain the relationship between HRMP and employee behavioural outcomes. One of such is the social exchange theory that was propounded by George Homans in 1961. This theory states that social behaviour is the outcome of an exchange process. That is, people usually weigh the possible benefits and the associated risks of social relationships such that the relationship will be abandoned if the corresponding risks overshadow the rewards or else, the relationship will be upheld (Cherry, 2020). Therefore, the theory of social exchange believes that the employees respond in positive ways predominantly through their attitudes and behaviour when organizations invest or spend on their employees which by implication impact on the efficiency of an organization.

Another theory that explains the connection between HRMP and organizational efficiency is the organizational support theory (OST) which was first

mentioned by Eisenberger, Huntington, Hutchinson and Sowa in 1986. According to Onikoyi et al. (2023) OST believes that ‘employees form a generalized perception on the extent to which the firm value their contribution and cares about their well-being’ That is, employees’ perception about how the firm values and supports them strongly affects their behavioural outcomes such as commitment, motivation and turnover. Onikoyi et al. (2023) outlined compensation management, performance appraisal, occupational health and safety, training and development, employee career management (career growth and development), family support and work-life balance as OST identified human resource management practices that influences perceived organizational support of its employees. The social exchange theory and organizational support theory are both adopted as theoretical support for this study because both theories projected a connection between human resource management practices and employee behavioural outcomes that leads to increased or decreased efficiency.

2.3 Empirical studies

Onikoyi et al. (2023) invests the impact of HRM practices on organizational performance in the manufacturing sub-sector of South – Western Nigeria where cross sectional survey research design was used to collect data from 381 middle level managers of manufacturing companies in Lagos. Analysis was done using Structural Equation Modeling (SEM). And the results show that HRM practices determine and predict components of employee outcomes which in turn improve the performance of the organization.

Similarly, Sheela and Jesura (2022) in a bid to unravel the impact of human resource management practices on organizational performance in IT organizations in Chennai region, used a descriptive research design. Requisite data was obtained from 486 respondents and processed using regression and path analysis and found that performance appraisal, selection & training and rewards & recognition system significantly influence Organizational Performance. These findings are in agreement with the findings of the study by Onikoyi et al. (2023) even when the studies are conducted in different economies and using different sectors. It is therefore, necessary to carry out a study in the banking sector for more findings.

Miranda and Fernando (2020) are also another study that examined how human resource management practices affects perceived organizational performance (POP) in Ceylon Fisheries Corporation (CFC) in Sri Lanka where 123 responses were obtained from the distributed questionnaire. Using a quantitative approach HRMP such as recruitment & selection, training & development, performance appraisal and reward management were found to have improved performance of CFC in Sri Lanka to higher level. These results are consistent with that of Onikoyi et al. (2023) and Sheela and Jesura (2022) yet, there is need for further studies using a different data source like the use of secondary data to draw an inference on the effect of HRMP on efficiency of listed deposit banks in Nigeria.

Jashari and Kutllovci (2020) used questionnaire to source information from 100 managers of manufacturing firms in Kosovo to ascertain the impact of human resource management practices on organizational performance. Using correlation

analysis, they put forth an inference that HRM practices significantly influence organizational performance positively. Also, Kareem and Hussein (2019) found that human resource development practices relate significantly to employee performance in enhancing organizational effectiveness when they employed a descriptive-analytical method based on one regression model to analyze data obtained from the responses of public universities in Iraq. The finding of this study is similar to the findings of Onikoyi et al. (2023); Sheela & Jesura (2022); Miranda & Fernando (2020) that expresses a relationship between HRMP and organizational performance. This current study is therefore necessary as all reviewed studies used similar source and method of data gathering also that such study need to be carried out in a sensitive industry like the bank. Therefore, this study is aimed at determining the effect of human resource management practices on the efficiency of listed deposit money banks in Nigeria.

3.1 Methodology

This study adopts an ex-post facto research design with a population covering all the 14 deposit money banks listed on the Nigerian Exchange Group (NGX) as at 31st December 2021. However, data was obtained from 10 banks, whose data were readily available because they were listed at least 1 year before 2012 and remain listed until 31st December, 2021. This filtered the study population to include: Access bank Plc, Starling bank, United bank for Africa Plc, Union bank Plc, Unity bank Plc, Wema bank Plc, Fidelity bank Plc, First bank Plc, Guarantee trust bank Plc and Zenith bank Plc.

The data were obtained from income statement, the statement of financial position and notes to the accounts published in the annual report and account of the banks for a period of 10 years from 2012-2021. Descriptive statistics, correlation and multiple regression analysis are the techniques for data analysis used to establish the relationship between the variables of interest. And regression analysis is considered most appropriate to predict the effect of human resource management practices on

efficiency of the organization of Deposit Money Banks listed on the Nigerian Exchange Group. Other econometric tests like the test for multicollinearity, data normality and auto correlation and normality test were conducted to ensure that the data set was fit for multiple regression analysis, because according to Bello (2016) non-stationarity implies the existence of a unit root in the data which often give rise to the occurrence of spurious regressions.

Table 1:
Variables definition and Measurement

Variable	Variable	Measurement
Efficiency	Dependent	$E = \frac{\text{Net profit or loss}}{\text{Total assets}}$
Recruitment and Training (RT)	Independent	Total cost incurred in recruitment and training staff of the bank
Staff Remuneration (SR)	Independent	Total amount of salaries and other reward paid to staff
Health Care and Safety (HCS)	Independent	Cost incurred for health care and provision of safety for staff

Source: *Researcher's compilation 2023*

The model for the study is therefore, a multiple regression model presented as follows;

$$\text{Efficiency} = f(\text{HRMP})$$

1

Efficiency = Return on Asset (ROA)

further expressed as:

$$E_{it} = \beta_0 + \beta_1 TR_{it} + \beta_2 SR_{it} + \beta_3 HCS_{it} + e_{it}$$

3

Where:

E = organizational efficiency; RT = Recruitment and Training; SR = Staff Remuneration;

HCS = Health care and Safety; e_{it} = Error term; i = companies (1 to 10); t = time (2012 to 2021).

Table 2:
Descriptive Statistics

	N	Minimum ₦'000	Maximum ₦'000	Mean ₦'000	Std. Deviation ₦'000
RT	100	100911.00	6808000.00	1669628.18	1553144.82
SR	100	1171000.00	58298000.00	24558156.45	15598927.55
HCS	100	219211.00	24951000.00	5184120.48	5379710.78
E (%)	100	-0.11	0.11	0.02	0.02
Valid N (listwise)	100				

Source: **Results of analysis using SPSS output version 20.0**

Table 2 presents the result of descriptive statistics for both dependent and independent variables.

HRMP = RT, SR, HCS

Hence,

$$E = f(\text{RT, SR, HCS})$$

2

Is

It is presumptively expected that β_1 to β_3 will be >0 .

4. Results and Discussion of Findings

This section presents descriptive statistics, correlation and regression technique analysis result.

a. Descriptive Statistics

The result of the descriptive analysis is presented in Table 1.

Recruitment and Training (RT) indicates a mean value of ₦1, 669,628,000.18 with a fluctuation of ₦1, 553,144,000.81. This implies that the sampled

banks spend on average the sum ₦1, 669,628,000.18 on recruitment and training activities. The highest amount spent by the studied banks on recruitment and training was ₦6, 808,000,000.00 and a minimum of ₦100,911,000.00.

Staff remuneration of the banks showed a mean value of ₦24,558,156,000.45 and standard deviation of ₦15,598,927,000.55 implying that the annual remuneration of employees of most of the studied banks are more than the average remuneration value of ₦24,558,156,000.45. The minimum and maximum remuneration paid in a year stood at ₦1, 171,000,000.00 and ₦58, 298,000,000.00 respectively.

Also, table 2 revealed that the studied banks spent on average the value of ₦5, 184,120,000.48 on

b Correlation Result

The result of the correlation analysis is presented in Table 3

Table 3:

Correlation analysis

		TR	SR	HCS	E
TR	Pearson Correlation	1			
SR	Pearson Correlation	.616**	1		
HCS	Pearson Correlation	.188	.524**	1	
E	Pearson Correlation	.187	.057	.034	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Results of analysis using SPSS output version 20.0

The correlation matrix presented in Table 3 shows the absence of multi-collinearity among the explanatory variables as all the variables lies below 0.75 which is considered harmful for the purpose of analysis. The correlations between the independent variables are moderate, low and very low as they lie within 0. 41 – 0.70; 0.21 – 0. 40; less than 0.2 even though, the strength of the positive relationship between the dependent variable (organizational

Health care and safety (HCS) of employees with a standard deviation of ₦5, 379,710,000.78. This implies that most banks under study spent more than the average value on health care and safety of their staff. The minimum and maximum amount spent on healthcare and safety of the staff of banks studied was ₦ 219,211,000.00 and ₦ 24,951,000,000.00 respectively.

The result on table 2 also reveals a mean figure of 0.02 in respect to asset turnover ratio that measures efficiency for this study with a fluctuation of 0.02. This implies that the studied banks earn little return on their investment. It means they are not very efficient in the utilization of their assets in generating profit. The minimum and maximum values of the studied banks' efficiency are -11% and 11% respectively.

efficiency) and all the three dimensions of human resource management practices are very low and not significant at 5%. By implication the regression result is supposed to indicate a low significant positive effect of human resource management practices on organizational efficiency.

c Regression Results

A number of tests were carried out to ensure the reliability of the results. Durbin–Watson statistic was used to test for the presence of autocorrelation

in the study and the result which was calculated as 1.578 (Table 4) indicates that there is no autocorrelation as it lies within the acceptable range of 1.5 – 2.5 (Akpa, 2011). The data can be accepted as valid and reliable as there is also no incidence of multi-collinearity. Multi-collinearity in the model was also tested using Variance Inflation Factor (VIF) statistics, and correlation matrix. The VIF values for all variables of the study are: 1.362, 1.678 and 1.283 for recruitment and training, staff remuneration and health care and safety

respectively (Table 5). These reveal the absence of multi-collinearity among the variables as all the independent variables VIF are more than 1 but less than 10. The F-Change figure of 0.003 represents the fitness of the regression model used at 95% confidence interval. This indicates that the result of this study measures what it purported and could lead to generalization.

The results from the regression analysis are presented in tables 4 and 5.

**Table 4:
Regression Model Result**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.368 ^a	0.135	0.108	0.02181	0.135	4.997	3	96	0.003	1.578

a. Predictors: (Constant), RT, SR, HCS

b. Dependent Variable: Efficiency

Source: Results of analysis using SPSS output version 20.0

**Table 5:
Regression coefficients result**

Model	Unstandardized Coefficients		Standardized Coefficients	t	P-Value	Tolerance/VIF
	B	Std. Error	Beta			
	(Constant)	-0.008	0.049		0.871	
1	TR	0.020	0.006	0.361	0.002	0.734/1.362
	SR	-0.024	0.008	-0.373	0.003	0.596/1.678
	HCS	0.012	0.006	0.226	0.038	0.779/1.283

a. Dependent Variable: Efficiency

Researcher's Computation Using SPSS, Version 20

The regression result revealed that the coefficient of multiple determination (R-Square) shows that about 14% cross-sectional systematic variation in the efficiency of listed deposit money banks in Nigeria is accounted for by the explanatory variables of recruitment and training, staff remuneration and health care and safety while, the remaining 96% of

the variation is accounted for by other factors not considered by this study. Though the percentage effect seems very small at 14% yet the variation caused by the independent variable is statistically significant at 5%.

Furthermore, the result reveals that if the money spent on recruitment and training is increased by

one naira, then organizational efficiency will increase by 36%. This means that recruitment and training has positive effect on organizational efficiency of listed deposit money banks in Nigeria. This is to say that an increase in the amount spent on recruitment and training of staff has the potential of increasing the efficiency of the organization. This seems to support the notion that the more an organization engage in recruiting best hands and training them to acquire the needed knowledge and skill for the job the better for the organization as that will improve the optimum use of resources at possibly low cost and by implication improve efficiency of the organizations. This result is statistically significant at 5% (P-value = 0.002). Hence, the null hypothesis (H_{01}) is rejected and concludes that recruitment and training have significant positive effect on organizational efficiency of listed deposit money banks in Nigeria. This finding is consistent with that of Onikoyi et al. (2023), Sheela and Jesura (2022) and Miranda and Fernando (2020) whose studies revealed that recruitment and training have significant positive effect on organizational performance even when the studies use different data source, from different companies set for different years and different economies.

The results further revealed that, a one naira increase to staff remuneration (SR) will likely reduce efficiency by 37%. This means that if the banks continue to increase remuneration of staff without paying attention to their knowledge and skill to efficiently do the job, they may not be able to discharge their duties even when they are motivated. Such decision to increase staff remuneration even when they are skilled but not

healthy to work may amount to share wastage of resources. This implies that increase in staff remuneration have a tendency of reducing organization efficiency as such addition to remuneration is an increase to cost of operation without a corresponding increase in skills, innovation and service delivery which will subsequently increase productivity and hence increase organizational efficiency. This finding is statistically significant at 5% (P-value = 0.003) therefore, the null hypothesis (H_{02}) is rejected. Consequently, concludes that, staff remuneration has a tendency of significantly reducing organization efficiency of listed deposit money banks in Nigeria.

This finding is consistent with the study of Onikoyi et al. (2023), Jashari and Kutlllovcı (2020) and Kareem and Hussein (2019) if the direction of the effect of the human resource management practice on organizations' efficiency is not to be considered otherwise, there is no consistency as Onikoyi et al. (2023), Jashari and Kutlllovcı (2020) and Kareem and Hussein (2019) found significant positive effect of human resource management practice on organizational performance. This disparity is perceived to exist because those findings were drawn from the analysis of opinions and not from already existing information regarding the variables. Because, going by literature and expectation of this study drawn from perception, more reward in form of remuneration ought to improve performance efficiency.

Finally, the result indicates that, an additional one naira spent on healthcare and safety of the employees will increase efficiency of the organization with about 23%. This signifies that,

healthcare and safety of staff is a determining factor of organizations' efficiency in Nigeria. Impliedly, if more money is spent on healthcare and safety, the employee will be sound physically and emotionally to carry out their duties in an optimally which will lead to more returns on the available resources of the organization. It is often said that 'health is wealth' therefore the healthier a staff is; the more money he makes. Notably, the result is also significant at 5% (P-value = 0.038). The study rejects the null hypothesis (H_{03}) and concludes that, healthcare and safety of staff have a positive significant effect on organizations' efficiency of deposit money banks listed in Nigeria. There is symmetry between the finding of this study and that of Onikoyi et al. (2023) as they also found that concentrating on healthcare and safety of staff affects organizational performance positively.

5. Conclusion and Recommendations

From the forgoing, it is obvious that human resource management practices have significant effect on the efficiency of deposit money banks listed in Nigeria

when all the human resource management practices proxies in this study are considered aggregately. It was further buttressed that human resource management practices of recruitment and training and provision of healthcare and safety have the capacity influencing the efficiency of listed deposit money banks in Nigeria while staff remuneration infusing a negative influence on the efficiency of listed deposit money banks in Nigeria. The study therefore concludes that human resource management practices have significant effect on the efficiency of deposit money banks listed in Nigeria. It further recommends that, the management of listed deposit money banks in Nigeria should ensure that the recruited employees are trained to acquire the needed skill required for the discharge of their duties for an outstanding performance in a challenging business world. The healthcare and safety of employee should be of great concern as experienced staff who is well paid and rewarded cannot work if such an employee is not physically and emotionally fit

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Assessing The Influence Of Audit Quality On Share Prices In The Financial Services Sector: The Roles Of Audit Fees, Audit Tenure, And Audit Firm Size.

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ABSTRACT

This study addresses the critical issue of the relationship between audit quality and share prices in Nigeria's financial services sector, a key driver of economic growth that has experienced significant fluctuations in market valuations. The main aim was to examine the effects of audit fees, audit tenure, and audit firm size on share prices. Utilizing a sample of 32 financial service firms listed on the Nigerian Stock Exchange from 2013 to 2022, the study employed panel data regression techniques, specifically the GMM II models, to analyze the data. The findings revealed that both audit fees and audit tenure have significant negative effects on share prices, indicating that higher audit fees and longer auditor-client relationships can erode investor confidence and depress market valuations. In contrast, audit firm size did not have a significant impact, suggesting that the perceived quality benefits of being audited by a Big Four firm do not necessarily translate to higher share prices in the Nigerian context. The results imply that investors are particularly sensitive to audit-related costs and the potential compromise of auditor independence over long tenures. Consequently, it is essential for corporate managers and directors to adopt cost-effective audit practices without compromising quality, while policymakers should enforce transparency in audit fee disclosures and mandate auditor rotations to enhance independence. Analysts and investors are advised to scrutinize audit fee disclosures and monitor auditor tenure as part of their investment decisions. Despite the lack of significant impact from audit firm size, firms should still consider the reputational advantages of engaging Big Four auditors. The study underscores the importance of maintaining a balance between audit quality and associated costs to sustain investor confidence and market stability. Future research should explore the broader implications of audit quality across different sectors and regions to provide more generalized insights.

1.Introduction

Banks financial performance is a function of interaction of both internal and external operating environments (Bello & Umar, 2019). The financial services sector in Nigeria has witnessed significant fluctuations in share prices, driven by various factors such as economic policies, market dynamics, and firm-specific attributes. Recent studies have highlighted that share prices in the financial services sector are influenced by a range of

variables including macroeconomic indicators, firm performance, and investor perceptions (Afifa, Alsufy, & Abdallah, 2020; Almashaqbeh, Alzoubi, & Mashal, 2020). In this context, the quality of financial reporting and auditing practices plays a crucial role in shaping investor confidence and market valuations. As firms strive to enhance their market credibility, the integrity of audit processes becomes paramount (Pham, Vu, Nguyen, & Nguyen, 2020). High-quality

audits, often associated with reputable audit firms and longer audit tenures, are linked to more accurate and transparent financial disclosures. Recent literature underscores the positive impact of audit quality on various aspects of financial performance and market behavior, suggesting that higher audit quality can lead to enhanced investor trust and reduced information asymmetry (Khajavi & Zare, 2016; Almashaqbeh et al., 2020). This relationship is particularly important in emerging markets like Nigeria, where financial systems are still developing, and market inefficiencies are more pronounced (Eneisik & Akani, 2021).

Audit quality, defined by the auditor's capability to detect and report material misstatements, is a critical component in ensuring the reliability of financial statements (Oroud, Almomani, Kharabsheh, & Alshwabkeh, 2019). High-quality audits provide a safeguard against financial misreporting and enhance the credibility of financial information disseminated to the public and investors. In Nigeria, where the financial services sector is a key driver of economic growth, maintaining high audit standards is essential for fostering a trustworthy financial environment. Despite the recognized importance of audit quality, the Nigerian financial services sector faces several challenges that undermine the effectiveness of audit processes. One significant problem is the prevalence of auditor-client relationships that compromise auditor independence, often due to long tenures and close ties (Ugwunta, Ugwuanyi,

& Ngwa, 2018). This issue is compounded by the limited presence of Big Four audit firms in the Nigerian market, which are generally perceived to deliver higher audit quality (Eneisik & Akani, 2021). The consequence is a financial reporting environment where the accuracy and reliability of financial statements are questioned, leading to volatility in share prices and reduced investor confidence (Khajavi & Zare, 2016).

The root causes of the problem in the Nigerian financial services sector include insufficient regulatory oversight and weak enforcement of audit standards. The regulatory framework governing audit practices needs to be strengthened to ensure that auditors remain independent and adhere to high-quality standards. Another root cause is the limited capacity of local audit firms, which may lack the resources and expertise to conduct thorough and unbiased audits. This limitation often leads to a reliance on a few dominant audit firms, which can create conflicts of interest and reduce the overall quality of audits. The effects of these problems are far-reaching. Poor audit quality can lead to significant financial misstatements, which in turn erode investor confidence and lead to increased market volatility. Share prices become more susceptible to sharp declines when investors lose trust in the financial information provided by firms. This lack of confidence can deter investment, stifle market growth, and ultimately impede the development of the financial services sector (Almashaqbeh et al., 2020).

The gaps in the current auditing practices also highlight the need for regulatory interventions to enhance audit quality. Existing regulations may not be stringent enough to ensure auditor independence and high standards of audit practice, leading to a call for reforms that promote better audit oversight and accountability (Almashaqbeh et al., 2020). Moreover, the financial services firms themselves must adopt better corporate governance practices to support robust auditing processes. Without these improvements, the sector risks continued instability and mistrust among investors, which can impede its growth and development (Oroud et al., 2019). Enhancing the audit quality framework could involve introducing mandatory rotation of audit firms, stricter penalties for audit failures, and continuous professional development for auditors. These measures would not only improve the audit quality but also ensure that financial statements are reliable and reflective of the true financial position of firms. The relationship between audit quality and share prices is underpinned by the signaling theory, which posits that high-quality audits send positive signals to the market about the firm's financial health and governance standards (Pham et al., 2020). Empirical evidence from various studies indicates that firms with higher audit quality tend to exhibit lower volatility in share prices, as investors have greater confidence in the reported financial information (Afifa et al., 2020). This relationship is particularly crucial for financial services firms, which operate in a sector

where trust and transparency are essential for market stability (Bulsara & Maheshwari, 2019). The implications of this relationship extend to policy-making and corporate strategy, emphasizing the need for continuous improvement in audit practices to support market integrity. Better audit quality can lead to more stable share prices, which in turn attracts more investment and supports the overall growth of the financial sector.

This study contributes to the existing body of knowledge by exploring the nuanced effects of audit quality on market behavior within the Nigerian context. The study utilizes robust methods such as panel data analysis to measure the impact of various audit quality indicators—such as audit firm size, audit tenure, and audit fees—on share prices, thereby providing empirical evidence on their significance. The theoretical contributions include a deeper understanding of the signaling theory in emerging markets, while the empirical contributions will offer insights into how improved audit practices can stabilize share prices and foster investor confidence in the Nigerian financial services sector. By addressing the identified gaps and providing actionable recommendations, the study aims to enhance the overall quality of financial reporting and auditing in Nigeria. The advantages of using panel data analysis include the ability to control for unobserved heterogeneity and provide more reliable and generalizable results. This study will also contribute to policy discussions on how to improve audit quality through better

regulatory frameworks and corporate governance practices, ultimately supporting the development of a more transparent and robust financial market in Nigeria.

2 Conceptual Clarifications and Theory

2.1 Share Price

Share price is a critical financial metric representing the market value of a company's equity. It reflects the collective judgment of investors about the future prospects and current performance of the company (Afifa, Alsufy, & Abdallah, 2020). Share prices are determined by supply and demand dynamics in the stock market, influenced by various factors such as company earnings, investor sentiment, economic conditions, and broader market trends (Bulsara & Maheshwari, 2019). According to Almashaqbeh, Alzoubi, and Mashal (2020), share prices are also affected by the quality of financial reporting and transparency, as investors rely on accurate and reliable information to make informed decisions. Various authors have measured share price using different approaches. One common method is to use the closing price at the end of the trading day, which represents the most recent valuation agreed upon by buyers and sellers (Pham, Vu, Nguyen, & Nguyen, 2020). Another approach involves calculating the average share price over a specific period to account for daily fluctuations and provide a more stable measure of a company's market value (Oroud, Almomani, Kharabsheh, & Alshawabkeh, 2019). Some studies use market capitalization, which is the share price multiplied by the total number of outstanding shares, to

assess the overall value of a company in the stock market (Khajavi & Zare, 2016). For companies, a higher share price can enhance their ability to raise capital through equity financing and improve their market reputation (Eneisik & Akani, 2021). For investors, share price serves as an indicator of investment value and potential returns. Fluctuations in share prices can affect investor wealth and influence investment decisions. For the present study, share price is defined as the market value per share of a listed financial services firm in Nigeria, measured by the closing price at the end of each trading day.

2.2 Audit Quality

Audit quality refers to the probability that an auditor will both detect and report material misstatements in a company's financial statements. This concept is crucial for ensuring the integrity and reliability of financial reporting, thereby enhancing investor confidence and market stability (Oroud, Almomani, Kharabsheh, & Alshawabkeh, 2019). High-quality audits are characterized by thoroughness, accuracy, and independence from client influence. According to Afifa, Alsufy, and Abdallah (2020), audit quality is influenced by factors such as auditor expertise, auditor independence, and the audit firm's reputation. Various methods have been used to measure audit quality. One common approach is to evaluate the auditor's report for any qualifications or modifications that indicate issues with the financial statements (Bulsara & Maheshwari, 2019).

Another method involves assessing the auditor's industry specialization, as auditors with extensive experience in a specific industry are more likely to provide high-quality audits (Pham, Vu, Nguyen, & Nguyen, 2020). Audit firm size is also used as a proxy for audit quality, with larger firms such as the Big Four being perceived as providing higher quality audits due to their resources and expertise (Almashaqbeh, Alzoubi, & Mashal, 2020). High audit quality enhances the credibility of financial statements, reduces information asymmetry, and protects investors from potential financial misstatements (Khajavi & Zare, 2016). It also helps in improving corporate governance and regulatory compliance. For the present study, audit quality is defined as the degree to which an audit is capable of detecting and reporting inaccuracies in financial statements, measured by the auditor's industry specialization and the size of the audit firm.

2.3 Audit Fees

Audit fees are the compensation paid to auditors for their audit services, reflecting the complexity, scope, and quality of the audit engagement. The amount of audit fees can provide insights into the level of effort and resources expended by the auditor, as well as the perceived risk and complexity associated with the client (Oroud, Almomani, Kharabsheh, & Alshawabkeh, 2019). According to Afifa, Alsufy, and Abdallah (2020), higher audit fees are often associated with more comprehensive and higher quality audits, although excessively high fees might also

indicate potential threats to auditor independence. Different studies have measured audit fees in various ways. The most straightforward method is to use the actual fees paid to the auditor as reported in the company's financial statements (Bulsara & Maheshwari, 2019).

Another approach involves adjusting audit fees for factors such as the size of the company, complexity of operations, and industry-specific risks to provide a normalized measure of audit effort (Pham, Vu, Nguyen, & Nguyen, 2020). Some researchers also analyze the relationship between audit fees and other variables, such as auditor tenure or the provision of non-audit services, to understand the broader implications for audit quality and independence (Almashaqbeh, Alzoubi, & Mashal, 2020). The implications of audit fees are significant for both auditors and clients. For auditors, fees must cover the costs of conducting a thorough and effective audit while also providing a profit margin. For clients, audit fees represent an expense that must be justified by the benefits of having high-quality and credible financial reporting (Khajavi & Zare, 2016). For the present study, audit fees are defined as the total amount paid by a listed financial services firm in Nigeria to its auditor for audit services, as disclosed in the firm's financial statements.

2.4 Audit Tenure

Audit tenure refers to the length of time an auditor or audit firm has been engaged with a particular client. It is a significant factor in assessing audit quality, as longer tenures can lead to better

understanding of the client's business and improved audit efficiency (Oroud, Almomani, Kharabsheh, & Alshawabkeh, 2019). However, extended audit tenures may also pose risks to auditor independence due to the development of close relationships between the auditor and the client (Afifa, Alsufy, & Abdallah, 2020). Audit tenure has been measured in various ways in literature. One common approach is to count the number of consecutive years an auditor has been engaged by the same client (Bulsara & Maheshwari, 2019). Another method involves categorizing audit tenures into different ranges (e.g., short, medium, long) to analyze their impact on audit outcomes and quality (Pham, Vu, Nguyen, & Nguyen, 2020).

Some studies also consider regulatory guidelines or mandates on mandatory audit firm rotation to assess the implications of audit tenure on audit quality and financial reporting (Almashaqbeh, Alzoubi, & Mashal, 2020). The implications of audit tenure are multifaceted. On the one hand, longer audit tenures can enhance the auditor's knowledge of the client's operations, leading to more effective and efficient audits. On the other hand, prolonged engagements may compromise auditor independence and objectivity, potentially reducing the quality of the audit (Khajavi & Zare, 2016). For the present study, audit tenure is defined as the number of consecutive years a listed financial services firm in Nigeria has been audited by the same audit firm, measured by the duration of the auditor-client relationship.

2.5 Audit Firm Size

Audit firm size refers to the scale and resources of an audit firm, typically categorized into large firms (e.g., the Big Four) and smaller firms. Larger audit firms are generally perceived to provide higher quality audits due to their extensive resources, expertise, and reputational concerns (Oroud, Almomani, Kharabsheh, & Alshawabkeh, 2019). According to Afifa, Alsufy, and Abdallah (2020), larger firms are better equipped to handle complex audits and are more likely to adhere to rigorous auditing standards. Measurement of audit firm size often involves categorizing firms based on their market presence and resources.

The most common categorization distinguishes between the Big Four audit firms (Deloitte, PwC, EY, and KPMG) and non-Big four firms (Bulsara & Maheshwari, 2019). Another approach includes assessing the number of employees, revenue size, and global reach of the audit firm to provide a more granular view of audit firm size (Pham, Vu, Nguyen, & Nguyen, 2020). Some studies also consider the audit firm's market share within specific industries or regions to measure its size and influence (Almashaqbeh, Alzoubi, & Mashal, 2020). The implications of audit firm size are significant for both audit quality and client perceptions. Larger firms, with their extensive resources and expertise, are often seen as more capable of conducting thorough and reliable audits. They are also subject to greater scrutiny and reputational risk, which incentivizes

them to maintain high standards of audit quality (Khajavi & Zare, 2016). For clients, engaging a larger audit firm can enhance the credibility of their financial statements and improve investor confidence. For the present study, audit firm size is defined as the classification of audit firms into Big Four and non-Big Four, measured by the firm's market presence and resources.

2.6.Theoretical Exposition

Agency theory, initially proposed by Jensen and Meckling (1976), examines the relationship between principals (owners) and agents (managers) within a corporation. The theory posits that there is an inherent conflict of interest between these two parties, as agents may not always act in the best interests of principals. This conflict, known as the agency problem, arises due to information asymmetry, where managers possess more information about the company's operations and performance than the shareholders. To mitigate this problem, principals employ mechanisms such as financial reporting and auditing to monitor and control the actions of agents (Jensen & Meckling, 1976). Audit quality plays a crucial role in reducing information asymmetry and mitigating the agency problem. High-quality audits ensure that the financial statements accurately reflect the company's financial position and performance, thereby providing reliable information to shareholders and other stakeholders (Oroud, Almomani, Kharabsheh, & Alshwabkeh, 2019). When audit quality is high, it increases the transparency of financial reporting and enhances investor

confidence, which can positively impact share prices. Conversely, low audit quality can lead to financial misstatements, eroding investor trust and resulting in increased volatility and decreased share prices (Afifa, Alsufy, & Abdallah, 2020).

Audit fees, tenure, and firm size are key determinants of audit quality within the framework of agency theory. Higher audit fees often correlate with more comprehensive audit efforts, reflecting the complexity and scope of the audit engagement. This can lead to higher audit quality, as auditors allocate more resources to thoroughly examine the financial statements (Bulsara & Maheshwari, 2019). However, excessively high fees might also threaten auditor independence if auditors become financially dependent on their clients (Pham, Vu, Nguyen, & Nguyen, 2020). Audit tenure refers to the length of the relationship between the auditor and the client. While longer tenures can enhance the auditor's understanding of the client's business, they may also compromise auditor independence due to familiarity threats (Almashaqbeh, Alzoubi, & Mashal, 2020). The size of the audit firm, often measured by whether the firm is part of the Big Four, is associated with higher audit quality due to greater resources, expertise, and a stronger emphasis on maintaining reputational capital (Khajavi & Zare, 2016).

The linkage between these variables—audit quality, audit fees, audit tenure, and audit firm size—and share prices can be understood through the lens of agency theory. High audit quality, often associated with appropriate audit fees,

balanced audit tenure, and large audit firms, reduces the information asymmetry between managers and shareholders. This reduction in information asymmetry ensures that shareholders have access to reliable and accurate financial information, thereby enhancing their confidence in the company's reported financial health (Oroud et al., 2019). As a result, investors are more likely to invest in the company, leading to higher and more stable share prices. On the other hand, low audit quality, potentially resulting from inadequate fees, excessively long or short audit tenures, and engagement with smaller audit firms, can exacerbate the agency problem, resulting in financial misstatements, reduced investor confidence, and volatile share prices (Eneisik & Akani, 2021).

2.7 Hypotheses Development

Few studies abound in terms of the relation between audit fees and share price. In terms of those that found positive linkage, we review the studies of Afifa, Alsufy, and Abdallah (2020) in Jordan, who investigated the effect of audit fees on the share prices of industrial firms listed on the Amman Stock Exchange. Employing a panel data regression model on samples spanning from 2010 to 2018, they found that higher audit fees, which indicate more comprehensive and diligent audit efforts, positively impact share prices by enhancing investor confidence in the reliability of financial reports. Similarly, Almashaqbeh, Alzoubi, and Mashal (2020) in Jordan found that increased audit fees, reflecting greater audit efforts, positively affected share prices of firms

listed on the Amman Stock Exchange, highlighting the role of thorough audits in bolstering market confidence. However, some studies reported mixed or negative findings. Eneisik and Akani (2021) in Nigeria studied the oil and gas sector and discovered that while higher audit fees were generally associated with improved audit quality, excessive fees could raise concerns about auditor independence, leading to negative market perceptions and thus negatively impacting share prices. In a different context, Ugwunta, Ugwuanyi, and Ngwa (2018) also in Nigeria found that audit fees had an insignificant effect on the share prices of firms in the oil and gas sector, suggesting that other factors may play a more critical role in influencing market valuations. Therefore, it is hypothesized that:

H1: There is no significant relationship between audit fees and share prices of listed financial service firms in Nigeria.

Research examining the relationship between audit tenure and share price has yielded diverse findings. In terms of those that found positive linkage, we review the studies of Bulsara and Maheshwari (2019) in India, who examined the effect of audit tenure on earnings management and share prices of firms listed on the Bombay Stock Exchange. Utilizing panel data from 2008 to 2018, they found that longer audit tenure improved audit quality, which in turn positively impacted share prices by enhancing the reliability of financial reporting. Similarly, Afifa, Alsufy, and Abdallah (2020) in Jordan discovered that longer audit tenure, which allowed auditors to gain deeper insights into their clients' operations,

positively influenced the share prices of industrial firms listed on the Amman Stock Exchange. However, other studies reported negative or mixed findings. Oroud, Almomani, Kharabsheh, and Alshawabkeh (2019) in Jordan found that while longer audit tenures could improve audit quality initially, excessively long tenures might compromise auditor independence, leading to reduced investor confidence and negatively impacting share prices. Eneisik and Akani (2021) in Nigeria observed that extended audit tenures were negatively associated with the share prices of oil and gas firms due to concerns about the potential loss of auditor independence over time. Therefore, it is hypothesized that:

H2: There is no significant relationship between audit tenure and share prices of listed financial service firms in Nigeria.

The relationship between audit firm size and share price has been the subject of numerous empirical studies. In terms of those that found positive linkage, we review the studies of Afifa, Alsufy, and Abdallah (2020) in Jordan, who explored the impact of audit firm size on share prices of industrial firms listed on the Amman Stock Exchange. Using panel data analysis, they discovered that firms audited by Big Four audit firms had higher share prices due to the perceived higher quality and reliability of the audits provided by these large firms. Similarly, Pham, Vu, Nguyen, and Nguyen (2020) in Vietnam found that audit firm size positively influenced the stock return synchronicity of firms listed on the Ho Chi Minh City Stock Exchange, suggesting that larger audit firms contribute to

higher market confidence and better share price performance. However, some studies reported different findings. Almashaqbeh, Alzoubi, and Mashal (2020) in Jordan found that while Big Four audit firms were generally associated with higher audit quality, the relationship between audit firm size and share prices was not always straightforward, as other factors such as firm-specific characteristics and market conditions also played significant roles. In a contrasting study, Eneisik and Akani (2021) in Nigeria reported that the size of the audit firm did not significantly affect the share prices of oil and gas firms, indicating that the market's response to audit firm size might vary across different sectors and regions. Therefore, it is hypothesized that:

H3: There is a significant relationship between audit firm size and share prices of listed financial service firms in Nigeria.

3. Data and Method

The population for this research comprises of forty five (45) financial services firms listed on the Nigerian Stock Exchange. From this population, a sample of 32 firms was selected using a sample filtering technique. This technique ensures that the sample is representative of the population while meeting specific criteria relevant to the study. The sample period spans from 2013 to 2022, providing a comprehensive view of the trends and impacts over a decade. The data for this study were collected from secondary sources, specifically the annual reports of the selected financial service firms. These reports provide detailed and reliable information on various financial metrics, including audit fees,

auditor tenure, audit firm size, and share prices. The use of secondary data from annual reports is advantageous as it ensures the availability of consistent and standardized financial information across the sample firms. This approach also allows for the extraction of historical data, which is essential for conducting a longitudinal analysis over the specified period.

The independent variable in this study is audit quality, which is measured using three proxies: audit fees, audit tenure, and audit firm size. Audit fees are logged to normalize the data and mitigate the effects of outliers, providing a more accurate measure of the audit effort (Afifa, Alsufy, & Abdallah, 2020). Audit tenure is represented as a dummy variable, with a value of 1 if the auditor-client relationship has lasted for three years or more, and 0 otherwise. This measure captures the impact of the duration of the auditor-client relationship on audit quality (Bulsara & Maheshwari, 2019). Audit firm size is also a dummy variable, with a value of 1 if the firm is audited by one of the Big four audit firms, and 0 for other audit firms (Pham, Vu, Nguyen, & Nguyen, 2020). These measures provide a comprehensive view of the different dimensions of audit quality and their potential impact on share prices.

The dependent variable in this study is the share price, measured as the market value per share at the end of each fiscal year (Oroud, Almomani, Kharabsheh, & Alshawabkeh, 2019). The relationship between audit quality and share prices is analyzed using panel data regression

techniques, specifically the GMM II models. These models are chosen for their ability to account for unobserved heterogeneity and provide robust estimates of the relationships between the variables. The GMM II model controls for time-invariant characteristics of the firms (Khajavi & Zare, 2016). The econometric model for this study is specified as follows:

$$SHPR_{it} = \beta_0 + \beta_1 AUDF_{it} + \beta_2 AUDT_{it} + \beta_3 AUFS_{it} + \beta_4 FSIZ_{it} + \mu_{it}$$

Where SHPR is share price, AUDF is audit fees, AUDT is audit tenure, AUFS is audit firm size, FSIZ is firm size; β_0 is the constant term, $\beta_1 - \beta_4$ is the slope coefficient, μ is the error term. The GMM models will be employed to analyze the data, with the Hausman test used to determine the most appropriate model for the analysis. This rigorous methodological approach ensures that the findings of this study are robust and reliable, providing valuable insights into the relationship between audit quality and share prices in the Nigerian financial services sector.

4. Results and Discussion

To accomplish the objective of this study, the study first performed a pooled least squares regression. The study then proceeded to examine whether there were any discrepancies with the fundamental assumptions of ordinary least squares regression such as multicollinearity and heteroscedasticity. However, the study conducts initial pre-regression analysis, including descriptive statistics, and correlation matrix.

4.1. Descriptive Statistics Analyses

In this section, the researcher examines the descriptive statistics for both the independent and

dependent variables of interest. Each variable is examined based on the mean, standard deviation,

maximum and minimum. Table 4.1 below displays the descriptive statistics for the study.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Shpr	320	4.274	8.230	0.180	47.950
Audf	320	4.713	0.733	3.250	8.070
Audt	320	0.628	0.484	0.000	1.000
Aufs	320	0.653	0.477	0.000	1.000
Fsize	320	7.196	0.838	6.010	9.060

Source: Authors Computation (2024)

The variable SHPR, representing share price, has 320 observations with a mean of 4.274 and a standard deviation of 8.230, ranging from 0.180 to 47.950. The high standard deviation indicates considerable variability, suggesting differing market valuations among the firms due to factors like performance and investor perception. AUDF, representing audit fees, shows a mean of 4.713 and a standard deviation of 0.733, with values ranging from 3.250 to 8.070. This indicates substantial audit efforts with consistent audit fees across firms, implying a standard pricing strategy or similar audit complexity. AUDT, representing audit tenure, has a mean of 0.628 and a standard deviation of 0.484, where 62.8% of observations have audit tenures of three years or more. This balance indicates a mix of stable long-term relationships and frequent auditor changes, impacting audit quality through enhanced understanding or potential independence risks.

AUFS, representing audit firm size, has a mean of 0.653 and a standard deviation of 0.477, indicating that 65.3% of observations are audited by Big Four firms. This highlights the market preference for Big Four auditors, associated with higher audit quality due to their resources and expertise. FSIZE, representing firm size, has a mean of 7.196 and a standard deviation of 0.838, with values ranging from 6.010 to 9.060. This indicates that the firms are relatively large and comparable in scale, suggesting more complex operations and greater resources, potentially leading to higher share prices. The high firm sizes may also reflect a selection bias towards well-established financial service firms

4.2. Correlation Analysis

In examining the association among the variables, the study employs the Spearman rank Correlation Coefficient (correlation matrix), and the results are presented in the table below.

Table 4.2: Correlation Analyses

Variables	(1)	(2)	(3)	(4)	(5)
(1) shpr	1.000				
(2) audf	0.745	1.000			
(3) audt	0.017	0.071	1.000		
(4) aufs	0.406	0.633	-0.004	1.000	
(5) fsize	0.886	0.810	0.082	0.453	1.000

Source: Authors Computation (2024)

In the case of the correlation between audit fees and share price, the above results show that there exists a strong positive association between the independent variable of audit fees (0.745) and the dependent variable of share price. This indicates that higher audit fees are associated with higher share prices during the period under study. Additionally, the result shows that there is a very weak positive association between the independent variable of audit tenure (0.017) and the dependent variable of share price, suggesting a negligible relationship between the length of the audit-client relationship and share prices during the period under study. Furthermore, there is a moderate positive association between the independent variable of audit firm size (0.406) and the dependent variable of share price. This suggests that firms audited by Big Four audit firms tend to have higher share prices during the period under study. In the case of the control variable, the result shows that firm size (0.886) is positively associated with the dependent variable of share price. This strong positive correlation indicates that larger firms tend to have higher share prices during the period under study. Also, the results show strong positive associations

between the independent variables of audit fees and audit firm size (0.633) and between audit fees and firm size (0.810). These relationships indicate that higher audit fees are associated with both larger firm sizes and more prominent audit firms during the period under study. Lastly, the correlation between audit tenure and audit firm size (-0.004) is slightly negative, indicating an almost non-existent inverse relationship between these variables during the period under study.

4.3 Regression Analyses

Prior to examining the cause-effect relationships between the dependent variables and independent variables as well as to test the formulated hypotheses, the data was tested for normality because financial time series data are generally believed to be non-stationary and the non-stationarity implies the existence of a unit root in the data which often give rise to the occurrence of spurious regressions (Bello, 2016). Furthermore, the study used a panel GMM regression analysis since the result reveal the presence of heteroscedasticity and endogeneity in the model.

Table 4.4: Regression Results

Variables	(1) OLS	(2) GMM I	(3) GMM II
Audf	-1.806 (0.058)	-0.677 (0.343)	-0.679*** (0.000)
Audt	0.029 (0.964)	-0.382 (0.287)	-0.384*** (0.000)
Aufs	-0.427 (0.586)	0.056 (0.958)	0.054 (0.369)
Fsize	8.852*** (0.000)	7.584*** (0.000)	7.591*** (0.000)
L.shpr		0.404*** (0.000)	0.404*** (0.000)
Intercept	-50.654*** (0.000)	-48.581*** (0.000)	-48.552*** (0.000)
Observations	320	256	256
R ²	0.568		
Sargen Test		chi2: 192.39{0.0000}	chi2: 33.24{0.0553}
endo:	1{0.000}		
VIF	3.06		
Hetest:	275.09{0.0000}		

Notes: *p-values are in parentheses.* *** $p < .01$, ** $p < .05$

Source: Authors Computation (2024)

The table above represents the results obtained from the estimation of the models of this study. The results show that the dependent variable of share price has an R-Square value of 0.568 in the OLS model. This implies that the independent and control variables of the study could explain 56.8% of the systematic change in the dependent variable share price. However, the unexplained part of the changes in share price has been captured by the error term. To further validate the estimates of the pooled OLS results, this study also tests for multicollinearity and heteroscedasticity. Multicollinearity can primarily be identified using tolerance and its inverse, known as the variance inflation factor (VIF). The mean Variance Inflation Factor (VIF) of the regression models is 3.06. The analysis reveals that the average VIF for the models is well

below the threshold of 10, which aligns with Gujarati's (2004) findings. This suggests that there is no multicollinearity present, indicating that none of the independent variables should be excluded from the models. The assumption of homoscedasticity specifically indicates that if the errors exhibit heteroscedasticity, it becomes challenging to rely on the standard errors of the least square estimates. The results indicate that the assumption of homoscedasticity in the pooled OLS regression model has been broken, as evidenced by the significant p-value from the heteroscedasticity test (Hetest: 275.09 {0.0000}). Therefore, the study modifies the model to address this violation by utilizing the Generalized Method of Moments (GMM) regression, as suggested by Greene (2003).

4.4 Discussion of Findings

The results obtained from the GMM II regression model presented in Table 4.4 revealed that audit fees [coef. = -0.679 (0.000)] have a significant negative effect on the share price of the listed financial service firms in Nigeria during the period under study. The result implies that an increase in audit fees will significantly decrease the share prices of the listed financial service firms in Nigeria during the period under study. Hence, the null hypothesis that audit fees have no significant effect on the share prices of the listed financial service firms in Nigeria is rejected. The significant negative effect of audit fees on share prices suggests that higher audit fees, which might be associated with more rigorous and detailed audit work, are perceived negatively by investors, possibly due to concerns about cost efficiency or financial strain on the firm. This finding aligns with the results of Eneisik and Akani (2021), who also observed that excessive audit fees could raise concerns about auditor independence and negatively impact market perceptions. However, this result contradicts the findings of Afifa, Alsufy, and Abdallah (2020), who reported a positive association between audit fees and share prices, indicating that investors might view higher audit fees as a sign of thorough auditing and reliability in financial reporting. The coefficient of Audit tenure [-0.384 (0.000)] also has a significant negative effect on the share price of the listed financial service firms in Nigeria during the period under study. The result implies that a longer audit-client relationship

significantly decreases the share prices of the listed financial service firms in Nigeria during the period under study. Hence, the null hypothesis that audit tenure has no significant effect on the share prices of the listed financial service firms in Nigeria is rejected. The significant negative effect of audit tenure on share prices indicates that longer audit-client relationships might raise concerns about the auditor's independence and objectivity, leading to decreased investor confidence and lower share prices. This result supports the findings of Oroud, Almomani, Kharabsheh, and Alshawabkeh (2019) of excessively long audit tenure compromises auditor independence. Conversely, this finding is at odds with Bulsara and Maheshwari (2019), who found that longer audit tenures could enhance audit quality and positively impact financial performance due to the auditor's deeper understanding of the client's business. Finally, the coefficient of audit firm size [0.054 (0.369)] does not have a significant effect on the share price of the listed financial service firms in Nigeria during the period under study. The result implies that whether a firm is audited by a Big four audit firm or not does not significantly affect the share prices of the listed financial service firms in Nigeria during the period under study. Hence, the null hypothesis that audit firm size has no significant effect on the share prices of the listed financial service firms in Nigeria is accepted. The non-significant effect of audit firm size on share prices suggests that being audited by a Big Four firm does not necessarily influence

investor perceptions and market valuations in the Nigerian context. This finding contrasts with the study by Pham, Vu, Nguyen, and Nguyen (2020), which indicated that larger audit firms positively influenced stock return synchronicity due to their perceived higher audit quality. The lack of significance in this study might be due to the specific market dynamics in Nigeria, where other factors could play a more dominant role in determining share prices.

5. Conclusion and Recommendations

This study addressed the unclear relationship between audit quality and share prices of listed financial service firms in Nigeria. The primary aim was to examine how audit fees, audit tenure, and audit firm size, as proxies for audit quality, affect the share prices of these firms. The key findings of the study revealed that audit fees and audit tenure have significant negative effects on share prices, while audit firm size does not significantly impact share prices. These findings suggest that higher audit fees may be perceived as a financial burden or as indicative of inefficiencies, thereby reducing investor confidence and share prices. Similarly, longer audit tenures might raise concerns about the auditor's independence and objectivity, leading to a negative perception among investors and a subsequent decline in share prices. On the other hand, the lack of significant impact from audit firm size suggests that in the Nigerian context, the perceived quality associated with being audited by a Big Four firm does not necessarily translate to higher share prices. The study advocates that

investors in the Nigerian financial services sector are sensitive to audit-related costs and the duration of the auditor-client relationship. These insights highlight the importance of maintaining a balance between audit quality and associated costs, and the necessity of ensuring auditor independence to bolster investor confidence and enhance market valuations. Given the findings, the following recommendations are made to corporate managers and directors, policymakers and regulators, analysts, investors, both potential and existing, and other stakeholders. Stakeholders should focus on strategies that enhance audit quality while balancing costs and ensuring auditor independence. This approach will help maintain investor confidence and positively influence share prices. Corporate managers and directors should engage in cost-effective audit practices that do not compromise audit quality. Policymakers and regulators should ensure transparency in audit fee disclosures and set guidelines that prevent exorbitant fees, which may erode investor confidence. Analysts and investors should critically assess audit fee disclosures to gauge the cost efficiency of audit practices and their impact on firm valuation. Firms should consider implementing policies for periodic auditor rotation to mitigate risks associated with long audit tenures. Regulators should enforce mandatory auditor rotation policies to enhance auditor independence. Investors and analysts should monitor auditor tenure as a factor in their investment decisions, understanding that longer tenures may affect

auditor objectivity and financial statement reliability. While audit firm size was not found to significantly impact share prices, corporate managers should still consider the reputational benefits of engaging Big Four firms, especially in markets where such affiliation might influence

investor perception. Regulators and policymakers should ensure that audit quality standards are upheld across all firms, regardless of size. Investors and analysts should look beyond audit firm size and focus more on the actual quality and integrity of the audit process.

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Sustainability Disclosure And Market Value Of Banks In Nigeria: The Mediating Role Of Investors

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ABSTRACT

Changes in the market value of corporate organisations have been a major concern to stakeholders especially the investors. Extant literature opines that the market value of organisations may change as a result of the attraction of more investors to the company through the sustainability activities of such organisations. To confirm this opinion, this study examined the mediating effect of investors on the relationship between sustainability disclosure and market value of banks in Nigeria. Sustainability disclosure was proxied by environmental, social, economic and governance disclosure; market value was proxied by Tobin's Q; the relationship was mediated by number of investors (ordinary shareholders). 13 deposit money banks were sampled from a population of 14 and data were collected and analysed using structural equation's modeling. It was found that sustainability disclosure had insignificant direct relationship with market value but it was further found that the mediating effect (indirect effect) of investors on the relationship between sustainability disclosure and market value had a significant effect. It was recommended that corporate organisations should disclose sustainability in a manner that will attract investors in order to boost their market value

Keywords: Sustainability Disclosure, Market Value, Environmental Disclosure, Economic Disclosure, Social Disclosure, Governance Disclosure

1.0 Introduction

Sustainability disclosure is a global best practice for corporate organisations; it connotes the release of information on the use of economic, governance, social and environmental resources of an organisation. Corporate sustainability disclosure is information to stakeholders on transactions that would make the organization remain in business in the future. Corporate sustainability disclosure is categorised into four dimensions of environmental disclosure, economic disclosure, governance disclosure and social disclosure (Global Reporting Initiative, 2019). The import of corporate sustainability disclosure is to disclose additional performance

information to the stakeholders via the four dimensions that have not been explicitly disclosed in the financial statements of the organisation. The four components of sustainability disclosure are strategically made to intimate the public on the below mentioned elements. The Global Reporting Initiative (2019) stipulates that the economic disclosure aspect is concerned with disclosing performance information on the profit, direct and indirect economic impacts, market presence, anticorruption activities, procurements and taxes amongst others. The economic disclosure provides unambiguous information on the

performance of the firm to enable stakeholders to have a clear picture of the organization's economic stand. On the other hand, environmental disclosure provides information on the use of the environment and how sustainable the use has been to avoid compromising the use of the same resources in the future. This includes but is not limited to waste control and management, pollution and environmental degradation, materials use, energy use and biodiversity. A proper disclosure on environmental use may inform the stakeholders on the concern of the corporate organization in respect of environmental sustainability. This may also put the company in a green work place and consequently enhance the company's performance through high patronage.

Another aspect of sustainability disclosure is the social disclosure. The social aspect of corporate sustainability is important because it takes care of the stakeholders and the society in general. Social disclosure could be in the form of information on remuneration paid to workers, staff training and education, occupational health and safety, security, employment and donations to communities amongst others. The disclosure of this information may enhance the company's image and give clarity to the stakeholders on the prospects of the company. If a company is socially sustainable, it enjoys good work relationship with the society where it is domicile and may not be prone to attacks like demonstrations by neighboring communities. Such companies will enjoy conducive working

atmosphere that encourages investors. Governance disclosure anchors the disclosure of information on the governance structure of the firm. It is concerned with the engagement of stakeholder groups and the organisation's profile amongst others. The disclosure avails the public with information on the governance mechanism of the institution.

In Nigeria, sustainability disclosure is given attention due to the increasing actions and inactions of companies in the economy. The disagreement between workers and corporate organizations on inadequate payment of wages has led to several strikes and other industrial actions in Nigeria. The issue of oil spillage in the Niger Delta area and the spread of cement waste products around the Yandev area in Benue State and the gully gutters created by the Dangote Cement during the exploration of limestone in Gboko, Nigeria are some possible reasons for increasing demand for sustainability disclosure by companies in Nigeria. However, some corporate organisations have hitherto reneged on the practice of sustainability disclosure this could be viewed from two debates. Viewed from the negative perspective, sustainability disclosure and its activity are expenditure that impairs financial performance as it reduces the profit of the year (Wong, 1975). The contra opinion is that, sustainability disclosure sends signals in the capital market that attracts more investors to patronise the company (Jalila & Komathy, 2019). The attraction of more investors creates competition in the purchase of the shares of the

firm and consequently increases the market value through high share prices. The proponent's ontology between sustainability disclosure and market value do not have a direct link but is perceived to be mediated by the attraction of more investors to increase the market value of the company. This implies that for sustainability disclosure to enhance market value such disclosure must attract investors to the company. This makes investors mediators between sustainability disclosure and market value. This part of the debate motivated this research to test the mediating effect of investors on sustainability disclosure and market value of deposit money banks listed on the Nigeria Exchange Group.

2.0 Literature Review

2.1 Concept of Sustainability Disclosure

Sustainability disclosure is the information a company releases on how the organization is transacting to enable her remain in business in future. Sustainability disclosure dates back in the 1940s with Professor Theodore J. Krepes as one of the first authors on the theme measurement of social performance of a business organisation (Hess, 2008). Krepes argued that the traditional profit or loss account was inadequate to provide a holistic view on the performance of corporate organisations. He began researching for ways to measure the contribution of companies to the overall goals of the economic system. The work of Krepes was concerned with the social aspect of sustainability disclosure and could not cover other sustainability disclosure aspects like environmental, economic and governance

disclosures nevertheless; it was a starting point for more robust information on the performance of the firm rather than having just the profit or loss accounts only. Another precursor of sustainability disclosure was the work of Howard R. Bowen who developed a system for outside auditors in 1945 to measure the performance of companies on matters such as wages, human, public and community relations. The audit was conducted by independent auditors however, the information was intended for internal use only and was not to be made available to the public (Minguel, 2017). These were all steps to provide additional performance measures that could complement the profit or loss account for extra corporate performance information.

Generally, sustainability disclosure has been viewed differently by different scholars, Jalila and Komathy (2019) opined that sustainability disclosures are very vital because stakeholders and investors would not want to invest in any company that occasions negative impacts on the society while performing its business operations. Iheduru and Okoro (2019) viewed sustainability disclosure as an accounting report that contains the activities, methods and systems of recording, analyzing and reporting environmental, social and economic activities of an organization.

Emeka and Osisioms (2019) defined sustainability disclosure as a report that provides information regarding environmental, social, economic and governance performance. This study does not view the concept of sustainability disclosure far from the views of the

scholars stated above however; this study conceptualises sustainability disclosure as making use and disclosing how the available resources of economic, social, environmental and governance are used such that the same resources could be available for use in the future.

2.2 Concept of Market Value

Market value is a measure of business performance; market value is the worth of a business organization at a particular time (Utile et al 2018). The market-based approach of firm valuation employs the market price method. The market-based approach evaluates the value of a firm on the basis of prices already quoted on the stock exchange, that is, the current price at which the shares of a company can be bought and sold (Laabs, 2012). It is the current quoted price at which investors buy or sell a share of common stock or a bond at a given time often referred to as market capitalization. Market value is often different from book value in the case of securities. This is because the market value takes into account future growth potentials. Regulatory bodies have considered market value as one of the most important basis of calculating firm value. This study chooses Tobin's Q as a main proxy for market value. This implies that the firm's market value was measured using Tobin's Q. This measure is chosen because it contains both market information and information about assets in place, which makes it a suitable proxy in this study. Tobin's Q is defined as the ratio of a firm's market value to the replacement cost of its assets (Okoth & Coskun, 2016). It is a statistic that

might serve as a proxy for the firm's value from an investor's perspective.

2.3 Concept of Investor

The ability to advance money into an organization for the purpose of gaining interest on the funds is recognized as investment. An investor is an individual or corporate person that puts money into another organization for the purpose of gaining returns on the money invested. An investor is one who minimizes risk for his investment to maximize returns on the investment (Utile et, al 2018). Investors are categorized into angel investors, venture capitalists and corporate investors amongst others however, this study concentrates more on the corporate investors who are predominantly ordinary shareholders, preference shareholders debenture and bond holders. Iheduru and Okoro (2019) conceptualized investors as those who are interested in growing their funds by investing into organisations with sustainable potentials to grow the invested funds. The ordinary shareholders who are investors that are not just interested in the return on their investment alone but also participate in the appropriation of the profit at the end of the day are highly interested in the sustainability of the company (Farah & Belina, 2016). Buallay (2020) opined that ordinary shareholders are concerned with the sustainability of the firm because it connotes the performance of the firm that is beyond financial performance and speaks volumes on the relationship between the company and the society.

2.4 Signaling Theory

The signaling theory was developed by Akerlof in 1970. The thrust of the theory posit that the managers of an organization are duty bound to transmit credible and accurate information about the organization to other stakeholders in the capital market. The signaling theory was developed to arrest the issue of information asymmetry in the capital market. The agents of any corporate organization usually have more information than the other stakeholders. The information is usually used to prepare the mandatory disclosure information prepared by the management. Thus any other information available to the shareholders about the organization is viewed as a signal. Signals could be seen as hints about the company that may be vital to investors when making investment decisions. Omoike et al (2018) assert that credible signals released by a business organization can spur high reputation for the company and consequently increase its market performance. This is because, the release of additional information informs stakeholders that the company is reliable and can be trusted not to hide information about its operations even if the information is negative or positive. This may earn reputational advantage for the company and may also attract new investors to the firm (Wasara & Ganda, 2019).

Signaling theory recommend that organizations supply information that would facilitate individuals to have good investment thoughts about the organization, its values and the future

direction. For instance, people might need information to purchase a company's stocks or goods, in such circumstance, the additional information that comes as a hint (signal) is very vital. It is however worthy of note that sometimes the signals are not credible and could be misleading. When signals are voluntary in nature, they are not audited. In addition, companies are not under compulsion to release voluntary information thus, they may release the information that favours them against the information that stands in their way (Onyali et al, 2014).

The relationship between signaling theory and this study is visible in the sustainability disclosure carried out by the company. Sustainability disclosure is a positive signal given by the company to investors and other stakeholders. The wider the disclosure made by the company the more the information is received by investors. The wider the information received by investors the higher the level of investor confidence and patronage in the company. With a high level of confidence, investors will response positively to the company in the form of price movements stocks that tend to rise. This implies that sustainability signals affect the price movement of shares with consequences on the market value of the firm.

2.5 Empirical Reviews

Corporate social responsibility of companies in China was examined by Nana et al (2019) corporate social responsibility was measured using reporting index obtained from the checklist

by the Global Reporting Initiative. Tobin's Q was used as a proxy for market value. The study found that within the study period, CSR had negative insignificant effect on Tobin's Q. Similarly, Farah and Rachmawati (2019) studied the effect of corporate social responsibility disclosure on the performance of Indonesian companies. The study discovered that corporate social responsibility disclosure had negative effect on market value. Ndukwe and Nwakanma (2017) studied corporate sustainability reporting and firm profitability of selected quoted companies in Nigeria. Findings indicated that no significant relationship existed between sustainability reporting and market value.

Buallay (2020) studied sustainability reporting and its impact on market value in London. The results show that sustainability disclosure had negative insignificant effect on market value. Furthermore, the moderating effect of country sustainability law on the relationship between sustainability reporting and market value also had insignificant effect on market value. A related study was further conducted by Effiong et al (2019) using triple bottom line disclosure and market value of Oil and Gas Companies in Nigeria. Triple bottom line was measured using economic, social and environmental disclosure. Market value was measured using share prices while triple bottom line disclosure was measured using the disclosure checklist by GRI. Findings indicated that sustainability variables had significant effect on market value. Jalila and Komathy (2019) examined sustainability

disclosure and firm performance in Malaysia the study sampled 100 firms with good sustainability disclosure practices in 2016. The sample was selected based on the data published by the Minority Shareholder Watchdog Group of Malaysia. It was found that sustainability disclosure had significant relationship with the market value. Idil and Destan (2019) conducted a study on sustainability reporting and market value in Turkey. Sustainability reporting was proxied by environmental and social reporting. Data were collected from automotive industries of different countries between 2010- 2018 using 155 firms. The data were collected via Thomson and Reuters Data Stream database and the GRI sustainability disclosure database. Market value was measured using Tobin's Q. Logistic regression was used for the purpose of data analysis; it was found that sustainability disclosure had significant effect on market value. To conclude the review of empirical studies, it is imperative to state that the studies reviewed indicated varying effects between sustainability disclosure and market value. This may be due to differences in the measurement of variables and the domain the researches were conducted. This study differs from the reviewed studies as it examined the mediating effect of investors on the relationship between sustainability disclosure and market value of deposit money banks in Nigeria against extant studies that examined only the direct effect of sustainability disclosure and market value. Also, the studies reviewed used regression analysis which was quite suitable for

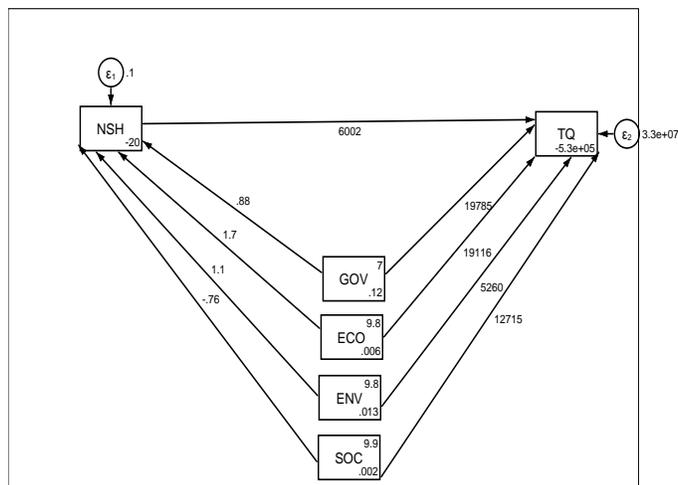
analysis of direct effect between sustainability disclosure and market value. However, this study used the structural equations modelling as it was considered suitable for the analysis of an indirect relationship like the one in this study. In addition, this study collected data using the GRI G4 sustainability disclosure checklist which emphasizes materiality of the disclosure that is industry specific. Contrary, the reviewed studies mostly used disclosure checklist that were earlier than the GRI G4 which were not based on the materiality of items necessary for disclosure in a particular industry. Furthermore, most of the reviewed studies concentrated on the direct effect of sustainability on market value but did not lag the regression models. It therefore appeared as though sustainability disclosure of the same year will affect the market value of the same year. This study corrected this methodological gap by lagging the sustainability data by one year so that

3.1 Model Specification

sustainability signals will be effectively captured in the market value of the following year.

3.0 Methodology

The study employed quantitative research design with data collected from 13 banks that were listed on the NGX. The data were collected using the published annual reports of the banks from 2014-2023. Variables of the study were independent, moderating and the dependent variables. The independent variable was sustainability proxied by economic, social, environmental and governance disclosure; each of the proxies of sustainability was measured as the ratio of the actual disclosure to the total expected disclosure. The mediating variable was investors measured using number of ordinary shareholders while the independent variable was market value proxied by Tobin's Q. The data were analysed using structural equation's modelling. The structure of the model is shown below.



Structural equation's Model

Where

NSH = number of ordinary shareholders

GOV = Governance disclosure

ECO = Economic disclosure
 ENV = Environmental disclosure
 SOC = Social disclosure
 TQ = Tobin's Q

4. Analysis and Discussion of Results

4.1 Descriptive statistics

The descriptive statistics is a function of the data in appendix VI. The descriptive statistics was computed using STATA version 15 and it

comprises of the mean, the standard deviation, the maximum and minimum. The descriptive statistics is presented in the table below.

Table 1: Descriptive Statistics

Var.	Obs	Mean	Std. Dev.	Min	Max
TQ	130	2.65	1.67	0.47	8.14
ENV	130	0.86	0.10	0.77	1.00
SOC	130	0.79	0.75	0.66	0.94
ECO	130	0.86	0.11	0.62	1.00
SIZ	130	7.51	0.74	5.62	8.58
NSH	130	1111559	158762	658834	1671400
GOV	130	0.828	0.78	0.66	0.94

Source: STATA version 15

The result of the descriptive statistics shows that the total number of observations for the study was 130 observations. This means that the data were collected from a panel of 13 banks for a period of 10 years. The study further indicated that within the study period, the average TQ stood at 2.60 with a little deviation from the mean of 1.67 implying that only a few of the TQ deviated from the mean TQ. The maximum and minimum stood at 8.14 and 0.47 respectively. The mean value of TQ of 2.65 was an indication that on the average, the banks generated market value that was higher than the value of the recorded assets. The deviation of 1.77 implied that few banks had TQ that were not close to the mean. The minimum value of 0.47 was an indication that within the study period, at least one bank had market value that was less than the book value of the assets.

In addition, the descriptive statistics show that the mean disclosure index of environmental, social, economic and governance disclosure within the

study period were 0.86, 0.79, 0.86 and 0.80 respectively. The respective deviations from the mean were 0.10, 0.75, 0.11 and 0.07 as indicated by the standard deviations. The maximum disclosure index for environmental disclosure was 1.00 that of social disclosure stood at 0.94, the economic was 1.00 and government disclosure witnessed the maximum disclosure index of 0.94. The mean reporting indexes of all the independent variables were close to '1' meaning that the disclosure ability of the banks on sustainability was generally high. The low values of standard deviations were indications that only few banks disclosed sustainability that was above and below the mean.

The number of investors (NSH) which is a mediating variable in the study has an average of 1.11 million shareholders with the maximum shareholders standing at 1.67 million and a standard deviation of 1.58.

4.2 Analysis of Results using Structural Equation's modelling

To analyse the results using structural equations modelling, the structure of the models was presented. The structure is made of a chain of effects between sustainability variables and investors and between investors and market

value. The direct effect between sustainability disclosure and market value was also captured in the structure. The structure of the models is shown under the methodology.

Table 2: Results of structural equation's modeling

		Coef	Z	P>Z
Goodness of fit	TQ	R ²		0.6930
	NSH	R ²		0.5132
	Overall	R ²		0.7175
	P>Chi2			0.0000
Structural: NSH	Model 1			
	ENV	1.11	0.85	0.396
	SOC	-0.75	3.36	0.001
	ECO	1.72	3.30	0.001
	GOV	0.88	7.47	0.000
TQ	Model 3			
	NSH	6002	2.85	0.005
	ENV	5260	0.82	0.412
	SOC	12715	0.80	0.424
	ECO	19115	1.96	0.050
	GOV	19784	7.07	0.000

Source: STATA version 15

Table 2 above indicated the model probability of 0.0000, which is an indication that all the models included in the structural equation's model were fit for interpretation and generalization of results. The table also indicated an R² (coefficient of determination) of 0.513 for model 1, 0.693 for model 2 and 0.717 for model 3 which was the overall model. This was an indication that in model 1, 51% of the variation in the number of investors (NSH) of the banks investigated was a function of sustainability disclosure activities of the banks within the period investigated. In addition, the R² of 0.693 in model 2 was an indication that sustainability disclosure accounts for 69% of the variation in market value (TQ) of the banks examined. Furthermore, the R² of 0.717 in the overall model was an indication that when

sustainability disclosure attracts investors (NSH) to affect market value (TQ), sustainability disclosure would account for 72% of the variation in market value of the banks examined. Summarily, all the values of R² in the three models are above 50%, which was an indication that within the design of the models of the study and the study period, sustainability disclosure accounted for more than 50% of the variation in market value of the Banks. Other factors that may cause changes in market value accounts for less than 50% in all the three models set for the study. The table also indicates under model 1 that ENV has significant (0.001) effect on NSH. This means that a unit increase in environmental disclosure (ENV) holding other variables constant would increase the number of investors

of the banks investigated by 1.11 units. Furthermore, the table indicated under model '3' that ENV has an insignificant (0.412) effect on TQ. This means that units increase in environmental disclosure would insignificantly affect market value if all other factors are held constant. The table further indicated under model '1' that SOC has a negative and insignificant (0.396) effect on NSH. This means that unit increase in social disclosure holding other variables constant would insignificantly reduce the number of shareholders of the banks investigated by 0.75 units. On the other hand, the table indicated under model '3' that SOC has insignificant 0.424 effects on TQ. This means that units increase in social disclosure would insignificantly increase market value if all other factors are held constant. The same table provided that ECO has significant (0.001) positive effect on NSH. This meant that when other variables are held constant within the period under investigation, a unit increase in ECO would increase the number of investors by 1.72 units. Further evidence in the table provided that under model '3' ECO had significant (0.050) positive effect on TQ if all other factors are eliminated.

This showed that within the period of the study, a unit increase in ECO will increase market value. In addition, the table provided that GOV has significant (0.000) effect on NSH. This connotes that a unit increase in GOV would increase investors by 0.88 units. Similarly, the table indicated in model '3' that GOV had significant (0.000) effect on TQ. This was an indication that GOV may have direct effect on market value of the Banks investigated. The table indicated under model '3' that NSH had significant (0.005) effect on TQ, which was an indication that the attraction of more shareholders can significantly change the market value of the Banks if all other factors are kept constant.

4.3 Analysis of Direct and Indirect Effect

The table below contains data for the analysis of the direct and indirect effect. The direct effect is a representation of the direct effect of sustainability variables on market value while the indirect effect is the representation of the mediating effect of investors on sustainability disclosure and market value of the Banks. This section therefore, examined whether direct or indirect effect exists regardless of whether the mediating effect is partial or full mediation

Table 3: Direct or Indirect effect

Direct effect		Coef	Z	P>Z
Structural: NSH	ENV	1.11	3.29	0.001
	SOC	-0.75	-0.85	0.396
	ECO	1.72	3.38	0.001
	GOV	0.88	7.47	0.000
TQ	NSH	6002	2.85	0.005
	ENV	5260	0.82	0.412
	SOC	12715	0.80	0.424
	ECO	19115	1.96	0.050
	GOV	19784	7.07	0.000
Indirect effect		Coef	Z	P>Z
Structural: NSH	No Path			
TQ	ENV	6667	2.15	0.032
	SOC	-4561	-0.81	0.461
	ECO	10355	2.17	0.032
	GOV	5284	2.65	0.008

Source: STATA version 15

Considering the direct effect in table 3 above, all the sustainability variables had significant effect on NSH except SOC that had an insignificant effect. This meant that within the study period, all the sustainability disclosure variables directly affect the investors of the banks investigated except social disclosure. The table however, indicated under the same direct effect that NSH had significant (0.005) effect on TQ, meaning that the changes in shareholders can affect the market value of the Banks. ENV had insignificant effect on TQ. This meant that within the study period, if other factors were not considered, environmental disclosure had no direct effect in the changes in the market value of the banks. On the contrary, ENV has significant (0.032) effect on TQ in the indirect effect. This implied that Environmental disclosure may be mediated by investors to affect market value. Based on the results in table 3, we concluded that since ENV

has insignificant effect on TQ under the direct effect but had significant effect under the indirect effect, mediation exists between ENV and TQ therefore, environmental disclosure may only pass through investors to affect the market value of the Banks.

Another variable of interest was the SOC (social disclosure) which has insignificant (0.424) effect on TQ in the direct effect and an insignificant (0.461) effect on TQ in the indirect effect. Both the direct and the indirect effect were insignificant implying that within the study period, investors had no mediating effect on the relationship between social disclosure and market value of the Banks studied. Contrary, ECO had significant (0.050) effect on TQ in the direct effect and (0.032) significant effect on TQ in the indirect effect. This implied that investors had mediating effect on the relationship between economic disclosure and market value. Similarly,

GOV has positive significant effect on TQ in both the direct and indirect effect meaning that considering the study period with other variables held constant, investors had mediating effect on the relationship between governance disclosure and market value of the Banks investigated.

4.4 Environmental disclosure and market value

The analysis of data in this study indicated that environmental disclosure had insignificant direct effect on market value of banks listed on the Nigeria Exchange Group. This is consistent with the findings of Abubakar et al (2017); Zamil and Hassan (2019) and Omoike, et al (2018) who empirically examined the relationship between environmental disclosure and market value and found insignificant relationship between environmental disclosure and market value. This means that an increase in environmental disclosure may not automatically increase market value. The result however changed when the effect of environmental disclosure on market value was considered from an indirect perspective where investors were introduced as mediators between environmental disclosure and market value. It was observed that environmental disclosure successfully passed through the investors to affect market value. This meant that environmental disclosure attracted more investors to invest into the banks by purchase of more shares causing competition for the shares and consequently increasing share prices that eventually increased the market value of the banks.

This result was supported by the voluntary disclosure theory and the signaling theory. The latter posit that the managers of an organization are duty bound to transmit credible and accurate information about the organization in order to signal their performance. By implication, the management of the Banks investigated had the moral obligation to provide information to the stakeholders to signal the Banks performance. The information may have served as signals to investors in making informed investment decisions. In addition, the voluntary disclosure theory stated that information is supposed to be released willfully in its natural form without adulteration to provide facts about an organisation's performance. Such information attracts more investors and consequently impact positively on performance. The release of environmental disclosure information by the banks may be what had attracted more investors to purchase the shares of the banks causing an increase in share prices and higher market value for the banks. The study recommended that banks investigated should continue with environmental disclosure activities as it enhances market value through the attraction of more investors and high share prices.

4.5 Social disclosure and market value

The effect of social disclosure on investors was insignificant as shown in table 3 under the direct effect results. This means that an increase in social disclosure activities by one unit may insignificantly increase the number of investors of the banks investigated. This finding was

supported by the voluntary disclosure theory that states that companies should voluntarily disclose information even if the information does not support their objective. The finding is further supported by the legitimacy theory because legitimacy theory posits that organizations should respect the law and behave in accordance with the norms of the land. Also, companies that are legitimate and ethical in their functions are rewarded with high reputation; this connotes that companies are obligated to disclose their CSR to be law abiding with the laws of the land.

Furthermore, the analysis of this study indicated that within the study period, corporate social responsibility disclosure has direct insignificant effect on market value of banks listed on the Nigerian Exchange Group. Consistent with this result were the findings made by Bualley (2020); Nan et al (2019), Erhirhie and Ekwueme (2019); who also found insignificant relationship between corporate social responsibility reporting and market value of different corporate organizations. The study also found an indirect insignificant relationship when investors were used as mediators between social disclosure and market value. The implication of this result was that within the study period, social disclosure did not affect market value even when it was mediated by investors.

This result is supported by the stakeholder theory, which posits that firms must accommodate the needs and desires of all the stakeholders including those that may affect or be affected negatively by the banks. This means that if the

social disclosure information prepared by the banks does not attract investors, they may not buy the shares of the firm and market value may be affected negatively. By the position of this theory, firms have to be sustainable in their functions by considering all the stakeholders even if it is detrimental to the determination of market value. Thus, it was concluded that within the study period, the effect of corporate social disclosure on market value may not be appreciated even with investors as mediators. The study recommended that going forward, the banks examined should prepare and disclose adequate social responsibility activities in such a manner that more investors would be attracted to invest in the company this is because some of the disclosure requirements on social disclosure were not met by the banks in some of the years examined.

4.6 Economic disclosure and market value

Similar to the findings of Jalila and Komathy (2019); Effiong et al (2019) and Utile et al (2018) that economic disclosure had positive and significant effect on the performance of different companies studied, this study also obtained a direct positive and significant effect between economic disclosure and the market value of Deposit Money Banks listed on the Nigerian Exchange Group. This means that an increase in economic disclosure would increase the market value of the banks examined. The indirect effect between ECO and TQ also had a positive and significant effect. This meant that the effect of

economic disclosure on market value would be appreciated more if investors mediate it.

This finding contradicts the agency theory where the agents were assumed to act against the interest of the principal. Here, the agents have released economic information by fully disclosing economic issues that reduced information asymmetry for more investors to make informed investment decisions. In addition, investors mediate economic disclosure because investors are interested in economic information like market presence, procurement practices, anti-corruption reports and anti-competitiveness which are economic disclosure activities that may enable the investors to have adequate information for informed decision making. Since investors have mediating effect between economic disclosure and market value, the banks investigated are encouraged to continue to improve their economic disclosures to attract more investor participation that may increase market value.

4.7 Governance disclosure and market value

The analysis of governance disclosure had significant direct effect on market value of Banks listed on the Nigeria Exchange Group. This is consistent with the findings of Oladeji and Agbesanya (2022) and Salem et al (2019) who empirically examined the relationship between governance disclosure and market value and found significant relationship between the two variables. This meant that an increase in governance disclosure may increase market

value. The result was similar when the effect of governance disclosure on market value was considered from an indirect perspective where investors were used as mediators between governance disclosure and market value. It was found that governance disclosure successfully passed through investors to affect market value. This further meant that governance disclosure attracted more investor because investors are interested in the governance structure of any organization, they intend to invest in. The profile of the directors of the firm for example is usually an interesting part for investors because the integrity of the directors is a motivating factor for investor participation in the firm. If the directors are predominantly of questionable reputation, investment may not receive optimal patronage. The later posit that the managers of an organization are duty bound to transmit credible and accurate information about the organization in order to signal their performance. By implication, the management of the Banks investigated had provided adequate signals on governance disclosure. The legitimacy theory posits that firms should carry out their functions in line with the law and norms of the society. Governance disclosure is therefore a legitimate thing that any corporate organization would willingly disclose. Since the disclosure of governance issues had significant effect on market value with or without the mediation of investors, Banks investigated were encouraged to continue to take adequate governance disclosure to enhance market value.

5 Conclusion

This study aimed at examining the mediating effect of investors on the relationship between sustainability disclosure and market value of Deposit Money Banks listed on the Nigeria Exchange Group. Investors mediated four variables of sustainability disclosure and market value. The conclusion of this study was based on the findings arising from the test of the hypotheses that were formed in chapter one. First, the result obtained from table 3 under the indirect test indicated that the mediating effect of investors on the relationship between environmental disclosure and market value was significant. This means that environmental disclosure does not have direct effect on the market value of the banks since the direct effect of environmental disclosure and market value was insignificant as shown by the direct effect test in table 3. The implication of this finding was that within the study period, investors of the Banks could only motivate the nexus between environmental disclosure and market value. This may be possible because the environmental disclosure was done in a manner that attracted more investors cum additional capital for the banks; innovative ideas and improved technology that may have led to increase productivity to enhance market value. Besides, the attraction could have created competition for the shares of the Banks causing a rise in share prices to enhance market value. Based on the findings of this study and subject to the study period, it was

concluded that investors are mediators between environmental disclosure and market value.

The second conclusion was that within the study period, investors had no mediating effect on the relationship between social disclosure and market value of Deposit Money Banks in Nigeria. This was because the result of the indirect test in table 3 on social disclosure and market value was insignificant. Furthermore, the result of the direct effect also indicated that social disclosure had insignificant effect on market value. In addition, the effect of social disclosure on investors was also insignificant. The implication of this conclusion was that between 2011- 2020, the social disclosure of the banks was unable to attract investors and market value could not be enhanced directly nor indirectly.

Thirdly, it was concluded that investors had significant mediating effect on the relationship between economic reporting and market value of Deposit Money Banks listed on the Nigeria Exchange Group. The conclusion was drawn based on the analysis of data under the indirect effect in table 3 where investors were found to have significant mediating effect on economic reporting and market value of the banks studied. This relationship may have been possible because investors were interested in the disclosure on anticorruption policies of the banks, market presence and anticompetitive strategies that could have motivated investors to invest more causing a boost in the market value of the Banks.

The last conclusion was that investors had significant mediating effect on governance

disclosure and market value of Deposit Money Banks listed on the Nigeria Exchange Group. The conclusion was based on the results obtained in table 3 under the indirect effect test. The result indicated that governance disclosure successfully passed through the action of investors to affect the market value of the Banks. This may have occurred because of the interest of investors on

the governance practices of the banks. The implication is that banks investigated may have made adequate disclosure on governance issues of interest to investors. This may have caused the attention of many potential investors to invest in the banks with positive consequences on the market value.

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Human capital (HC) Development and SMES Performance: A Conceptual Review.

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Abstract

This conceptual paper examines Human Capital Development (HCD) and its impact on SME performance in Nigeria. The literature on HCD strongly supports the existence of a causal relationship between HCD and SME performance. Organizations strive to hire individuals who can enhance operational efficiency and contribute to competitive advantage and organizational success, which can be achieved through HCD. HCD encompasses activities such as training, education, investments in classes, workshops, presentations, and work experience. The findings indicate that HC improves the efficiency and productivity of SMEs, it enhances SMEs competitive advantage, HCD support SMEs growth and sustainability and improves SMEs innovativeness capacity. Consequently, the study concludes that there is a positive and significant relationship between HCD and SMEs performance. Content analysis was conducted using documentation, seminars, and databases. The study recommends that SME owners and managers should invest more in HC and prioritize HCD by engaging employees in training programs, obtaining educational qualifications, and participating in workshops, seminars, and exhibitions. This approach is essential for building robust knowledge and work experience among employees, thus achieving higher levels of organizational performance.

Keywords: Human Capital, Human Capital Development, SMEs Performance, Human Development

1.0 Introduction

Human capital development plays a crucial role in the performance of SMEs. This is because all activities conducted within an organization rely on the skills of its workforce to achieve optimal results aligned with organizational goals. According to Rumawas (2015), improving employees' skills is an effort to enhance their capabilities beyond their current abilities. Sari

(2015) emphasizes the critical role of HC development in organizations, asserting that it distinguishes one organization from another. Enhancing HC transforms it from a mere resource into a competitive advantage for organizations, thereby improving employee performance. Daniel *et al.* (2019) hypothesized that HC influences organizational culture and structure, positively impacting organizational

sustainability and performance. Widarni and Malang (2015) affirm that SMEs heavily rely on HC, suggesting that investing in education, training, and retraining is essential for cultivating new entrepreneurs and enhancing SME efficiency. Anosa (2021) supports this viewpoint, stating that HC enables organizations to achieve and sustain higher operational effectiveness and productivity, thereby enhancing their chances for success and performance. The study aims are to explore the significant relationship between HC development and SMEs performance. To

2.1 Conceptual Review

2.1.1 Conceptualizing Human Capital Development

A firm's HC represents a critical and sustainable source of competitive advantage, playing a pivotal role in achieving success (Adebayo et al., 2019; Emmaculate et al., 2019; Anosa, 2021). Ahmed *et al.* (2021) have demonstrated that investments in HC of the workforce can increase employee productivity and contribute to organizational performance. Similarly, enhancing HC enables individuals to develop knowledge, skills, and competencies that add value to the organization (Adebayo *et al.*, 2019). According to the resource-based theory, firm performance hinges on how effectively managers leverage resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). HC meets these criteria, and therefore, firms should nurture and safeguard such resources to enhance organizational performance (Adebayo *et al.*, 2019).

achieve this objective, the paper has the introduction, the literature review which discussed previous studies and findings related to the topic. The methodology employed in the study. Finally, the study concludes that HC improves the efficiency and productivity of SMEs, it enhances SMEs competitive advantage, HCD support SMEs growth and sustainability and improves SMEs innovativeness capacity. the study makes valuable recommendations based on the findings.

Literature Review

Anosa (2021) further extends the argument from a knowledge-based perspective, emphasizing that acquiring talent externally enhances a firm's knowledge heterogeneity, which is crucial for sustainable organizational performance. HC is essential for organizations to creatively respond to environmental changes and is widely acknowledged for its impact on SME performance (Emmaculate *et al.*, 2019). HCD is a multifaceted concept that involves enhancing individuals' capacity to generate and utilize knowledge and expertise, thereby building intellectual capital (Daniel *et al.*, 2019). Ugochukwu and Ikechukwu (2018) conceptualize HCD as an ongoing process of assessing an organization's HC needs under evolving conditions and formulating personnel strategies to ensure long-term effectiveness. Further review of literature reveals diverse definitions highlighting critical components inherent in the concept of HC. Minini and

Nwinee (2021), for instance, define HC as encompassing employees' competencies, knowledge, skills, creativity, attitudes, commitment, wisdom, and experience. They emphasize that HC includes the values, attitudes, and behaviors of individuals within the organization, as well as management practices that motivate people to realize their potential. Human capital is integral to development and comprising elements such as knowledge, skills, abilities, experience, insights, and training, underpins all aspects of organizational development, social, economic, technological, (Ifejika, 2017). Okafor *et al.* (2019) view HC as investments in career support, off-the-job training and on-the-job training, skills development, knowledge enhancement, and attitude improvement, all of which enhance the productivity of employees with limited skills, knowledge, or attitude.

According to Cross (2019), HCD encompasses educating new employees, upgrading skills and knowledge of existing staff, addressing challenges in technological advancements, acquiring skills necessary in the competitive market, and enhancing HC intelligence. Daniel *et al.* (2019) highlight that HC consists of knowledge, skills, and experience, which can be cultivated through coaching, training, development programs, empowerment, assignments, and participation in workshops and seminars. This perspective aligns with Egberi's (2019) observation that individuals possess innate abilities, experience, and skills,

collectively forming HC. In a similar vein, Marimuthu and Ismail (2009) affirm that HCD within organizations significantly contributes to enhancing organizational competencies, thereby fostering creativity and improving firm performance, which positively impacts the organization due to effective HC practices. From the above, it can be concluded that the approach to HCD is crucial in strengthening SMEs' performance. This study views HCD in relation to SMEs' performance as a catalyst for knowledge transfer, skill enhancement, innovation, and overall firm performance leading to the achievement of organizational objectives. Similarly, Rumawas (2018) views HCD as fundamentally an investment aimed at enhancing human productive capacity through efforts in improving work quality, education, training, and health. Additionally, Daniel *et al.* (2019) reiterates that HCD has become increasingly essential and critical for organizations in the current business environment. Ahmed *et al.* (2021) identified training, education, and work experience as indicators of HCD, according to the study, the indicators are likely to positively influence SMEs' performance.

2.2.1 Training

This aspect is crucial in any organizational setting as it serves as a key driver of SMEs' performance by enhancing employee skills, increasing productivity, and improving organizational effectiveness and efficiency (Sirinaga *et al.*, 2020). Anosa (2021) underscores that effective

and efficient HC development requires organizations to invest concerted exertions in their employees' development to stay up-to-date of the evolving business environment for enhanced job productivity. According to Zemburuka and Dangarembizi (2020), training is a methodical procedure aimed at imparting knowledge, skills, abilities, and appropriate attitudes and behaviors necessary to meet organizational requirements. They emphasize that training teaches employees how to perform their jobs professionally and prepares them for future responsibilities.

In another study, Okafor *et al.* (2019) define training as a process of imparting knowledge and skills essential for employees to execute their assigned tasks. They argue that training not only focuses on improving current job performance but also equips employees with the necessary knowledge and skills to effectively achieve their organizational set goals. The study further contends that training enhances employees' knowledge and skills, thereby preparing them for new or expanded responsibilities. Motlokoa *et al.* (2018) posit that training is vital to organizational success, likening it to the bloodstream of an organization, crucial for achieving its objectives and goals by leveraging its HC effectively. Therefore, organizations should invest in employee training to enhance their performance and that of the organization as a whole. Based on the reviewed academic literature, this study aligns with the consensus among extant studies in literature concerning the impact of training on

SMEs' performance. Training serves as a motivational factor that enhances employee productivity and improves organizational performance.

2.2.2 Education

According to Minini and Nwinee (2021), entrepreneurial education serves as the key catalyst for economic growth and development of nations, with HC forming the fundamental basis for national wealth. Anosa (2021) asserts that employing academically qualified workers in organizations initiates sustainable HC development. Mahmood *et al.* (2021) similarly argue that entrepreneurship education is essential for achieving effective economic growth and sustainable development. In alignment, Olusadum (2020) emphasizes the crucial role of education in developing HC for the nation, citing UNESCO's recommendation that countries allocate 26% of their annual budget to education. Idrus *et al.* (2020) emphasize that education is imperative in the success of business units like small and medium enterprises (SMEs), as it stimulates critical thinking among workers and motivates them to drive business development. Education guides SME workers and entrepreneurs towards achieving the goals and aspirations necessary for business success. Studies by Suroso and Anggraeni (2017), Silvia and Frantisek (2016), and Othman *et al.* (2016) underscore that entrepreneurs with higher education and management experience have greater impact on business performance compared to those with lower education levels

and limited management experience. Based on the reviewed studies, this research agrees that education significantly influences SMEs' performance, highlighting the necessity for SME owners/managers to possess comprehensive business education to harness its benefits effectively.

2.2.3 Work Experience

Work experience plays a crucial role in enhancing SMEs' performance. Work experience facilitates the development of knowledge and skills through practical engagement in job tasks, thereby improving employee output per task assigned (Ardianto, 2020). According to Maftuchach and Salfadilla (2020) affirm with strong employee competencies are evident in those with extensive years of experience, as they possess confidence in their abilities. Ardianto (2020) further emphasizes the significance of experience across all activities, citing it as the best teacher due to the learning derived from personal encounters.

In a related perspective, Sprint *et al.* (2017) highlight that organizations often prioritize experienced candidates for senior positions, believing they bring not only a suitable fit for the role but also leadership insights that positively influence team performance. Peng *et al.* (2020) argue that entrepreneurial work experience is essential not only for immediate entrepreneurial success but also for the long-term growth of entrepreneurial ventures. Similarly, Othman *et al.* (2016) illustrate that entrepreneurs with prior business experience tend to achieve better firm performance. Also, Egberi (2019) ascertain that

in today's knowledge driven economy, the performance of SMEs' and competitive advantages are relatively attributed to the work experiences and skill sets of a workforce.

2.3 SMEs Performance

Sustainable development of developing countries like Nigeria depends largely on the performance of their indigenous micro, small and medium scale enterprises (Suleiman, Aliyu & Bello, 2021). These enterprises are generally considered as the engine of economic growth as a result of their immense contribution towards employment generation, poverty reduction, export earnings and gross domestic product

Performance is defined as the quality and quantity of work accomplished by an employee in fulfilling their responsibilities according to the tasks assigned (Muhtadi *et al.*, 2021). Murali (2018) suggests that performance is a multidimensional construct that can be subjective, depending on specific objectives and perspectives being assessed. There is no single best approach to measuring performance. Zaato *et al.* (2020) refer to SMEs' performance as the ability to achieve desired outcomes and activities that are generally accepted by the firm, which can be measured through both subjective (financial) and objective (non-financial) criteria, or a combination of both. Cicea *et al.* (2019) elaborate that SMEs' performance can be quantitatively assessed by measures such as efficiency, financial results, production levels, customer base, market share, profitability, productivity, cash flow, expenses, and liquidity. Qualitatively,

performance can be evaluated based on goals achievement, management style, employee behavior, customer satisfaction, product and process innovation, organizational and marketing development. Kiyabo and Isaga (2020) define SMEs' performance as the outcomes of firms' business activities. Muhtadi *et al.* (2021) further categorize performance into individual performance and organizational performance.

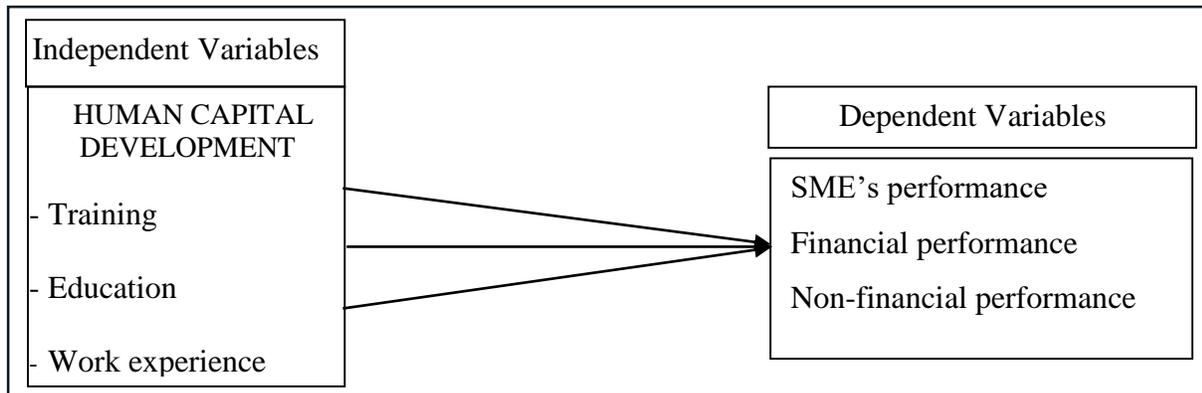
2.4 Human Development

Human development, as a concept, involves acquiring and enhancing the shared industrial relevant skills, key education, and the experiences that are essential for the social, economic and political advancement of a given nation. It is closely associated with investing in human beings as creative and productive resources (Ogunniyi, 2018). Olusadum (2020) defines development as a change that occurs in a specific area aimed at improving the standard of living for its populous. Development in human value is also interpreted as the process focused on enhancing individuals' capabilities over time to manage desired change effectively and mitigate undesirable outcomes, with a particular emphasis on building the knowledge and skills of organizational members to tackle new responsibilities and challenges (Lind, 2019). According to Okowa and Vincent (2019), education plays a pivotal role in human development by equipping individuals with necessary skills and knowledge to enhance their efficiency and value. Human development

encompasses the entirety of human potentials—knowledge, skills, attitudes, energy, and technology—inherent within a nation's HC stock. Ifejika (2017) similarly emphasizes the highlighted importance of education in human identified development as it provides a skilled labor force and serves as a factor for the attainment of other developmental goals. The United Nations (UN), as cited in Ekperiware *et al.* (2017), measures human enhancement by indicators such as the average life expectancy (i.e. health), adult literacy (that is education), and average income earned (that is standard of living). HC can be broadly viewed as individuals' well-being in terms of health, social, educational, economic, and political freedoms. Daniel *et al.* (2019) perceives human development as a process aimed at enhancing employees' capacity to achieve and sustain goals and aspirations beneficial to the individual, firm, community, and the world at large.

In light of these perspectives, the current study conceptualizes human development as a process that expands individuals' opportunities and enhances their well-being. This involves assessing the external and internal environments of countries and organizations, supporting individuals, groups, and organizations in identifying and implementing strategies that improve SMEs' performance.

Conceptual framework



Figure; 1

Source: adopted from Daniel *et al.* (2019)

The conceptual framework reveals the relationship between independent and dependent variables. The independent variable is Human Capital Development (HCD), comprising its dimensions (Training, Education, and Work Experience). The dependent variable is SMEs performance, encompassing its measures (Financial Performance Measurement and Non-Financial Performance Measurement). This framework is based on the conceptualization aimed at investigating the impact of HCD on the performance of SMEs. It hypothesizes that HCD positively influences SMEs' performance. Additionally, the conceptual framework illustrates the existence of a relationship between HCD and SMEs' performance.

2.4.1 Human Capital Development and SMEs Performance

Human capital development and SMEs performance are discussed from both individual and organizational perspectives, as these elements constitute the fundamental components of HC (Marimuthu *et al.*, 2009). Khayinga and Muathe (2018) assert that the success of every

organization hinge on HC necessitating the ability to develop, deploy, and continually engage it through effective HC management to maintain competitiveness and gain an edge over other firms. In Nigeria, approximately 96% of business ventures are SMEs, making a modest contribution to business generation and poverty reduction (National Bureau of Statistics, 2015; SMEDAN, 2017). Evidence suggests that SMEs in Nigeria perform less favorably compared to their counterparts in other developing countries such as South Africa, Ghana, and Malaysia (Du and Banwo, 2015). The low performance of SMEs in Nigeria adversely impacts GDP, growth rates, unemployment levels, and Nigeria's ranking on the world competitiveness index, highlighting the significant challenges facing SMEs in the country. Scholars like Ojokuku and Sajuyigbe (2015), Duru *et al.* (2018), Adebayo *et al.* (2019), and SMEDAN (2017) identify major obstacles hindering SMEs' performance in Nigeria, including outdated technology, multiple taxes, market access issues, poor support (business development services), inconsistency in

government policies, inadequate infrastructure, limited access to finance, and insufficient attention to HC. This study focuses on HCD as a critical determinant of SMEs' performance in Nigeria.

HC pertains to both individuals and organizations (Ali, 2020). Kale (2019) asserts that MSMEs are crucial for Nigeria's industrialization and comprehensive economic development, emphasizing HC as the most vital component of industrialization according to the economic recovery and growth plan. Furthermore, enterprises are categorized as micro, small, and medium-sized, defined as any legal entity with the right to engage in economic activity and conduct business independently (Suroso and Anggraeni, 2017; Edoko *et al.*, 2018). Widarni and Malang (2015) found that SMEs are types of businesses heavily reliant on HC. Qamariah and Muchtar (2019) illustrate that HC directly and indirectly influences SMEs' performance, serving as an intangible asset crucial to their success. Moreover, Ojokuku and Sajuyigbe (2015) argue that in the knowledge economy, firm performance and competitive advantage stem primarily from a firm's knowledge base and the HC that enables it to leverage that knowledge. Thus, HC emerges as a critical driver of SMEs' performance, with HCD identified as a key tool for enhancing SMEs' performance. Cross (2019) explored the impact of HC development on SMEs' performance, surveying a population of 152 SMEs. The study revealed a significant

positive relationship between HC development and SMEs' performance, recommending that SMEs owners/managers ensure proper identification, protection, and assessment of HC needs. Adebayo *et al.* (2019) examined the influence of HC development on SMEs' performance in Southwest Nigeria. Findings indicated a significant positive relationship between HC and SMEs' productivity, suggesting that investing in HC by SMEs owners/managers enhances firms' profitability and increases sales revenue.

Simic *et al.* (2020) investigated the relationships between HC and SME performance, incorporating the mediating effect of entrepreneurial management within the context of a traditional economy. The study concluded that HC indirectly influences SMEs' performance through the mediating effect of entrepreneurial management. In another study, Ojokuku and Sajuyigbe (2015) contributed insights into the relationship between HC development and SMEs' performance in Ibadan, South-Western Nigeria. Their study highlighted significant impacts of HC development factors on SMEs' performance, emphasizing that SME performance can be enhanced through investments in on-the-job training, formal education, and participation in workshops. The study recommended that SME owners/managers actively promote participation in educational activities such as seminars, trade fairs, workshops, and exhibitions to acquire current knowledge that positively impacts SME performance and enhances their capacity for

growth and survival. Also, Ebrahimi *et al.* (2018) established the relationship between entrepreneurship and SMEs' performance through innovation and firm size. Their findings revealed direct and significant relationships between entrepreneurship, innovation, and SMEs' overall performance. The study indicated that each dimension of entrepreneurship significantly enhances SMEs' growth and performance. Nura *et al.* (2019) explored the impact of an entrepreneur's social network and HC on SMEs' performance in Kano State, North-Western Nigeria. The study sought to determine whether HC moderates the relationship between social networks and SMEs' performance in Nigeria. Results indicated that an entrepreneur's social network and HC have significant positive effects on SMEs' performance, with HC playing a moderating role in the relationship between the entrepreneur's exposure and SMEs' performance. The study concluded that social networks and HC are critical drivers of SMEs' performance.

2.5 Theoretical Review

2.5.1 Human Capital Theory

Schultz (1961) laid the groundwork for the HC theory, which was later expanded by Becker, a Nobel laureate in economics, in 1964 with his seminal work on the economics of employer-provided training. The theory posits that the education or training of workers increases their productivity and income levels by enhancing their skills and knowledge. Building on Schultz's insights, Becker (1967) likened HC to the traditional factors of production such as land,

labor, and capital. He argued that investments in HC through education, training, provision of quality healthcare, and other means can enhance total output, akin to physical investments in capital, albeit with the returns on HC varying. In this framework, HC is considered a factor of production that continuously requires investment to yield increasing levels of output. According to HC theory, the development of employees is best achieved through investments in their education, training, and welfare. Daniel *et al.* (2019) emphasize that a fundamental tenet of HC theory is the added value that individuals bring to an organization, making HC a critical asset for any firm. Thus, the HC theory is fundamentally aligned with the resource-based view (RBV) model, which emphasizes the strategic importance of valuable, rare, and inimitable resources to achieve competitive advantage.

2.5.2 Resources Based View Theory

The resource-based view (RBV) theory, introduced by Edith Penrose in 1959, emphasizes that organizations should be assessed based on their available resources to achieve their objectives. According to RBV, an organization's success is largely determined by its internal resources rather than external factors. Scholars have extensively explored this theory in various studies (Gao *et al.*, 2018), highlighting its significance in understanding organizational performance. RBV conceptualizes an organization not merely as an administrative unit but as a collection of both physical and human resources. These resources include land, labor,

and capital assets, which can be strategically leveraged to create competitive advantages. By effectively utilizing these resources, organizations can enhance their economic performance and achieve sustainable growth (Kor *et al.*, 2016; Chandrashekar and Subrahmanya, 2017). The theory underscores the importance of resource management in gaining a competitive edge in the market. Consequently, RBV has become a fundamental framework in strategic management, guiding organizations in resource allocation and utilization.

According to the resource-based view (RBV), organizational resources and capabilities that are rare, valuable, non-substitutable, and difficult to imitate form the basis for a firm's sustained competitive advantage. RBV posits that a firm can maintain this advantage by developing capabilities that are unique to the firm, foster complex social relationships, are deeply rooted in the firm's history and culture, and generate tacit organizational knowledge (Odhong *et al.*, 2013). In this framework, human capital (HC) is identified as the most valuable, non-substitutable, and difficult-to-imitate asset. Effective utilization of HC can significantly enhance a firm's efficiency and competitiveness. RBV emphasizes the importance of investing in people, aligning with human capital theory, which states that such investments add substantial value to the firm (Armstrong and Taylor, 2014). This alignment underscores the critical role of human resources in achieving long-term success. By leveraging their unique resources and capabilities, firms can

create and sustain competitive advantages in their respective markets. Thus, the RBV framework provides a strategic approach to resource management and organizational development.

3.1 Methodology

The study employed a conceptual literature review to explore the intricate relationship between human capital development and SMEs performance. Utilizing a qualitative methodology, the research focused on conceptualizing HCD, identifying key indicators, and examining its broader implications for human development and organizational growth. A conceptual framework was developed to understand how enhancements in HCD directly influence SMEs performance, aligning with HC theory and the RBT theory. articles were reviewed, encompassing discussions on how investments in HC through training, education, and experience contribute to the competitive advantage and sustained performance of SMEs. This approach facilitated a comprehensive synthesis of literature, offering insights into the multifaceted dimensions through which HCD shapes the operational effectiveness and long-term success of small and medium enterprises.

4.1 Conclusion and Recommendations

The conceptual review revealed a significant and positive effect of HCD on SMEs performance in Nigeria. This corroborates earlier research by Simic *et al.* (2020), which similarly found that HC directly influences SMEs performance. A related study by Adebayo *et al.* (2019) investigated the impact of HCD on SMEs in the

South-Western Nigeria and also confirmed a positively significant effect of HC on SMEs profitability. These underscore the importance of investing in HC through training, education, seminar, workshop and experience to enhance SMEs' operational efficiency and overall success in Nigeria's business environment. The study concludes that HC improves the efficiency and productivity of SMEs, it enhances SMEs competitive advantage, HCD also support SMEs growth and sustainability and improves SMEs innovativeness capacity, the more an organization invests in its employees, the greater the likelihood of improved efficiency and success. The study focused on three aspects of HCD: training construct, education construct, and work experience construct. It posits that an

entrepreneur who possesses a comprehensive range of HC competencies with effective training programs, a rich educational background, and substantial work-related experience is likely to achieve high levels of performance in their ventures. Conversely, lacking any of these HC elements individually may lead to negligible impacts on SMEs performance. Based on this, the study recommends that SME owners/managers should invest more in HC and prioritize HCD. Engaging employees in various forms of training, including off-the-job training and on-the-job training, acquiring educational qualifications, and participating in workshops and seminars, should be encouraged to cultivate robust work experience and achieve higher levels of organizational performance.

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Moderating Role Of Environmental Management Adoption On The Relationship Between Green Innovation And SMES Performance In Kano State Nigeria.

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ABSTRACT

The study examined the moderating role of environmental management adoption on the relationship between green innovation (green product innovation, green process innovation, green management innovation) and SMEs performance in Kano state, Nigeria. The study adopting quantitative research design and a sample of 220 SMEs registered with Kano State Chamber of Commerce, Industry, Mines and Agriculture [KACCIMA]. The result shows that the proxy of independent variable green product innovation (GPdI) has no significant effect on the performance of sampled SMEs. It is also found that green process innovation (GPcI) has no significant effect on performance of sampled SMEs, the result indicated that green management innovation (GMI) has a positive significant effect on performance of sampled SMEs. The finding also revealed that moderating variable (environmental management adoption) has a strong positive significant effect on performance of sampled SMEs. It was found that environmental management adoption moderate the relationship between green innovation and SMEs performance. Therefore, it is recommended that SMEs managers should consider adopting and implementing effective environmental management policies in their production and operation processes.

Keywords: SMEs Performance, Green Innovation, Environmental Management Adoption

1.0 Introduction

Sustainable development of developing countries like Nigeria largely depends on the performance of their indigenous micro, small and medium scale enterprises (Suleiman, Aliyu & Bello, 2021) and are also generally considered as the engine of economic growth as a result of their immense contribution towards employment generation, poverty reduction, export earnings and gross domestic product (Suleiman, Aliyu & Bello, 2021).

Small and medium scale enterprises (SMEs) play a vital role in national economies around the world and account for about 90% of enterprises, contributing to 60% of employment and half of GDP worldwide (Abubakar, et al., 2023). According to Tradeup (2021), SMEs make up 34% of U.S. export revenue, employ over 50% of private sector workers, and

represent 99 percent of all US businesses. According to Tahir, Razak, and Rentah (2018) and Hoffman (2017), small and medium-sized enterprises (SMEs) make up 99.2% and 97% of all businesses in Malaysia and China respectively. Moreover, SMEs contribute 32% and 58% of the GDP, 19% and 68% of all exports of these countries. In Peru, SMEs generating 62.6% of total employment (Ministerio de la Producción, 2021). In the case of Colombia, they generate 79.1% of total employment (Heredia Zurita & Dini, 2021; Ministerio, de Comercio, et al., 2022). In Nigeria, SMEs contribute around 48% to the nation's GDP and generating employment to more than 60million individual (NBS 2019). It is clear that SMEs play a crucial role in employment creation, poverty alleviation, and economic growth of any country (Abubakar, et al., 2023). As a result, in recent

decades, numerous nations have placed an emphasis on the growth of SMEs in order to accelerate economic growth (Imran & Aldaas, 2020). They are the economic lifeblood of communities that help fight poverty, create decent jobs, foster entrepreneurship for women, youth and vulnerable groups, safeguard livelihoods and economic growth. All these efforts and achievements of SMEs contribute to the achievement of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) (Abubakar, et al., 2023). However, despite the contribution of SMEs to economic growth of many countries they have been negatively affected by the series of events that have disrupted economies, from the climate catastrophe, the COVID-19 pandemic, and the war in Ukraine (Department of Economic and Social Affairs, 2022; Guterres, 2022; International Council for Small Business, 2022). Furthermore, during the last decades these SMEs obtained the lowest productivity results if compared to other similar developing economies, resulting a GDP of 0.46% in 2000 and 0.88% in 2010–2019 (Paus & Robinson, 2022). The COVID-19 outbreak had an unprecedented impact on the fall of 6.8% of GDP in 2020, a decrease in the value of exportations to 13%, and more than 2.7 million companies that permanently closed their activities, generating an unemployment crisis in Latin America (Economic Commission for Latin America and the Caribbean, 2021). This situation is consequence of the high dependence on international production and its weak regional integration, highlighting the need to determine the capacity of companies to address technological gaps, foster collaborations, generate alliances, create regional value chains that help develop and consolidate scientific and technological

capabilities (Abubakar, et al., 2023). Overcoming these issues would strengthen competitiveness, create high quality employment, and generate a dissemination of new science and technologies that enable SMEs of proposing innovations in products and processes at higher standards (Economic Commission for Latin America and the Caribbean, 2021; OECD et al., 2021).

In spite of their commitment in Nigeria, the latest information shows that around 20% of SMEs bomb in their most memorable year, and half of private companies flop in their fifth year (Abubakar, et al., 2023). This is seen in the drop on their contribution to Nigeria's economy from 50% contribution to GDP in 2021 to 43.3 % in the last quarter of 2022. In addition, a good number of SMEs have remained stagnant in terms of growth, despite the availability of accessible credit which could be used for expansion. With the increasing and rapid change in the external environment in which these SMEs operate, as well as unfavorable macroeconomic indices, it becomes pertinent for SMEs to review their internal activities with a view to creating a shield against negative effects of these externalities. Management systems are to blame for these failures; failure to establish and communicate company goals, lack of financial planning and review, and a lack of vision, purpose, or principles (Onehi, et al., 2017). The sector has continued to witness dwindling performance. Moreover, identifying the inevitable role of green innovation (GI) (i.e. process, product and management) has encouraged businesses to integrate green measures into their business strategies. In recent years, scholars have realised the value of the inclusion of GI in a company's business strategy. Sustainable thinking widely leverages this strategic

integration to uplift the GI paradigm, combating the progressing environmental vulnerabilities (Wang et al., 2022). The GI approach has enhanced firms' strategic vision towards achieving sustainability (Khan & Johl, 2020). Today, the GI strategy has made organisations realise the growing importance of sustainable performance. As a result, the literature shows that the GI strategy has become a sustainable goal of today's organisations, without which it is hard for them to survive (Wang et al., 2022). Meanwhile, over the years, progressing industrialisation has forced humans to face the severe effect of environmental degradation, which is weakening the world's socio-economic prosperity (Li, et al., 2023). The building ecological burden has caused the earth's biodiversity to experience unprecedented consequences. In particular, today, the dual environmental impact on social and commercial lives has elevated the need to find the solution to the developing socio-ecological problems (Awan et al., 2021; Sarfraz et al., 2020). This accelerating environmental pressure has strongly impacted the world's social foundations, with firms' sustainability having a significant role in combating the emerging ecological challenges (Bombiak et al., 2018). Unsurprisingly, increasing environmental degradation has challenged the world's major industries as they face severe environmental consequences. The ecological decline becoming a global phenomenon has made stakeholders respond to the increasing climatic vulnerability through a sustainable model (Jakhar et al., 2020). In recent years, natural environment protection has received attention internationally. Given the application of environmental measures, regulations have forced firms to protect the natural environment by adopting

sustainable innovation (Naseem et al., 2021; Vallaster et al., 2019). However, the result from previous studies showed inconsistency on the relationship between green innovation and firm performance, for instance Li et al., (2023); Zhang et al. (2019); etc. shows positive relationship. While, Pemayun1, (2016); etc. indicates negative relationship. Fitriani (2015); no significant relationship. Many previous literatures tried to moderate the relationship (i.e. Li, et al., 2023 introduce employee green behavior as moderating variable), but still none of these studies introduce environmental management adoption to moderate the relationship between green innovation and performance. Meanwhile, SMEs in Nigerian context were selected because their contribution to the economic development, poverty alleviation and largest waste producer industry. This study presents a rich body of literature concerning GI practices and firms' sustainable performance. It is a unique contribution to the growing GI literature that incorporates the moderating roles of environmental management adoption on green constructs (i.e. green product innovation, green process innovation and green management innovation) influencing the SMEs' sustainable performance. Previously, studies have illustrated that the manufacturing sector (SMEs included) is the largest waste producer industry, with a drastic negative impact on the world's ecosystem (Li et al., 2023; Mathiyazhagan et al., 2021). Therefore, to balance the rising issue of environmental pollution, this industry requires companies to adopt GI practices to achieve sustainable performance. Hence, in this regard, this study offers an all-purpose innovation model to investigate the GI approaches implemented in the manufacturing industry (i.e. SMEs). This study

includes the potential drivers that help SMEs combat the increasing environmental degradation. Following the resource-based theory, this study presents a pioneering conceptual framework that guides researchers and managers to understand the notion of GI and sustainable performance. The study suggests that managers, employees, researchers, policymakers, and scholars view the study findings as a critical way of boosting firms' sustainable performance. Moreover, the current study findings present significant evidence for incorporating GI strategies as a subsidiary to achieve sustainable performance.

1.1 Research Objectives

- i. To examine the relationship between green product innovation and SMEs performance in Kano state, Nigeria.
- ii. To examine the relationship between green process innovation and SMEs performance in Kano state, Nigeria.
- iii. To examine the relationship between green management innovation and SMEs performance in Kano state, Nigeria.
- iv. To examine the relationship between environmental management adaptation and SMEs performance in Kano state, Nigeria.
- v. To examine the moderating effect of environmental management adaptation on the relationship between green product innovation and SMEs performance in Kano state, Nigeria.
- vi. To examine the moderating effect of environmental management adaptation on the relationship between green process innovation and SMEs performance in Kano state, Nigeria.
- vii. To examine the moderating effect of environmental management adaptation on the relationship

between green management innovation and SMEs performance in Kano state, Nigeria.

2.1 Literature Review

2.1.1 SMEs Performance

As per the World Bank (2013), SMEs are characterized in light of the size of the endeavor with regards to the complete number of workers as well as all out resources esteem. According to Stork and Esselaar (2006), various African nations provide various definitions of SMEs. Small and medium-sized enterprises (SMEs) in Ghana refer to businesses with no more than six to ninety employees and no more than 2.5 billion Ghana Cedi in fixed assets (excluding land and buildings). In South Africa, SMEs are characterized as unmistakable and separate business elements, including helpful endeavors and non-legislative associations that are independent by a solitary proprietor or more which incorporates its branches or auxiliaries, if any. Small and medium-sized enterprises (SMEs) in Cameroon are those with a turnover value of at least 1 billion Cameroon Francs (CFA), accrued investments of no more than 500 million CFA, short-term credit of no more than 200 million CFA, at least 5 percent ownership of the capital, and Cameroonian managers. In Nigeria, SMEs are characterized as firms that utilize less than 200 representatives and have under 500 million Naira (N) worth of complete resources, barring area and building (SMEDAN, 2012). In particular, the term "small enterprise" refers to SMEs with fewer than 50 employees and assets totaling between N5 million and N50 million, excluding land and buildings. The term "medium enterprise" refers to businesses that have between 50 and 199 employees and assets of between N50 million and N500 million, excluding land and buildings. As a result, SMEs are defined as businesses with fewer than 200 employees and assets

totaling between N5 million and N50 million, excluding land and buildings in this research.

2.1.2 Green Innovation (GI)

Literatures on Green Innovation (GI) are commonly divided into two types. The first describes GI as a firm's abilities (Gluch, Gustafsson, & Thuvander 2009), whereas the second defines GI as an organization's environmental practices (Lin & Ho, 2008; Ho, Lin, & Chiang, 2009). According to Marchi, (2012) green innovation is also known as eco-innovation or environmental innovation in the literature, is defined as "new or improved techniques, procedures, systems, and products to limit or avoid the use of harmful substances that would cause damage to the environment. When it comes to organizational practices, GI is described as "the software or hardware innovation related to green processes, managements or products" (Song & Yu, 2018); it is proposed that GI comprises management practices and technological advancements that expand the environmental and organizational performance (OP) and provide a competitive edge to the company (Rennings, 2000). Other researchers recommend that GI consists of altered systems or unique, products, processes, and practices that provide an advantage to the environment and subsidize firms' sustainability (Xie, Huo, & Zou, 2019).

2.1.3 Environmental Management Adoption

EMA is "that aspect of an organization's overall management structure that addresses the immediate and long-term impact of its products, services, and processes on the environment" (Low, 2015). It begins fragmented with formation of the British Standard 7750 (BS7750) by the UK and later the Eco-management and Audit System (EMAS) developed by the European Commission (EC) to provide a

standard that could be accepted internationally (Ritchie & Hayes, 1998). However, both of these standards failed the test of harmonizing industries differences in environmental management; as well as providing an effective tool for managers to protect their organizations against potential negative impact on trade and commerce while achieving their environmental objectives (Ritchie & Hayes, 1998). These shortcomings must be address in order to induce organizations to manage their environment responsibly. Hence, the Strategic Advisory Group on the Environment (SAGE) was established by the International Standard of Organization (ISO) to make recommendations for an international environmental standard in 1991. The net result; after much deliberation and difficult international consensual process based on industry experience with EMSs; is the introduction of the ISO 14000 series in 1993, with the dual aims of helping organizations globally to become environmental friendly and sustainable (ISO, 2005).

2.2 Hypothesis Development

2.2.1 Green Innovation and SMEs Performance

Previous studies shows mixed results on the relationship between green innovation and SMEs performanace for instance the results of Helmi, and Widiastuty, (2023); Nsiah et al., (2022); Novitasari and Agustia (2022); Maya, and Tarigan, (2022); Wang et al., (2021); Chandra, Arafah, and Basri, (2021); Asadi, et al., (2020); Zhang et al., (2020a); Zhang et al., (2020b); Zhang et al. (2019); Xie et al., (2019); Tang et al. (2018); Ma et al., (2018); Zhang and Walton (2017); Tang et al., (2017); Ar (2012) indicated that green innovation have positive significance effect on organizational performance. Meanwhile, Jayaraman, et al., (2023); Osei (2022); Pandithasekara, (2022); Wang, et al., (2022);

Chandra, et al., (2021); Berrone et al., (2017); Pemayunl, (2016); Küçükoğlu and Pınar (2015) indicated that green innovation have negative significance effect on organizational performance. Study of Fitriani (2015) shows that there is no significant relationship between green innovation and SMEs performance. However, several attempt have been made to moderate the relationship i.e. Wang, et al., (2022); Alhadid, et al., (2014) moderate the relationship between different independent variables and firm performance but none of these studies used or proposed environment cost as moderating variable. Therefore, the following hypotheses are formulated;

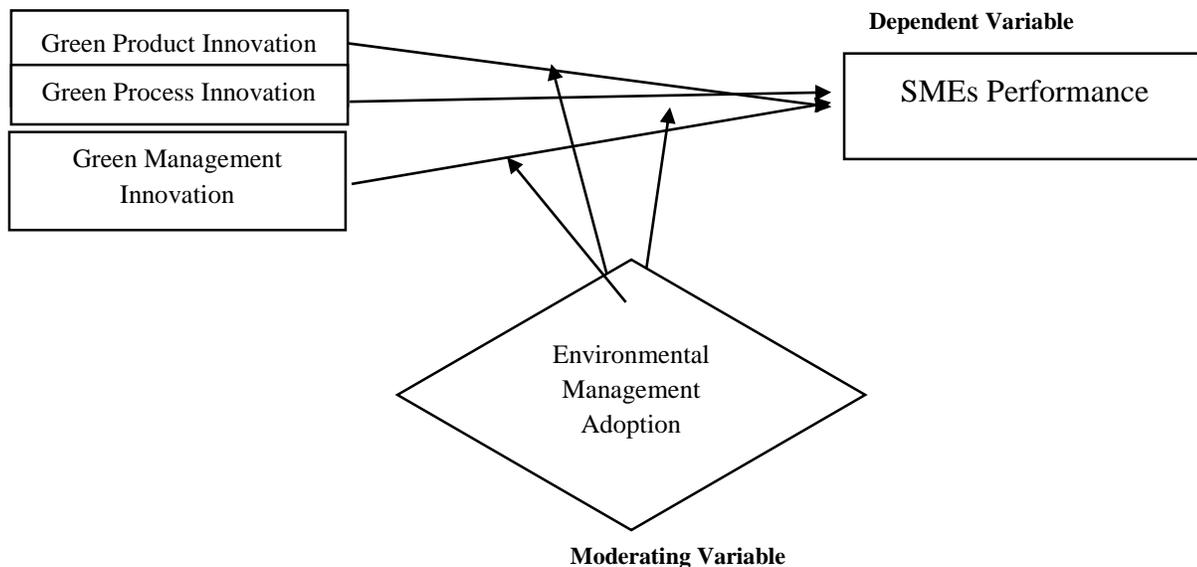
H1: There is significance relationship between green product innovation and SMEs performance in Kano state, Nigeria.

H2: There is significance relationship between green product innovation and SMEs performance in Kano state, Nigeria.

H3: There is significance relationship between green product innovation and SMEs performance in Kano state, Nigeria.

2.2.2 Moderating Role of Environmental Management Adoption

2.3 Conceptual Framework
Independent Variable



Previous studies for example Lawrence and Bernard (2023); Ilelaboye and Alade (2022); Ofurum and Iwunna (2022); Nwaiwu and Oluka (2018); Okafor (2018) shows a significant relationship between environmental management and firm performance. Furthermore, several studies i.e. Wang et al., (2023); used environmental management as moderating variable and concluded that it is a good moderating variable. Thus, based on the above mentioned arguments, this study proposed the following hypotheses:

H4: Environmental management adoption has impact on SMEs performance in Kano state, Nigeria.

H5: Environmental management adoption moderate the relationship between green product innovation and SMEs performance in Kano state, Nigeria.

H6: Environmental management adoption moderate the relationship between green process innovation and SMEs performance in Kano state, Nigeria.

H7: Environmental management adoption moderate the relationship between green management innovation and SMEs performance in Kano state, Nigeria.

Figure 1: Conceptual Framework

2.6 Underpinning Theory

This study underpinned by resource - based view theory as the theory explain the relationship between research variables.

2.6.1 Resource-Based View

Wright, Dunford, and Snell (2001) reported that the resource-based view (RBV) was based on Penrose's (1959) formulation, although its plausible formulation is attributed to Wernerfelt (1984). Wernerfelt (1984) suggests that a firm's resources are its assets and weaknesses. As a result, resources are defined as "those assets (tangible and intangible) owned by the firm on a semi-permanent basis". He also says that a company's ability to gain competitive advantage depends on how it uses its resources, not what it produces; unique resources used to gain short-term and long-term competitive advantage despite an imperfect market environment. In response to Wernerfelt's (1984) argument, Barney (1991) argues that, in the resource scarcity view, a firm can sustainably gain competitive advantage by implementing strategies that use its internal strengths to respond to external opportunities. The company must also be able to discredit external risks by avoiding internal inefficiencies by leveraging its unique assets that competitors do not have.

One factor that will give companies the opportunity to develop the skills they need to be innovative in an environment dominated by large corporations is green innovation. Another factor that can unify and direct all the resources of an organization towards achieving predetermined goals is the environmental management adaptation (Li, et al., 2023). This is because, according to the resource-based view of firm attributes, these are some intangible resources that are

thought to complement some attributes. According to Barney (2001), compared to tangible resources, intangible resources are believed to provide greater competitive advantage.

To this end, green innovation and environmental management adoption can be seen as an extraordinary intangible resource of the association that affects its performance (Lo, 2012). With the help of RBV theory, the main objective of this study is to examine the impact of green innovation and environmental management adoption on organizational performance. The RBV hypothesis is plausible for this review, as other previous studies have shown that it takes specific environmental management adoption (community development and waste management) and specific green innovation (product, process and management) and considers them as assets of ambiguities that can help a company gain an edge and improve performance (Li et al., 2023; Egbadju & Elaigwu 2023).

3.1 Methodology

This study adopted cross-sectional survey research design as data were collected at a single point in time. The population of the study consists of all the 514 registered business with the Kano State Chamber of Commerce, Industry, Mines and Agriculture (KACCIMA) as of the year 2023. A sample size of 220 SMEs was used to represent the entire population, through Krejcie and Morgan's (1970) sampling table. A mixed-method sampling technique was adopted, this involves a stratified sampling technique and simple random sampling, this technique was adopted because the population of the study is heterogeneous, stratified sampling technique was used to obtain a representative sample (stratum),

then simple random sampling was applied for each stratum to get an equal sample size from each stratum. The researchers used primary sources of data, where data was collected by using administered questionnaire. The dependent variable is SMEs performance, the independent variable is green innovation measured by green product innovation, green process innovation and green management innovation and the moderating variable is environmental management adaptation. For the purpose of presentation and discussion of the result of data generated in the course of this research, descriptive statistics, correlation and regression techniques of data analysis were used in SPSS version 22 statistical tools of analysis.

To examine the moderating model, the suggested relationship for the first assumption is as follows:

$$SMEsP_{it} = c + \beta_1 GPdI_{it} + \beta_2 GPcI_{it} + \beta_3 GMI_{it} + U_{it}$$

model 1

The first model evaluates the effect of research independent variable proxies (Green Product Innovation (GPdI), Green Process Innovation (GPcI) and Green Management Innovation (GMI)) on the dependent variable (SMEs Performance)

$$SMEsP_{it} = c + \beta_1 GPdI_{it} * EMA_{it} + \beta_2 GPcI_{it} * EMA_{it} + \beta_3 GMI_{it} * EMA_{it} + U_{it}$$

model 2

The second model evaluates the moderating role of environmental management adaptation on the

Table 1: Descriptive Statistics of the Variables

	N	Mean	Std. Deviation
SMEsP	220	3.1530	.71733
GPdI	220	2.3028	.79026
GPcI	220	2.7495	.79356
GMI	220	2.6580	.79394
EMA	220	2.9472	.54977

Source: Field Survey, 2024

Table 1 shows the descriptive statistics result of the dependent and independent variables. A total of 220 observations were recorded. SMEsP (SMEs

relationship between independent variable proxies (Green Product Innovation (GPdI), Green Process Innovation (GPcI) and Green Management Innovation (GMI)) and the dependent variable (SMEs Performance).

3.1 Validity and Reliability Test

The research instrument designed in this study - before being distributed to 220 respondents - was first tested for the validity and appropriateness of each statement item made in the instrument. For this reason, at this stage, pilot test questionnaires were distributed to 30 respondents, in this case, Small and Medium Enterprises (SMEs). The results of the validity and reliability test of the research instruments in this study obtained that the entire statement items were valid and reliable to be used for the next test.

4.0. Results and Discussion

The section presents the data analysis and interpretation of result of the dependent variable, independent variables and moderating variable. It presents the descriptive statistics, correlation and regression results of the study.

4.1. Descriptive Statistics

The descriptive statistics shows the mean and standard deviation of each independent variable and moderating variable from the mean and standard deviation of the dependent variable.

Performance) which is the dependent variable has an average of 3.1530 and a standard deviation of 0.7173 showing that there are many differences among the

response to the questions on SMEsP. GPdI (Green Product Innovation) has an average of 2.3028 and a standard deviation of 0.79026 showing that there are many differences among the response to the questions on GPdI. GPcI (Green Process Innovation) has an average of 2.7495 and a standard deviation of 0.79356 showing that there are many differences among the response to the questions on GPcI. GMI (Green

Management Innovation) has an average of 2.6580 and a standard deviation of 0.79394 showing that there are many differences among the response to the questions on GMI. Environmental Management Adaptation (EMA) has an average of 2.9472 and a standard deviation of 0.54977 showing that there are many differences among the response to the questions on EMA.

4.2 Diagnostics Testing

4.2.1 Multicollinearity Test

Table 2: Test for Independence

	Collinearity Statistics	
	Tolerance	VIF
GPdI	.452	2.214
GPcI	.189	5.289
GMI	.306	3.271
EMA	.707	1.415

Source: Survey, 2024

Based on the results in Table 2, the variance inflation factor (VIF) is less than 10. Myers (1990) suggested that a variance inflation factor (VIF) value

greater than 10 calls for concern, however, for this study, the VIF values are less than 10.

4.2.2 Homogeneity Test

Table 3: Test of Homogeneity of Variances

	Levene Statistic	Df1	Df2	Sig.
GPdI	1.761	19	194	.178
GPcI	2.633	19	194	.092
GMI	1.034	19	194	.341
EMA	1.672	19	194	.191

Source: Survey, 2024

Table 3, show the data variance is homogeneity. The p-value of EMA (0.191), GPdI (0.178), GPcI (0.092), and GMI (0.341) are all greater than 0.05. Therefore; the responses on green product innovation (GPdI),

green process innovation (GPcI), green management innovation (GMI) and environmental management adaptation (EMA) are homogeneous

4.2.3 Normality Test

Table 4: Normality Test

	Skewness		Kurtosis	
	Statistics	Std. Error	Statistics	Std. Error
SMEsP	.672	.168	.858	.334
GPdI	.945	.168	.374	.334
GPcI	.191	.168	.644	.334
GMI	.225	.168	.913	.334
EMA	.928	.168	.145	.334

Source: Field Survey, 2024

Table 4, show the normality test using skewness and kurtosis. The values of both skewness and kurtosis of EMA (0.191), GPdI (0.178), GPcI (0.092), and GMI (0.341) are all greater than 0.05. Therefore; the

responses on green product innovation (GPdI), green process innovation (GPcI), green management innovation (GMI) and environmental management adaptation (EMA) are homogeneous.

4.3 Correlation Result

Table 4: Correlation Matrix

	SMEsP	EMA	GPdI	GPcI	GMI
SMEsP	1				
EMA	.548**	1			
GPdI	.354**	.346**	1		
GPcI	.470**	.399**	.153**	1	
GMI	.426**	.541**	.594**	.750**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey, 2024

Table 4 shows the correlation result of the dependent variable SMEsP and the independent variables GPdI, GPcI and GMI, and moderating variable EMA. The relationship between SMEsP and moderating variable EMA is positive, with a coefficient of 0.548 this means that all things being equal the higher the EMA the higher the SMEsP. The relationship between SMEsP and independent variable GPdI is positive, with a coefficient of 0.354 this means that all things being equal the higher the GPdI the higher the SMEsP. The relationship between SMEsP and independent variable GPcI is positive, with a

coefficient of 0.470 this means that all things being equal the higher the GPcI the higher the SMEsP. The relationship between SMEsP and independent variable GMI is positive, with a coefficient of 0.426 this means that all things being equal the higher the GMI the higher the SMEsP.

4.4 Regression Result

Table 5 a & b below presents the results of the direct and moderating effect which includes all the coefficients of the variables, their standard errors, t-statistics and the probability value. It also reports the R-square value and adjusted R-square.

Table 5a: Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.4985 ^a	.4751	.4532	.20542

a. Predictors: (Constant), GPdI, GPcI, GMI, EMA

Source: from the field study 2024

Table 5b: Regression Results

Explanatory Variables	Coefficients	Std.Err.	t-statistics	P-value
GPdI	.0057	.0106	0.54	0.592
GPcI	.0189	.0891	0.21	0.832
GMI	.0316	.0151	2.10	0.036**
EMA	.1315	.0128	10.31	0.000***
GPdI*EMA	.1050	.0794	2.46	0.014**
GPcI*EMA	.3317	.1370	2.42	0.016**
GMI*EMA	.1431	.0139	3.23	0.001***
CONS	.2793	.0496	2.85	0.005***
R-squared	0.4751			
Adjusted R-squared	0.4532			
F- statistics		42.91***		

Note: ***, ** denotes 1% and 5%, level of significance

Source: Survey, 2024

From the results of the multiple regression analysis of SMEs performance in table 5, the overall R^2 revealed that 47.51% of change in performance of SMES in Kano state, Nigeria is explained by the explanatory variables used in the model of the study. Similarly, the F statistics is significant at 1%, showing that the model is fit for the study. The table also indicates that there was a no significant relationship between green product innovation and SMEs performance in Kano state, Nigeria ($\beta = 0.0057$, $t = 0.54$, $p = 0.592$), there was a no significant relationship between green process innovation and SMEs performance in Kano state, Nigeria. The first objective of this study is to examine the effect of green product innovation on SMEs performance in Kano state, Nigeria. The result reveals that there is no significant relationship between green product innovation and SMEs performance in Kano state, Nigeria. The positive insignificance relationship, mean a unit increase in green product innovation will not leads to an increase in the SMEs performance in Kano state, Nigeria and vice versa. The positive insignificance relationship, mean a unit increase in green process innovation will not leads to an increase in the SMEs performance in Kano state, Nigeria and vice versa. The finding is in the support of that of Fitriani (2015) and contrary with the findings of Wang, et al., (2022); Chandra, et al., (2021).

The third objective of this study is to examine the effect of green management innovation on the SMEs performance in Kano state, Nigeria. The result reveals that there is significant relationship between green management innovation and SMEs performance in Kano state, Nigeria. The positive significance relationship, mean a unit increase in green management innovation will leads to an increase in

state, Nigeria ($\beta = 0.0189$, $t = 0.21$, $p = 0.832$). The result also shows that there was statistically significant positive relationship between green management innovation and SMEs performance in Kano state, Nigeria ($\beta = 0.0316$, $t = 2.10$, $p = 0.036$), there was also statistically significant positive relationship between environmental management adaptation and SMEs performance in Kano state, Nigeria ($\beta = 0.1315$, $t = 10.31$, $p = 0.000$). Hence, Hypotheses; H1, H2 was rejected while H3 and H4 was fully supported.

4.5 Discussion of Findings

The finding is in the support of that of Fitriani (2015) and contrary with the findings of Jayaraman, et al., (2023); Osei (2022).

The second objective of this study is to examine the effect of green process innovation on SMEs performance in Kano state, Nigeria. The result reveals that there is no significant relationship between green process innovation and SMEs performance in Kano state, Nigeria. The positive insignificance the SMEs performance in Kano state, Nigeria and vice versa. The finding is in the support of that of Helmi, and Widiastuty, (2023); Nsiah et al., (2022); Novitasari and Agustia (2022); Maya, and Tarigan, (2022) and contrary with the findings of Wang, et al., (2022); Chandra, et al., (2021); Fitriani (2015).

The fourth objective of this study is to examine the effect environmental management adaptation on the SMEs performance in Kano state, Nigeria. The result reveals that there is strong positive significant relationship between environmental management adaptation and SMEs performance in Kano state, Nigeria. The positive significance relationship, mean a unit increase in environmental management

adaptation will leads to an increase in the SMEs performance in Kano state, Nigeria and vice versa. The finding is in the support of that of Lawrence and Bernard (2023); Ilelaboye and Alade (2022); Ofurum and Iwunna (2022); Okeke et al. (2021); Oraka (2021); Zhou, et al., (2019).

The fifth, sixth and seven objectives of this study is to examine the moderating role of environmental management adaptation on the relationship between green innovation measures (i.e. green product innovation, green process innovation and green management innovation) and SMEs performance in Kano state, Nigeria. The result reveals that there is strong moderating effect of environmental management adaptation on the relationship between green innovation measures (i.e. green product innovation, green process innovation and green management innovation) and SMEs performance in Kano state, Nigeria. This indicates that environmental management adaptation strengthen the relationship between green innovation measures (i.e. green product innovation, green process innovation and green management innovation) and SMEs performance in Kano state, Nigeria.

5.0 Conclusion, Recommendation Policy Implication

In conclusion, literatures show an inconsistency on the relationship between green innovation and firm performance and also it could be noted that based on the literature there is ample evidence that suggests that environmental management adaptation has a positive impact on firm performance. The finding of this study reveals that there is no significant relationship between two green innovation measures (i.e. green product innovation and green process innovation) and SMEs performance in Kano state,

Nigeria, while green management innovation has significant effect on and SMEs performance in Kano state, Nigeria. The results also indicated that environmental management adaptation has strong positive significant effect on SMEs performance in Kano state, Nigeria and also moderate the relationship between green innovation measures (i.e. green product innovation, green process innovation and green management innovation) and SMEs performance in Kano state, Nigeria. Therefore, the study concluded that environmental management adaptation strengthen the relationship between green innovation measures (i.e. green product innovation, green process innovation and green management innovation) and SMEs performance in Kano state, Nigeria. Study also recommended that the SMEs managers should consider the adaptation of environmental management mechanism in their production and operation process as it effect their performance and strengthen the relationship between firm performance and green innovation measures (i.e. green product innovation, green process innovation and green management innovation).

The study's findings have major implications for the advancement of theory. First, the investigation contributes to the advancement of resource base view theory by shedding light on the reasons for green process innovation, green product innovation, green management, environmental management adoption and performance are related. Based on the findings of this paper, the study argue that green process innovation, green product innovation, green management, environmental management adoption are strategic resources that businesses could utilize to impact firm performance. The findings also have important policy implications for a wide variety of

stakeholders due to the central role that green innovation (i.e. green process innovation, green product innovation and green management) and environmental management adoption plays in defining how a SMEs function.

5.1 Limitations and Directions for Future

Research

The study has some limitations and recommendations for further research. The study limited the applicability of the investigation to SMEs in Kano state, Nigeria. Therefore, propose that future study expands the conceptual examination strategy to firms in other developing nations

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Effects Of Islamic Financial Products On The Profitability Of Selected Women Entrepreneurs In Nigeria

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ABSTRACT

Despite the growing importance of Islamic finance and women's entrepreneurship in developing economies, there is limited empirical evidence on how Sharia-compliant financial products impact the profitability of women-led businesses. This research addresses this gap by employing a Tobit regression analysis on data collected from 357 women entrepreneurs across five Nigerian states. The findings reveal a significant positive relationship between the utilization of Islamic banking products and business profitability. Women entrepreneurs who engage with a wider range of Islamic financial products demonstrated higher profits. Specific products such as Takaful, Ijarah, Murabahah, and Musharakah showed strong positive impacts on profitability, underscoring the potential of these Sharia-compliant instruments in supporting business growth and risk management for women entrepreneurs. Interestingly, the study found that patronizing multiple Islamic banks was negatively associated with profitability, suggesting that women entrepreneurs might benefit more from concentrating their banking activities with a single Islamic financial institution. The study found a strong positive correlation between engagement with Islamic financial products and business success, suggesting sustained access to Islamic finance could be crucial. It also highlighted geographical variations and its recommends the need for regulatory body diversify Sharia-compliant financial products for women entrepreneurs, aligning with their religious beliefs. Government agencies should promote financial literacy, strengthen banking relationships, and support women-led businesses through collaboration with Islamic banks and ongoing research for increased economic participation and women's empowerment.

Keywords: Islamic finance, women entrepreneurs, business profitability, financial inclusion, Nigeria

1.0 Introduction

Women's economic empowerment, particularly through entrepreneurship, is crucial for global development and poverty reduction. However, women entrepreneurs, especially in developing countries like Nigeria, face significant challenges in accessing capital to start and grow their businesses (Nyarko, 2022; Rahman et al., 2017). Traditional banking systems often pose barriers for women due to a lack of collateral, gender bias, and high interest rates (Shukurat, 2022; Liew & Yusoff, 2023).

Islamic financial products have emerged as a potential solution to address these challenges and support women's entrepreneurial growth.

Unlike conventional banking, Islamic finance operates on principles that may be more conducive to women's economic participation. However, the specific effects of Islamic financial products on the revenues of women entrepreneurs in Nigeria remain understudied (Shinkafi et al., 2023; Shettima & Mustapha, 2022).

This research gap necessitates an interrogation of how Islamic financial products impact the revenue generation of women-owned businesses. By examining factors such as access to capital, interest-free loans, and profit-sharing arrangements, we can better understand

the potential of Islamic finance to drive women's entrepreneurial success (Soemitra, Kusmilawaty, & Rahma, 2022; Nawaz, Ramzan, & Shahid, 2021).

Furthermore, the role of Islamic fintech in improving access to financial services for women entrepreneurs is an area that requires exploration. As digital financial solutions continue to evolve, understanding how Islamic fintech platforms can address the unique needs of women entrepreneurs becomes increasingly important (Abraham & Meketaw, 2023).

To comprehensively analyze the effects of Islamic financial products on women entrepreneurs' revenues, this study employs advanced micro econometric techniques. These include Poisson regression and negative binomial regression to examine the frequency of women entrepreneurs' subscriptions to Islamic products and the influence of Islamic fintech on business growth. Additionally, a Tobit regression model was used to investigate factors determining women's willingness to use Islamic financial products and their impact on revenue improvement (Hamdan & Kassim, 2022). By addressing these research gaps and employing rigorous methodologies, this study aims to provide valuable insights into the effectiveness of Islamic financial products in supporting women's entrepreneurship and increasing their business revenues in Nigeria.

2.0 Literature Review

Empirical Review

Several studies have explored the effects of Islamic financial products on women entrepreneurs and small and medium enterprises (SMEs) across various countries.

Multiple studies have found a positive effect of Islamic finance on SME performance and growth among them is Ozdemir et al. (2023) developed a customized microfinance model for participation banks in Turkey based on global best practices and stakeholder interviews. Their findings highlight the potential of participation banks in fund sources, financial instruments, and risk management tools for microfinance. Mustapha-Jaji and Adesina-Uthman (2023) analyzed the relationship between remittances and financial development in Nigeria from 1981 to 2021. Using auto-regressive distributed lag models, they found that international remittances had a significant positive effect on banking sector development but an insignificant effect on stock market development. Al Dabbas (2023) investigated the role of Islamic finance in SME development in Jordan. Through a survey of 100 SME owners, the study found a moderate reliance on Islamic finance among Jordanian SMEs, with Murabaha identified as a principal financing method. Shinkafi et al. (2023) explored the impact of Islamic finance on entrepreneurship and sustainable economic development in Nigeria. Using qualitative interviews with 12 experts, they highlighted the influence of Islamic finance tools on SME growth, socioeconomic well-being, and sustainable development. Eid et al. (2023) examined the relationship between financial inclusion and stability in Islamic banks using a qualitative approach. Their findings emphasized a direct relationship between financial stability and inclusion within Islamic banks. Doruk (2023) studied the impact of

COVID-19 on SME lending in the Turkish Islamic banking sector. Using time series analysis techniques, the research revealed that Islamic banks behaved countercyclically in SME financing during the pandemic.

Also, Shettima and Mustapha (2022). They reported that Islamic microfinance significantly contributed to providing startup funds, expanding SMEs, and enhancing household income in Nigeria. Similarly, Sa'adatu (2020) found a positive influence of Islamic financing on SME performance in Nigeria using regression analysis. Faiza (2022) discovered a positive correlation between SME operations and Islamic financing, suggesting potential benefits for SME growth. Adedeji (2021) found that Islamic finance played a significant role in enhancing the competitiveness of SMEs in southern Nigeria, particularly influencing factors like product pricing, customer experience, and product quality. Other studies highlighted the role of Islamic finance in promoting financial inclusion and poverty alleviation. For instance, Abdullahi, Othman, and Kassim (2020) reviewed literature indicating that Islamic finance contributes to financial inclusion through Shariah-compliant, risk-sharing financial products and services. Ramatu (2020) demonstrated the significant role of financial inclusion in reducing poverty creating employment, and promoting income-generating activities, with Islamic finance instruments having potential to impact various economic sectors.

Research has identified various factors influencing the adoption of Islamic finance by SMEs and entrepreneurs. Jérôme and Yaouba

(2022) found that adherence to sharia principles, subjective norms, and perceived relative advantage influenced the decision to adopt Islamic finance among Cameroonian SMEs. Osman, Abdullah, and Ulum (2020) reported that Malaysian Muslim entrepreneurs' use of Islamic finance was primarily driven by religious beliefs and capital and income guarantees.

Bilal et al. (2020) highlighted the significant impact of corporate governance, government support, relative advantage, perceived behavior control, and subjective norms on the use of Islamic banking among SMEs in Pakistan. Al Balushi et al. (2019) found that Islamic knowledge and personal characteristics influenced the intentions of SME owners and managers to adopt Islamic finance in Oman.

Despite the positive impacts, studies also identified challenges in the adoption of Islamic finance. Ayanleye (2020) revealed challenges such as religious biases, inconsistent legal frameworks, and limited public awareness affecting the operation of the Islamic financial system in Nigeria. Phillemon and Wekaya (2019) noted that religious beliefs hindered SMEs from opting for conventional banking financing in Somaliland, while Islamic banks were reducing their exposure to SMEs due to macroeconomic factors and poor business conditions.

Focusing specifically on women entrepreneurs, Nawaz, Sheikh, and Khatiba (2021) found that Islamic microfinance initially had a negative correlation with women's entrepreneurship performance in Pakistan. However, it ultimately led to the development of social

capital among women entrepreneurs, enhancing their performance.

The empirical evidence largely suggests positive effects of Islamic financial products on SMEs and women entrepreneurs, particularly in terms of business growth, financial inclusion, and poverty alleviation. However, challenges remain in terms of awareness, regulatory frameworks, and economic conditions. Further research is needed to explore the long-term impacts and to develop strategies for overcoming the identified barriers to adoption and effectiveness of Islamic financial products. Based on the empirical review the research hypothesis for this study is presented as;

Ho: *Islamic financial products have no significant effects on the revenues of women entrepreneurs banking with in Jaiz and Taj Banks in Nigeria?*

H_A: *Islamic financial products have significant effects on the revenues of women entrepreneurs banking with in Jaiz and Taj Banks in Nigeria*

Theoretical Review

The Resource-Based View (RBV) theory provides a valuable framework for understanding the potential impact of Islamic financial products on women entrepreneurs' revenues. According to this theory, a firm's competitive advantage stems from effectively utilizing its internal resources and capabilities (Engert et al., 2016). In the context of women entrepreneurs accessing Islamic financial products, these resources can be viewed as crucial enablers of business growth and revenue generation.

The RBV categorizes resources into tangible and intangible assets (Al-Doori & Areiqat, 2019), with Islamic financial products being tangible assets for women entrepreneurs. These products, like interest-free loans or profit-sharing arrangements, provide capital and financial stability, establishing a competitive edge in the market (Che Omar et al., 2020). Moreover, the intangible assets gained through engagement with Islamic financial institutions, such as financial knowledge, business relationships, and enhanced reputation, can contribute significantly to the success of women-owned enterprises (Eccles et al., 2001). The VRIO framework within RBV (Valuable, Rare, Costly to Imitate, and Organized to capture value) can be applied to analyze how Islamic financial products create unique value for women entrepreneurs (Warnier et al., 2013).

Islamic financial products can help women entrepreneurs acquire the necessary resources and develop robust structures, enhancing the effectiveness and sustainability of women-owned businesses (Mahani & Suraiya, 2019). This aligns with the RBV's emphasis on internal factors and specific resources contributing to improved firm performance and sustainability. This study examines the impact of Islamic financial institutions on women-owned enterprises' revenues using the Resource-Based View theory. It aims to understand how these entrepreneurs can optimize these financial resources to achieve sustainability and growth in their businesses. The study focuses on how access to and utilization of Islamic financial products can contribute to increased revenues

and overall business success for women entrepreneurs.

3.0 Methodology

The analysis of the data required several closely related operations such as the establishment of categories, the application of these categories to raw data through coding, tabulation, and then drawing statistical inferences with the use of statistical software namely; Statistical package for Social Sciences STATA version 17.

3.1 Research Design

The research design for this study was based on a non-experimental descriptive/ survey design of collecting and analyzing data. A survey design was adopted for this study because it allowed data to be collected from a sample to discover the relationship or interactions among variables. The survey research design was used to investigate the relationship between Islamic finance and women's entrepreneurship.

3.2 Population/ Sample Size and Sampling Techniques

The study's population encompasses women entrepreneurs banking with Jaiz Bank and Taj

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

Where: the population, in this case is N=infinite (∞) cutomers of the women entrepreneurs banking with Jaiz and Taj banks in F.C.T

Where: n_0 is the sample size for infinite population

Z is the selected critical values of desired confidence level of p is the estimated Assuming the maximum variability which is equal to 50% ($p=0.5$) and taking 95% confidence level with $\pm 5\%$ accuracy, the Thus;

$$n_0 = \frac{(1.96)^2(0.5)(0.5)}{(0.05^2)} = 384.16 = 384$$

Bank in Nigeria. Due to a lack of substantive information on the exact number of these women, the population is assumed to be infinite. The study focuses on women banking in five states and the F.C.T Abuja—Kano, Katsina, Gombe, and Lagos—chosen for their high number of bank branches.

The sample size was determined from an infinite population of the women entrepreneurs banking with Jaiz and Taj banks in F.C.T Abuja, Kano and Lagos States respectively, using Cochran formula (1977). The choice of Cochran formula lay in its unique characteristics such as allowing for sample size determination from an infinite population size, level of accuracy (sampling error), confidence level, and degree of variability (the distribution of characteristics of the population). Cochran's formula for the determination of an appropriate sample size, for infinite population was given as;

Abuja, Kano, Katsina, Gombe and Lagos States.

n_0 , however, Cochran (1977) provides the following formula ; $n_0 = \frac{Z^2pq}{e^2}$

proportion of an attribute that is present in the population

$$q = 1-p$$

e = the desired level of precision

calculation for the sample size, n_0 is; $p=0.5$; $q=1-0.5=0.5$, $e=0.05$ and $Z=1.96$

by substitution, the first equation above becomes

$$n = \frac{384}{1 + \frac{384-1}{\infty}} \approx 384$$

Using the simple random sampling method, the questionnaire was distributed to any customer

3.3 Tobit Model

The tobit model was first proposed by James Tobin (1958) and refers to regression models in which the range of the dependent variable is censored in some way. Censoring refers to a data limitation that can result in a data clustering at a lower threshold (left-censored), an upper threshold (right-censored), or both. This model will be used to address specific objective two where the research try to investigate the effect of Islamic financial products on the revenues of women entrepreneurs.

The tobit model assumes that income from women entrepreneurs often has values clustered

$$Y_{ik}^* = \beta X_i + \varepsilon_i \quad i = 1, 2, \dots, N,$$

$$Y_i = Y_i^* \text{ if } Y_i > 0,$$

$$Y_i = 0 \text{ if } Y_i^* \leq 0 \dots\dots\dots(1.0)$$

Where N is the number of observations, Y_i the dependent variable (average sales made per day), X_i a vector of independent variables structure and demographic variables, β a vector of estimable parameters, and ε_i is a normally and independently distributed error term with zero mean and constant variance σ^2 .

It is assumed that there is an implicit, stochastic

$$L_{Tobit} = \sum_0 \ln[1 - \delta \left(\frac{\beta_i X_i}{\sigma_i}\right)] + \sum \ln \left[\frac{1}{\sigma_i} \phi \left(\frac{(Y_i - \beta_i X_i)}{\sigma_i} \right) \right] \dots\dots\dots(1.2)$$

From equation (3.10), “0” indicates the total sum of the zero observations in the sample (i.e. $y_i = 0$), “+” represents the total over the positive observations (i.e. $y_i > 0$), δ stands for the standard normal random variable cumulative distribution function (cdf) and ϕ represents the

willing to answer the questions in any of the Islamic Banks to be visited in Abuja FCT.

at a limiting value, zero in this case. Tobit analysis also allows for estimating both the conditional quantity effects and the market participation effects (McDonald & Moffitt, 1980; McCracken & Brandt, 1987). The theoretical framework and model specification used to estimate the relationship between the i average amount of money made from sales per day and the independent variables suggest estimation by the following equation:

The tobit model is expressed (average sales per day i) using a limit of zero

(Islamic finance used, type of business, number of employees, average cost of operations per day, years of experiences, business ownership index (latent variable) equal to Y_i^* which is observed only when positive. The corresponding likelihood function for the Tobit model over zero observations (0) and positive observations (1) is modeled below as:

standard probability normal density function (pdf).

Maximization of the above likelihood function concerning σ and β will give the maximum likelihood estimates of these parameters.

The empirical estimate of the Tobit model used to investigate the effect of Islamic financial products on the revenues of women

entrepreneurs is presented in the following equation (3.10):

The Tobit regression model can be specified as follows:

$$Profit^* = \beta_0 + \beta_1 ISBanks + \beta_2 ISBP + \beta_3 NTISP + \beta_4 MaritalS + \beta_5 Location + \beta_6 Noemp + \beta_7 Age + \beta_8 WExperience + \varepsilon \dots \dots \dots (1.3)$$

where profit is the latent variable representing the profit, and ε is the error term assumed to follow a normal distribution with mean 0 and constant variance σ^2 .

The observed dependent variable profit is related to the latent variable profit* through the following measurement model:

$$\begin{aligned} profit &= profit^* \text{ if } profit^* > 0 \\ profit &= 0 \text{ if } profit^* \leq 0 \end{aligned}$$

$$Profit = \begin{cases} profit^*, & \text{if } profit^* > 1000 \\ 0, & \text{if } profit^* \leq 1000 \end{cases}$$

Measurement Model for Tobit Regression:

Where:

The Tobit model accounts for the censored nature of the dependent variable profit, where negative values are not observed and are censored at 0.

profit is the observed dependent variable.

The log-likelihood function for the Tobit model is given by:

$$L = \sum_{i \in uncensored} -0.5 \left(\log(2\pi) + \log(\sigma^2) + \frac{(profit_i - \beta_0 - \beta_1 ISBanks_i - \beta_2 ISBP_i - \dots - \beta_8 WExperience_i)^2}{\sigma^2} \right) + \sum_{i \in uncensored} \log \left(\Phi \left(- \frac{\beta_0 - \beta_1 ISBanks_i - \beta_2 ISBP_i - \dots - \beta_8 WExperience_i}{\sigma} \right) \right) \dots \dots \dots (1.4)$$

where $\Phi(\cdot)$ is the cumulative distribution function (CDF) of the standard normal distribution, and the summations are over the

uncensored and censored observations, respectively.

function given above.

The parameters $\beta_0, \beta_1, \beta_2, \dots, \beta_8$ and σ are estimated by maximizing the log-likelihood

Where;

MaritalS = Marital Status of respondents (categorical variable)

Profit = Profit (continuous variable, logged) as Dependent Variable

Location = Location of the respondents (categorical variable)

Independent Variables:

Noemp = Number of employees (count variable)

ISBanks = Type of Islamic bank used (categorical variable)

Age = Age of the respondents (categorical variable)

ISBP = Type of Islamic Products (categorical variable)

WExperience = Working Experience (continuous variable)

NTISP = Number of Times subscribed to a product (count variable)

3.0 Data Definition and Descriptions of Variables

The variables that were used in this study and their possible *apriori* expectation were described in this section. The following were

the descriptions of variables and their *apriori* expectation. Table 1.0 provides a summary of definitions and measurements of the variables used in estimations.

Table 1.0: Variable Definition, Measurement and *Apriori* Expectations

Variables	Definitions	measurement	Apriori Expectations
Dependent variables			
Prof	Continues sales per day minus expenses per day	Continuous data	Stochastic
Independent variables			
ISP	patronize Islamic Banks and use their financial products	Categorical data	Positive
ISBanks	Islamic Banks patronize	Categorical data	Positive
ISBP	Type of Islamic Products	Categorical data	Positive
NTISP	Number of Times subscribed to a products	Categorical data	Positive
Legalstatus	legal status	Continues data	Stochastic
Length	Length of Business	Categorical data	Stochastic
Noemp	Number of employees	Categorical data	Stochastic
Age	Age of the respondents	Categorical data	Stochastic
Education	Education of respondents	Categorical data	Positive
WExperience	Working Experience	Categorical data	Positive
MaritalS	Marital Status	Categorical data	Stochastic
HouseholdSize	Household Size	Continues data	Negative

Source: Authors' Compilation (2024)

4.0 Discussion of Findings.

A survey was conducted across five Nigerian states to assess the impact of Islamic finance products on women entrepreneurs. Total of 384 questionnaires were distributed among 5 states

- Kano, Katsina, Gombe, Abuja, and Lagos. Details of the response rate analysis and distribution to each sampled selected state are presented in Table 2.0 below

Table 2.0 Summary of the Questionnaire Distributed and Returned

State	Questionnaire Distributed	Completed and Returned	Improperly Filled	Missing
Kano	160 (42%)	148 (38%)	8 (2%)	4 (1%)
Katsina	55 (14%)	49 (13%)	4 (1%)	2 (0.5%)
Gombe	50 (13%)	50 (13%)	0 (0%)	0 (0%)
Abuja	79 (21%)	77 (20%)	2 (1%)	0 (0%)
Lagos	40 (10%)	33 (9%)	5 (1%)	2 (0.5%)
Total	384 (100%)	357 (93%)	19 (5%)	8 (2%)
Total Response rate (%)	93%			
Total non-response rate (%)	7%			

Source: Field Survey (2024)

Of the 384 questionnaires, 93% were completed and returned, indicating a high response rate. However, 19 questionnaires (5%) were improperly filled and 8 (2%) were reported as missing. Kano had the highest number of distributed questionnaires (38%), while Gombe had a perfect response rate (13%). The study's

findings provide insights into the geographic distribution and response rates. This helps further in analyzing the relationship between Islamic finance products, financial inclusion, and the productivity of women entrepreneurs in regions covered by Jaiz Bank and Taj Bank.

Demographic and Socio-economic Analysis

Table 3.0 Demographic Analysis

	Frequency	Percentages
Age of the respondents		
18 to 29 years	91	25.49
30 to 39 years	155	43.42
40 to 49 years	77	21.57
50 to 59 years	34	9.52
Total	357	100.00
Education of respondents		
Post-Graduate Degree	49	13.73
First Degree/HND	130	36.41
Diploma/NCE	153	42.86
others	25	7.00
Total	357	100.00
Working Experience		
1 to 10 years	162	45.38
11 to 20 years	100	28.01
21 to 30 years	63	17.65
31 years and above	32	8.96
Total	357	100.00
Marital Status		
Single	126	35.29
Married	229	64.15
Others	2	0.56
Total	357	100.00
Household Size		
0-3 persons	186	52.10
4-6 persons	119	33.33
7 persons and above	52	14.57
Total	357	100.00
Religion Affiliation		
Islam	324	90.76
Christian	33	9.24
Total	357	100.00
Location of the respondents		
Kano	148	41.46
Katsina	49	13.73
Gombe	50	14.01
Abuja	77	21.57
Lagos	33	9.24
Total	357	100.00

Source: Field Survey (2024)

The majority of respondents (43.42%) fall within the 30-39 age range, followed by 25.49% in the 18-29 age group. This indicates that the sample is predominantly young to middle-aged adults, with nearly 69% of respondents under 40 years of age. The representation of older age groups (40-49 and 50-59) is smaller, suggesting that the study's findings may be more reflective of younger entrepreneurs or business owners.

The educational background of respondents is diverse, with the largest group (42.86%) holding Diploma/NCE qualifications, followed closely by those with First Degree/HND (36.41%). A significant portion (13.73%) has postgraduate degrees, indicating a well-educated sample overall. This distribution suggests that the respondents likely have the educational foundation to understand and engage with financial products, including Islamic finance options.

Nearly half of the respondents (45.38%) have 1-10 years of working experience, while 28.01% have 11-20 years of experience. This distribution aligns well with the age demographics, suggesting a sample of relatively experienced professionals. The inclusion of individuals with extensive experience (21-30 years and 31+ years) adds depth to the study, potentially providing insights from more seasoned entrepreneurs or business owners.

A clear majority of respondents (64.15%) are married, with 35.29% being single. This could have implications for financial decision-making, as married individuals may have different financial priorities and responsibilities compared to single respondents.

Over half of the respondents (52.10%) have small households of 0-3 persons, while 33.33% have medium-sized households of 4-6 persons. This distribution may influence financial needs and choices, potentially affecting the attractiveness of different Islamic financial products. The sample is predominantly Muslim (90.76%), with a small Christian minority (9.24%). This strong Islamic representation is crucial for a study focusing on Islamic financial products, as it ensures that the majority of respondents are likely to be familiar with and potentially interested in Sharia-compliant financial options.

The respondents are spread across five locations, with the largest concentration in Kano (41.46%), followed by Abuja (21.57%). The inclusion of respondents from different areas, including major cities like Lagos, provides a good geographical spread, potentially capturing regional variations in attitudes towards access to Islamic financial products. This provides a useful summary of key variables related to the finances and performance of women-owned businesses surveyed in the study.

Table 4.0 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
EXPD	342	18669.298	29506.375	100	300000
SALPD	320	36879.063	69293.675	1000	700000
profit	314	16778.344	46214.553	-20000	500000

Source computed by the researcher using STATA 17 (2024).

The average daily expenditure (EXPD) of N18,669 indicates a micro to small enterprise nature, with wide variability in budgets as shown by the large standard deviation in Table 4.0. A minimum of N100 spent per day suggests the predominance of very modest operations. Similarly, mean daily sales (SALPD) of approximately N37,000 daily aligns with micro-small scales. Albeit, there is a larger standard deviation, and a maximum of N700,000 daily sales points to a long right tail with some successful businesses achieving much larger turnover. The average profit per day (N16, 778) affirms generally positive earnings, though over four times the profit variation compared to expenditures or sales.

Coupled with loss-making cases (minimum - N20,000), this highlights common risks and vulnerabilities among startups.

4.3 Tobit Regression Analysis

The Tobit regression analysis conducted on women entrepreneurs banking with Jaiz and Taj Banks in Nigeria offers valuable insights into the impact of Islamic financial products and other factors on their business profitability. This study, which employed a censored dependent variable for a profit ranging from 1,000 to 10,000, reveals several significant findings that shed light on the dynamics of Islamic finance in supporting women-led businesses.

Table 5.0 Tobit regression

Profit=DV	Coef.	t-value	p-value
ISBP	1256.981	2.67	0.008
ISBanks	-2929.316	-3.13	0.002
NTISP	5904.552	3.31	0.001
Location	-2758.49	-3.99	0.000
Noemp	-779.816	-0.62	0.536
legalstatus	-12705.952	-5.07	0.000
MaritalS	3960.129	2.17	0.031
Age	2462.539	2.18	0.003
WExperience	-1177.732	-1.01	0.312
Constant	3211.414	0.59	0.554
var(e)	75001842		
Mean dependent var	17182.759	SD dependent var	53125.244
Pseudo r-squared	0.058	Number of obs	232
Chi-square	103.117	Prob > chi2	0.000
Akaike crit. (AIC)	1682.234	Bayesian crit. (BIC)	1720.148

*Source: computed by the Authors using STATA 17 (2024). Note: the asterisks ***, ** and * indicate significance at 1%, 5% and 10% respectively.*

One of the puzzling results is the positive relationship between the utilization of Islamic Banking Products (ISBP) and profitability. Women entrepreneurs who engage with a wider range of Islamic financial products tend to

achieve higher profits. This finding lends credence to the notion that Islamic finance can significantly contribute to the financial success of women-led enterprises. Specific products such as Takaful (Islamic insurance), Ijarah

(lease-to-own arrangements), Murabahah (cost-plus financing), and Musharakah (partnership financing) demonstrated strong positive impacts on profitability. The results suggest that Sharia-compliant financial instruments may offer unique advantages in supporting business growth and risk management for women entrepreneurs.

Interestingly, the study found that patronizing multiple Islamic banks was negatively associated with profitability. This unexpected result implies that women entrepreneurs might benefit more from concentrating their banking activities with a single Islamic financial institution, possibly due to stronger relationships or more tailored services. Additionally, the frequency of engagement with Islamic financial products showed a strong positive correlation with profits, indicating that sustained access to Islamic finance could be a key factor in driving business success.

The analysis also highlighted the significance of geographical location in determining profitability, with some areas showing negative impacts. This finding underscores the importance of considering regional economic conditions and market dynamics when assessing the potential for business success. Demographic factors such as marital status and age initially appeared to influence profitability positively, but further analysis suggested their impact might be less significant than initially thought.

The legal status of the business emerged as a crucial factor, with partnerships showing a strong negative relationship with profitability. This result warrants further investigation into

how different business structures interact with Islamic banking practices and affect financial outcomes. The impact of business size, as measured by the number of employees, varied depending on the scale. Businesses with 6-10 employees showed positive effects on profitability, while those with 11-15 employees demonstrated negative effects, suggesting an optimal scale for efficiency in this context.

While the model's overall explanatory power was modest, with a pseudo R-squared of 0.058, it nevertheless provided statistically significant insights into the factors influencing the profitability of women-led businesses engaged with Islamic banking. The findings strongly support the hypothesis that access to and utilization of Islamic financial products can enhance the productivity and financial performance of women entrepreneurs in Nigeria. This research contributes valuable knowledge to the ongoing discourse on financial inclusion and women's economic empowerment, particularly in the context of Islamic finance in developing economies.

Test of Research Hypotheses

In order to evaluate the working hypothesis of this study we need to recap the hypotheses. They include the following:

H0: Islamic financial products have no significant effects on the revenues of women entrepreneurs banking with in Jaiz and Taj Banks in Nigeria.

Reject H0. The poisson regression found that type of Islamic product subscribed to and number of subscriptions significantly increases business profits. This provides empirical

support that Islamic finance positively impacts revenues when tailored appropriately.

5.0 Conclusion

This study examined the effects of Islamic financial products on the revenues of women entrepreneurs banking with Jaiz and Taj Banks in Nigeria. The findings reveal a strong positive relationship between the utilization of Islamic banking products and the profitability of women-owned businesses. Islamic financial products like Takaful, Ijarah, Murabahah, and Musharakah are crucial for women entrepreneurs, enhancing business performance and providing financial tools for growth and risk management.

The study suggests that women entrepreneurs may benefit more from a strong relationship with a single Islamic financial institution, potentially due to tailored services or reduced transaction costs. Geographical variations in profitability were also observed. Additionally, the research indicates that profitability in women-led Islamic finance businesses is influenced by business size, with 6-10 employees appearing optimal. However, demographic factors like age and marital status may not significantly affect profitability, while partnerships were found to negatively impact profitability.

Overall, this study highlights the positive impact of Islamic financial products on Nigerian women entrepreneurs' revenues, underscoring their potential for economic empowerment and financial inclusion. These insights contribute significantly to the broader discourse on financial inclusion and women's

economic empowerment in the context of Islamic finance.

Recommendations

Islamic banks should expand Sharia-compliant financial products tailored for women entrepreneurs, with a focus on businesses with 6-10 employees, as this size was found to be optimal for profitability. Given the geographical variations in profitability, banks should consider location-specific product offerings and support.

Regulatory bodies and Islamic banks should collaborate to develop programs that encourage long-term relationships between women entrepreneurs and a single Islamic financial institution, as this was found to be potentially beneficial.

Financial literacy programs should be implemented, focusing on the effective use of Islamic financial products like Takaful, Ijarah, Murabahah, and Musharakah, which were found to enhance business performance and provide tools for growth and risk management. Given the negative impact of partnerships on profitability, Islamic banks should offer specialized guidance and products for sole proprietorships or provide additional support and risk management tools for partnership-based businesses.

The Central Bank of Nigeria should develop a policy framework to promote Islamic finance for women's entrepreneurship, emphasizing products and services that have shown positive impacts on revenue and profitability in this study.

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Revisiting the Impact Of Audit Committee Attributes On Audit Lag In The Banking Sector Of The Nigerian Exchange Group

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ABSTRACT

The objective of the study is to examine the relationship between audit committee attributes and audit report lag among listed deposit money banks in Nigeria. The study adopted a correlation research design in which secondary data are collected from the annual report published by the listed deposit money banks in Nigeria and the NSE fact book for the period of five years from 2018 to 2022. Descriptive statistics, panel regression and Hausman test were used for the data analysis. The empirical result showed that audit committee independence, and audit committee meeting has a significant negative relationship with audit report lag. Indicating that these attributes may reduce the number of days external auditor may take to append their signature in the financial statements. The study therefore, recommends that deposit money banks should continue to maintain the culture of having independent directors and have a fruitful meeting in the audit committee since it will promote timely financial reporting.

Keywords: Audit lag, audit committee attributes, banking sector, Nigeria.

1. Introduction

In Nigeria, the need for high quality and timely financial information of banks has become imperative due to increasing exposure of Nigerian business organization to international capital markets and the adoption of International Financial Reporting standards (IFRS). Thus, the banking organizations are being obliged to satisfy the information demand of investors and to provide them with more timely information in the annual financial reports. The main determining factor of financial reporting lag is the time lag between the end of the fiscal year and the issuance of the year's earnings announcement. In Nigeria, the capital market (the Nigerian Stock Exchange) rules stipulates that every dealing member must submit to the exchange its year-ended audited report within ninety days (90) of the fiscal year (Eze & Nkaka, 2020). However, despite the regulatory requirement, there some listed banks

failed in reporting their audited financial statement on time (Eze & Nkaka, 2020).

Untimely rendition of account give room for uncertainty and speculation that may rob of the company off future investment, which may have negative impact on the companies' earnings. Thus, to most investors audit delay is a red flag that something is amiss which may arouse suspicion. In addition, such suspicion may lead to sales of companies share (divesting) and in turn the prices of the shares may likely drop significantly.

This issue if not addressed may diminish generally the confidence of the investors in the market particularly int the banking sector. One of the measures to address this issue is having a strong audit committee. The Nigeria Corporate Governance Code, 2018 (NCGC 2018) stipulates that it is desirable for every company

to have an audit committee responsible for review the company's accounting policies, assess the internal control system, review external reporting systems and compliance and regulations.

Empirically, scholars who investigated audit committee attributes and audit lag have resulted in a mixed findings (Akinleye & Aduwu, 2019; Al-Muzaiqer et al., 2018; Chukwu & Nwabochi, 2019; Eze & Nkak, 2020; Firnanti & Karmudiandri, 2020; Juwita et al, 2020; Kaaroud, 2020; Odjaremu & Jeroh, 2019; Pradipta & Zalukhu, 2020; Raweh, Kamardin, & Malek, 2019; Soyemi, et al.. 2019; Zaitul & Ilona, 2019). This inconsistency throws up an opportunity for further research. Therefore, this study examines the impact of audit committee attributes on audit report lag. The study focuses on the banking sector and is considered as the heart of every economy. Prior studies have attested to the incremental benefits the sectors has in the development of a nation (Idris et al., 2024; Oyewumi et al., 2018). Using a dataset obtained from the NGX website of the listed banks, the empirical result of the study revealed that audit committee independence and audit committee meeting has an inverse relationship with audit report lag.

The remainder of this paper is structured as follows. Review of empirical evidence and hypotheses are placed in the second section of the paper. The methodology of the paper is situated in third section. Whereas discussion of results and conclusion are placed in the fourth and fifth section of the study respectively.

2. Review of literature and development of hypotheses

2.1 Audit committee independence and audit report lag

The relationship between audit committee independence and audit report lag have been previously investigated by scholars. Yadirichukwu and Ebimobowei (2013) examined the effect of audit committee independence and timelines of financial reports for thirty-five (35) firms quoted in the Nigeria Stock Exchange (NSE) for the period 2007-2011. The data for the study were collected from the annual reports and accounts. The collected data were analyzed using relevant diagnostic tests, pooled least square and granger causality test. The result suggested that audit committee independence positively significantly related to the timeliness of financial reports. This result is consistent with the study of Puasa et al., (2014) who explored the link between audit committee characteristic and financial reporting timeliness on changes in financial reporting timeliness after the reform of Malaysia's corporate governance legislation in 2007. The result of the regression shown that, audit committee independence positively associated to financial reporting timeliness during the period under review. More so, Sadiq & Emmanuel (2017) and Aifuwa & Saidu (2020) from the Nigerian market reported that audit committee independence has a positive relationship with financial reporting lag, However, Maranjory and Tajani (2022) tested the effect of independence of audit committee on audit report lag in firms listed on the Tehran Stock Exchange (TSE) using unique data from Iran for 5 years' period between 2016 and 2020,

the result showed that independence of audit committee has a significant negative effect on audit report lag. In a recent study by Sheidu et al. (2023) using oil and gas companies for the period of 2011 to 2020. The study revealed that presence of independent directors on audit committee have a negative and statistically significant effect on audit delay of listed oil and gas companies.

Therefore, the study hypothesized that

H₁: There is a relationship between audit committee independence and audit report lag.

2.2 Audit Committee Gender Diversity and Audit Report Lag

Using Nigerian banks, Sadiq and Emmanuel (2017) investigated the association between audit committee attributes and financial reporting lag from 2011 to 2015. The study used ordinary least square regression, and revealed that audit committee gender having a female in the audit committee lead to higher financial reporting lag. But the findings of Gospel and Ngozi (2019) failed to document any significant association while investigating the insurance firms in Nigeria between 2012 and 2015.

Nevertheless, recent evidence indicates a significant role played by female directors in audit committee. Hussien et al., (2022) investigated the impact of gender diversity audit committee and audit report lag of Chinese listed companies for the period of 2010 -2018. The result showed a negative relationship between gender diversity and audit report lag. The study noted that a gender diverse audit committee is able to better monitor the

preparation of financial reports, communicate better with the auditors in resolving disagreements between management and auditors and facilitate a more efficient audit engagement. Similarly, Abdullah & Gokhan (2024) examined the effect of audit committee characteristics on timeliness of financial reporting, the research is based on data collected from 2284 company year-observations from non- financial companies listed in Turkey. The utilized regression model was used to analyze the data. The findings showed that gender diversity negatively and significantly associated with financial reporting timeliness. Therefore, the study proposed that

H₂: There is a relationship between audit committee gender diversity and audit report lag.

2.4.3 Audit committee meeting and audit report lag

Audit committee meeting is important in corporations. It is an avenue to deliberate on matters that relate to the strength and weakness of entities. Also, provide a platform for compliance with the financial reporting requirements. Gabriel (2012) investigated the impact of audit committee attributes on financial reporting quality and timeliness of banks in Nigeria. The study employed eleven (11) banks that audit committee meeting has a positive significantly relationship between financial reporting timeliness. This implies that the frequency of audit committee meeting would significantly lead to timely release of audited financial statement by the quoted banks. In line with this finding, Joseph et al, (2018) who investigated the effect of the audit

committee attribute on financial reporting of listed deposit money banks, insignificant positive relationship. Likewise, Sheidu et al. (2023) reported insignificant association between audit lag and audit committee diligence in the oil and gas companies listed on the NGX.

In contrast, Gospel and Ngozi (2019) in their investigation in the insurance companies reported that significantly negative relationship prevails between audit committee meeting frequency and timeliness of corporate financial reporting. The study maintained that the statutory meeting should continue to be taken place since it enhances the timeliness of corporate financial reporting. Consistence with this finding, Edosa and Monye (2022) explored the relationship between audit committee characteristics and timeliness of financial reports in Nigeria. The study employed correlation research design using the annual report of thirteen (13) listed deposit money bank in Nigeria for the period of 2016- 2020. The data for the study were analyzed using descriptive statistic. The result showed that the audit committee meeting has a negative effect and statistically significant relationship with timeliness of financial report. Equally, Anisa & Mohamad (2023) from Indonesian market, documented that audit committee meeting affects audit report lag negatively and statistically significant. Thus, the study hypothesized that

H₃: There is a relationship between audit committee meeting and audit report lag.

2.3 Underpinning Theory

2.3.1 Agency Theory

The agency theory explains the relationship between the principal (shareholder) and the agent (management) of a firm (Aifuwa et al., 2018; Saidu & Aifuwa, 2020). The agent performs some service or service on behalf of the principal who delegate some authority over decision-making to the agent. The foundation of the theory is the assumption that the interests of the principal and the agent will be different. The agents may not always behave in the best interest of the principals; the agent may exhibit an individualized opportunistic behavior at the detriment of the principal. The after of such individualized conduct creates a cost to the principal. The goal of the theory is to resolve problems that may occur in an agency relationship (Ilaboya & Lodikero, 2017; Saidu & Aifuwa, 2020). Agency problems can arise when the principal cannot verify whether the agent's behavior has been carried out correctly and there are differences in attitudes between the principal and the agent due to different risk preferences. The problems can arise when the principal does not know the exact actions taken by the agent. This can happen because of the influence of personal needs on the part of the agent.

Management (as an agent) is responsible for the financial statements made. Shareholders (as principals) are required to be able to make decisions following management. Thus, in assuring that both parties have fulfilled their responsibilities, there is a need for a third party, that is, an auditor. The auditor will ensure that

management's reports can be used as a basis for decision-making. Auditors are needed as an audit function that can help shareholders assess the reports made by management. The auditor will perform an audit analysis of financial statements. Based on this, shareholders can control the management performance. The auditor plays an important role here, especially in the timeliness of audit reporting. The longer lags occur when they perform the audit reports can affect the value of information in the financial statements.

3. Methodology

The population of this research work is made up of all deposit money banks listed on the Nigerian Exchange Group (NGX). At the time of conducting this study, only thirteen (13) listed deposit banks on the NGX were available on the main floor. This sector was chosen as the domain of the study because of its strategic importance in the development of the economy

(Idris et al., 2024; Oyewumi et al., 2018) and it is one of the most regulated sector in Nigeria whose published annual reports are easily reached and easily accessible during the period of the study that is 2018-2022. Out of the 13 listed banks, the study employed 12 banks on the purposive sampling based on the availability of the data.

The study period is five (5) years 2018-2022 with 60 firm-year observations. The data of the selected twelve (12) deposit money banks collected from the annual report and account of the sampled banks downloaded from the NGX website at <https://ngxgroup.com>. The study uses three independent variables which are Audit committee independence, audit committee gender, and audit committee meeting. Following the extant studies, this study also uses two control variables return on assets and size of the firm. Table 1 presents the variable definitions and their measurement.

Table 1 Variable Definition and Measurement

Variable	Type	Measurement	Source
Audit Report Lag (ARLAG)	Dependent Variable	Number of days from date of financial year-end (FYED) to the date auditor sign the report.	Al-Muzaiqer, Ahmed, & Millicent et al., (2022) (Sheidu et al., 2023)
Audit Committee Independence (ACIND)	Independent variable	The number of non- executive director on the audit committee	Abdullah et al (2008), Ogun and Adesewa (2020) Eze & Nkak (2022)
Audit Committee Gender Diversity (ACGD)	Independent variable	Total number of female gender present on the audit committee	Harjoto et al (2015), Chukwu & Nwabochoi (2019); Soyemi et al. (2019)
Audit Committee Meeting (ACM)	Independent variable	Total number of audit committee meeting held in the financial year	Ishak & Nugraha, (2023)
Profitability (PROF)	Control variable	Measured by ROA; Profit after tax divided by total asset	Kasmir (2019)
Firm size	Control variable	Natural logarithm of total assets	Aifuwa & Embele (2019); Saidu & Aifuwa (2020); Firnanti & Karmudiandri (2020)

Source: Developed by the Researcher Based on Literature

3.1 Model of the study

$$ARLAG_{it} = \beta_0 + \beta_1 ACIND_{it} + \beta_2 ACGD_{it} + \beta_3 ACM_{it} + \beta_4 ACFEP_{it} + \beta_5 ACSIZE_{it} + \beta_6 PROF + \beta_7 FSZ + \varepsilon_{it}$$

Where:

ABLAG = Audit Report Lag

β_0 = Constant

ACIND = Audit committee independence

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ = Coefficient of explanatory variables

ε = standard error

ACGD = Audit committee gender diversity

ACM = Audit committee meeting

PROF = Profitability

FSZ = Firm size

4. Results and discussion of findings

4.1 Descriptive Statistics

The descriptive statistics is presented in Table 2 below, where the minimum, maximum,

standard derivative of the variable use in the study is showed.

Table 2 Descriptive Statistics

Variable	Obs.	Mean	Std. dev.	Min	Max
ARLAG	60	1.686	0.201	1.255	2.072
ACIN	60	0.455	0.072	0.200	0.667
ACGD	60	0.237	0.190	0.000	0.800
ACM	60	4.517	1.127	1.000	8.000
PROF	60	0.020	0.014	0.003	0.066
FSZ	60	7.447	1.253	6.043	9.809

Source: STATA 17

ARLAG recorded a mean and standard deviation of 1.686 and 0.201 respectively. Mean explains the average amount of value recorded in the for the data on each variable, the standard deviation (Stv. Dev.) measures the level of variability of the data. Audit report lag (ARLAG) show a minimum of 1.255 for banks that reported within the ninety (90) days as specified by BOFIA and a maximum of 2.072 for those that reported after the ninety (90) days. Standard deviation of 0.201 and mean value of 1.686, This indicates that majority of the sampled banks timely report within the regulatory deadline of 90days. The descriptive analysis of the independent variables revealed that over the period 2018-2022. The mean value of Audit Committee Independence (ACIN) of banks examined is 0.455 and maintain a minimum of 0.200 and the maximum of 0.667 with a standard deviation of 0.072, the

independence level of the audit committee is average and could be improved on. Audit Committee Gender Diversity (ACGD) depicts a mean of 0.237 with a minimum value of 0.000 and maximum of 0.800 and standard deviation of 0.190. This indicate that women are not participating much in the board. Audit Committee Meeting (ACM) with a mean value of 4.517 and a minimum of 1.000 and a maximum of 8.000 with a standard deviation of 1.127 reveal that meetings are held at least four times annually although some audit committees have had meetings up to seven (8) times. Judging from these numbers, the audit committee may be May be satisfying the minimum number of meetings stipulated by the regulators.

Profitability (PROF) has a mean of 0.020 with a minimum and maximum of 0.003 and 0.066

respectively with a standard deviation of 0.014. The mean value of Firm Size (FSZ) is 7.447 with a standard deviation of 1.253 and a minimum and maximum values of 6.043 and 9.809 respectively.

4.2 Correlation matrix

Table 3 below displays the correlation value between the dependent and the independent

Table 3 Correlation Matrix

VAR	1	2	3	4	5	6
(1) ARLAG	1.000					
(2) ACIN	-0.134	1.000				
	0.306					
(3) ACGD	-0.245	-0.059	1.000			
	0.062	0.659				
(4) ACM	0.444*	-0.002	-0.188	1.000		
	0.000	0.990	0.155			
(5) PROF	-0.547*	0.157	0.511*	-0.358*	1.000	
	0.000	0.231	0.000	0.005		
(6) FSZ	0.126	0.050	0.317*	-0.225	0.146	1.000
	0.339	0.707	0.014	0.084	0.266	

Stata 14 Output

The result also indicates that there is a negative relationship between audit committee gender diversity (ACGD) and audit report lag from correlation coefficient of -0.245 which is significant.

The Table 3 also, depicts the of the correlation between audit committee meeting and audit report lag. The result from the Table 3 indicates that there is a positive relationship between

4.3 Multicollinearity

The study further uses Variance Inflation Factor (VIF) to test multicollinearity among the independent variables which may affect the outcome of the analysis. The VIF and total tolerance according to Gujarati (2009) should not exceed 10 and 1 respectively which is

variables as well as the relationship between the independent variable themselves. From the correlation matrix result reported in Table 3 shows that there is negative relationship between audit committee independence (ACIND) and audit report lag with a correlation coefficient of -0.134 which is insignificant.

audit committee meeting (ACM) and audit report lag from correlation coefficient of 0.444 and it is statistically significant.

The Table 3 also shows that there is a negative relationship between profitability (PROF) and audit report lag from correlation coefficient of -0.547 which is significant. Furthermore, the correlation between firm size and audit report lag is 0.126 but statistically insignificant.

acceptable range that indicate the absence of multicollinearity. Table 4 presents the results which show that there is no multicollinearity among the independent variables as none of the variables have a value of 10 and 1 for VIF and tolerance respectively

Table 4 VIF and Tolerance values for the independent variables

Variable	VIF	Tolerance
ACIN	1.07	0.9351
ACGD	1.52	0.6577
ACM	1.2	0.835
PROF	1.59	0.627
FZS	1.16	0.8599

Source: Stata 14 output

4.4 Regression results

The study uses Hausman Test to determine the most efficient model between fixed and random effects. The outcome of the Hausman test show that the random effect was found to be suitable and most efficient model as evidenced by the Chi square of 3.84 and a p-value of 0.5720. Also, Breusch and Pagan Lagrangian multiplier test for random effects was conducted. The result shows that the Chi square has a value of 18.41 and a p-value of 0.000. Thus, favors the random effect instead of simple OLS model. From Table 4 the regression result shows that ACIND has a negative and significant effect on ARLAG among the sampled DMBs in Nigeria. Indicating that Audit committee independence significantly influence audit report lag of listed DMBs in Nigeria as shown by the coefficient of -0.093 and P-value of 0.088. This provides evidence of accepting the alternative hypothesis, thus, rejecting H_{01} . This revealed that for one increase in audit committee independence, will decrease audit report lag of the listed DMB by 9.3%. The result is similar to the finding of Maranjory and Tajani (2022) and Sheidu et al. (2023) that reported a negative significant effect of audit committee independence on audit report lag and contrary

to the result of Sadiq and Emmanuel 2017; Aifuwa and Saidu 2020 that revealed a positive association between Audit committee independence and audit reporting lag.

Regarding the coefficient of determination, the result shows that the model has R^2 0.3913 (overall) indicating the coefficient of determination (R^2). The total variations in the dependent variable as explained by the independent variables jointly, is 39.13%. This implies that 39.13 % of the total variations is accounted by audit committee independence, gender diversity, frequency of meeting, profitability and firm size. The remaining 60.87 % can be accounted for by other factors. The Wald chi2 which measures the model's fitness has a value of 17.53 and P-value of 0.0036. Thus, the findings of the study can be relied upon.

Rogers (1993) argued that the use of robust standard error can address potential threat of heteroscedasticity, as well as serial correlation. Based on this, the estimation of this study is based on the robust standard error. This will enhance the quality of the result, and the findings can be relied upon.

Table 4. Regression results

VARIABLE	Coef.	Std. Err.	z	P>z
ACIND	-0.093	0.054	-1.710	0.088
ACGD	-0.106	0.073	-1.440	0.149
ACM	-0.108	0.049	-2.210	0.027
PROF	-0.049	0.046	-1.080	0.280
FZS	0.041	0.016	2.550	0.011
_CONS	3.146	0.491	6.410	0.000

Source: Stata 14 output

Table 4 reveals that audit committee gender diversity is found to be negatively associated with Audit report lag and statistically insignificant (coefficient of -0.106 with a p-value of 0.149). The result, therefore, provides an evidence of accepting the null hypothesis. Hence, the alternative hypothesis is rejected. The result is in line with the finding of Gospel and Ngozi (2019) who revealed insignificant audit report lag of listed DMBs in Nigeria. The result, therefore, provides an evidence of accepting the alternative hypothesis, thus, H_{03} is rejected. The result is in support of the finding

Conclusion and Recommendations

The objective of the study is to investigate the relationship between audit committee attributes and audit report lag of listed deposit money banks in Nigeria. Based on the findings the study, therefore, concludes that the attributes of audit committee significantly affect audit lag. The result of the current study is consistent prior evidence audit committee attributes explains the audit reporting lag. Specifically, the results indicated that audit committee independent and audit committee meeting have a negative significant relationship between audit report lag of listed deposit money banks in Nigeria. In line with the findings of the study, the following recommendations are made: Firms should continue to sustain the culture of

association between audit committee gender and audit report lag.

Audit committee meeting is found to be negatively associated with audit report lag and statistically significant. The result in Table 4 shows that the coefficient is -0.108 with a P-value of 0.027. The results indicates that audit committee meeting significantly influence

of Anisa and Mohamad (2023) and Gospel and Ngozi (2019) that found a significantly negative relationship between audit committee meeting frequency and audit report lag.

having independent directors in the audit committee to promote timely financial reporting. The study also recommends that the meetings held by the audit committee should strategically be managed to ensure fruitful deliberations regarding the financial statements reporting.

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Long Run Effect Of Trade Openness On Unemployment In Nigeria

By

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ABSTRACT

Integrating the world economy through trade openness helps reduce poverty and unemployment. Despite the influence of trade openness to employment generation, the unemployment in Nigeria continues to rise. This study examines the effect of trade openness on unemployment in Nigeria, covering the period from 1982 to 2022. The study used Auto Regressive Distributed Lag (ARDL). The computed ARDL results indicate that trade openness (TRO) reveals a negative and significance impact on unemployment (UNE) in the long run. Specifically, a percent increase in trade openness is associated with a decrease in Nigeria's unemployment. Similarly, trade openness (TRO) shows a negative and significant impact on unemployment (UNE) in Nigeria. Specifically, a percent increase in trade openness is associated with decrease in unemployment. Based on these findings, the study recommends that the country must embark on necessary reforms and adopt sound policies to provide employment solutions to address the issue of unemployment.

Keywords: Trade Openness, Unemployment, Nigeria, ARDL.

1. Introduction

Over the past two decades, global trade openness has increased on average by 6% annually. The integration of the global economy through trade openness has reduce the rate of unemployment across various regions globally. However, most developing countries have not fully shared in this prosperity, even though their incomes have risen dramatically (Warrad, 2018). Trade openness recognizes that no country can solely rely on domestic production to meet all the needs of its citizens (Mannur, 1995).

Integrating the world economy through trade openness helps drive faster economic growth, generate employment, reduce poverty and decrease unemployment both domestically and internationally (Ikechukwu et al., 2017). Countries that are open to trade tend to grow

rapidly, innovate, and improve productivity, leading to higher incomes and more job opportunities, thereby reducing unemployment levels. Trade openness particularly benefits lower-income households by providing access to more affordable goods and services.

The impact of trade openness on unemployment is a subject of ongoing debate among scholars. Generally, trade openness can create new jobs in export industries. When businesses gain access to larger markets, they often expand production, requiring additional labor. Moreover, cheaper imported goods resulting from trade openness can lower the cost of living for consumers, potentially increasing demand and thus boosting employment in other sectors of the economy (Martes, 2018). However, opening up to international competition can compel domestic

firms to enhance their efficiency and innovation. This can support long-term economic growth and contribute to job creation.

Africa's trade has opened up significantly to the global market, especially in merchandise trade, although trade in services has also been increasing over recent decades. For instance, in 2016, Africa exported goods valued at approximately \$361 billion, with services exports reaching nearly \$96 billion. Intra-African trade alone accounted for over \$129 billion, constituting about 15.4% of Africa's total goods trade (exports plus imports). Africa's total trade openness to the rest of the world averaged \$760 billion from 2015 to 2017, including \$4,109 billion from Asia, \$6,801 billion from Europe, \$5,140 billion from America, and \$481 billion from Oceania (United Nations Conference on Trade and Development [UNCTAD], 2019).

Nigeria stands as one of the leading economies in Africa, particularly in terms of GDP (current US\$). The country ranks 140th globally in GDP per capita (current US\$), 47th in total exports, and 50th in total imports (Economic Complexity Index [ECI], 2019). The contribution of trade openness to Nigeria's GDP has shown remarkable growth over the years, especially since the advent of democratic rule. Globalization has significantly increased Nigeria's trade openness, evident in the rising volumes of trade in both oil and non-oil sectors. Before the discovery of oil, the agricultural sector played a crucial role in Nigeria's economy, contributing significantly to

overall economic activities (Muhammad et al., 2018).

Hazera et al. (2021), trade openness can reduce unemployment by introducing reasonable wages and increasing returns to scale. Malefa (2020) argues that small countries benefit from deep trade openness into the global economy, gaining access to a larger consumer base, skilled labor, additional financing sources, and new technologies. Trade openness creates an environment where existing firms can expand and become more productive, while new firms can emerge and create more job opportunities.

Masamba et al. (2020) contend that trade openness immediately expands market size for each firm, facilitating the trade of intermediate and finished goods across borders. A larger market size stimulates a country's production volume, leading to increased demand and supply of labor. Naime & Saudi (2015) assert that long-term trade openness enables poor countries to enhance their economies by increasing production volumes of goods and services for global markets, generating higher foreign earnings and funding programs to reduce poverty and unemployment.

The benefits of trade openness extend to employment opportunities by reducing trade costs, enhancing availability of goods and services, and improving purchasing power (Aljebrin, 2020). Furthermore, market expansion, technology sharing, and cross-border investments stimulated by trade openness contribute to improved employment prospects. While trade

openness enhances technological advancement and generates employment opportunities, issues of unemployment persist. Recently, Nigeria closed its borders to prevent movement of certain goods and address security concerns within the country. This policy resulted in reduced income generation, increased incidents of terrorism, and loss of jobs, particularly affecting populations residing near the borders such as Adamawa bordering Cameroon, Zamfara bordering Niger, Borno bordering Niger, Chad, and Cameroon, Jigawa bordering Niger Republic, and Lagos bordering Benin Republic. The benefits of border trade primarily flowed to neighboring countries through smuggling and informal trade, notably at the Benin-Nigeria border, where significant revenues were collected by Benin through legal imports and subsequent illegal diversion into Nigeria via smuggling.

This situation has contributed to a rise in Nigeria's unemployment rates by 8.24% in 2018, 8.53% in 2019, 33.3% in 2020, and 33.5 % in 2021, compared to 3.8% and 3.7% in 2011 and 2012 respectively. Theoretical literature suggests that while trade openness can have indirect negative effects on unemployment, Nigeria's recent data on trade openness reflects a corresponding increase in unemployment rates. In light of these issues, this study aims to examine the impact of trade openness on unemployment in Nigeria.

2. Literature Review

2.1 Conceptual Review

Trade Openness

Trade openness refers to the degree to which a country or economy allows goods and services to

be imported and exported across its borders without restrictive barriers. It encompasses the extent of a nation's integration into the global economy and reflects policies that either facilitate or hinder international trade. Trade openness is often associated with trade liberalization, which involves reducing tariffs, quotas, and non-tariff barriers that restrict international trade. This liberalization aims to create a more open and competitive market environment. (Ammani et al, 2023)

Trade openness measures the extent to which a country is engaged in the global trading system and is usually measured by the ratio between the sum of exports and imports and gross domestic product. It increases product market competition by fetching in foreign more efficient industrial firms, entry of foreign firms decreases the profits and cash holdings for domestic firms, bringing outside opportunities as well as the need to defend domestic markets against superior foreign technologies and increase the need for domestic firms to invest more (Rahman et al., 2021).

Trade openness brings efficient welfare gains to all nations regardless of their initial conditions, technological capabilities, development level, and resources endowments (Afolabi et al., 2017).

Unemployment

Unemployment is the condition in which individuals who are capable of working, are actively seeking work, but are unable to find any employment. It is a critical economic indicator that reflects the health of an economy and the

effectiveness of its labor market (Ammani et al, 2024).

Unemployment can be conceived as the number of people who are unemployed in an economy, often given as a percentage of the labor force. Unemployment is also defined as numbers of people who are willing and able to work as well make themselves available for work at the prevailing wage but no work for them (Kabiru et al., 2021).

2.2 Empirical Review

Isiaka (2017) asserted that trade openness negatively impacts the unemployment rate in Nigeria both in the short run and long run, covering the period from 1981 to 2014, using the autoregressive distributed lag (ARDL) model. Ikehukwu et al. (2017) analyzed the impacts of trade openness on unemployment rates in Nigeria using time series data from 1970 to 2010, employing the vector error correction model (VECM) approach. Their study found that in the long run, real output and income per capita lead to a decline in unemployment, while trade openness is associated with an increase in unemployment.

Warrad (2018) observed a statistically significant positive impact of trade openness on employment levels in selected Arab countries, using a sample from Algeria, Bahrain, Egypt, Jordan, Oman, Saudi Arabia, and Tunisia spanning from 1990 to 2015, applying panel pooled Ordinary Least Squares (OLS). Hossain et al. (2018) investigated the relationship between trade openness and unemployment in Bangladesh empirically,

employing the vector error correction model (VECM) and data from 1990 to 2016. Their findings reveal a positive and significant cointegration between trade openness and unemployment in the long run, suggesting that increased public expenditure on education reduces unemployment, a result consistent with short-term estimates.

Alfalih (2024) studied the impact of oil prices, foreign direct investment (FDI), and trade openness on unemployment rates in Saudi Arabia, covering the period from 1991 to 2019. Using an ARDL model and bounds testing for co-integration, the study found that oil prices, FDI, real GDP, and trade openness all negatively affect unemployment in the long run. Specifically, oil prices need to be above \$41.20 per barrel to positively impact unemployment; below this threshold, unemployment worsens.

Shuaibu & Ohams (2024) examined the relationship between trade openness, gender gaps, and unemployment in Nigeria from 1991 to 2021. Using co-integration and vector error correction models (VECM), the study found that trade openness has a significant negative effect on unemployment in the long run. In the short run, real wages reduce unemployment, while trade openness has an insignificant effect.

Ulima (2022) investigated whether trade openness fosters unemployment in D-8 OIC countries, covering the period from 1991 to 2020. The study found that trade openness has a significant positive effect on unemployment. Conversely, wages, economic growth, and

inflation have a significant negative relationship with unemployment, while population growth increases unemployment.

Gonese et al. (2023) explored the relationship between trade openness and unemployment in selected Southern African Development Community (SADC) countries using panel data from 1980 to 2019. Employing a panel ARDL (Pooled Mean Group PMG) approach, the study found that exports negatively impact unemployment, whereas imports positively affect unemployment in the long run. Effective trade policies should balance export growth with import management.

Martes (2018) examined the effect of trade openness on unemployment across 28 Organization for Economic Cooperation and Development (OECD) countries using panel regression analysis spanning from 2000 to 2016. The study found a negative relationship between trade openness and unemployment in both the short run and long run. Onifade et al. (2019) investigated the link between openness and unemployment in Nigeria from 1980 to 2014, using the ARDL model. Their empirical findings indicated that terms of trade were insignificant to

.Methodology

This study utilizes secondary data for relevant variables sourced from the World Development

.Model Specification

The specification of an economic model is typically grounded in economic theory and the available data pertinent to the study's topic (Ammani et al., 2023). The empirical model

the unemployment rate, while trade openness had a negative and significant impact on unemployment in Nigeria over the study period. Nwosa et al. (2020) inspected the relationship between trade openness and the unemployment rate in Nigeria from 1980 to 2018. The study utilized the autoregressive distributed lag (ARDL) technique, finding that trade openness had a negative and significant impact on the unemployment rate in Nigeria. Mohler et al. (2018) examined the impact of international trade and unemployment in Switzerland, using panel data covering the years 1991 to 2008. The study found a positive but insignificant relationship between import competition and the likelihood of (low-skilled) individuals becoming unemployed in Switzerland. Kabiru et al. (2021) examined the nexus between investments and unemployment in Nigeria from 1991 to 2019. The study employed the vector error correction model (VECM) and found that domestic and foreign investments negatively and significantly impact unemployment, while economic and population growths have a significant positive relationship with unemployment in the long run, with all short-run coefficients being insignificant Indicators of the World Bank. The data covers the period from 1982 to 2022, and the variables are expressed in their natural logarithm employed in this study draws from the Classical theory of trade, as articulated in the work of Isiaka et al. (2017). The model is formulated as follows:

$$UNE_t = f(TRO_t, FDI_t, DIV_t, \dots) \dots \dots \dots (1)$$

The model was modified in this study by adding population growth to provide assistance for achieving the objective of the study, as it signifies

that unemployment rate is function of trade openness and foreign direct investment and add population growth as given in equation 2.

$$UNE_t = f(TRO_t, DIV_t, FDI_t, POP_t) \dots \dots \dots (2)$$

The following equation 3 present econometric log form of the model:

• **Estimation Procedure**

$$UNE_t = \beta_0 + \beta_1 \ln TRO_t + \beta_2 \ln DIV_t + \beta_3 \ln FDI_t + \beta_4 \ln POP_t + \mu_t \dots \dots \dots (3)$$

○ **Unit root test**

Unit root test will be conducted for getting unbiased estimate for Granger causality test (Jayaraman and Singh, 2007) and for further justification of applying ARDL (Awokuse, 2009). It is also performed so that if the calculated F value falls inside the bounds, we will be able to

know the order of integration of the variables under consideration for drawing inference (Pesaran et al., 2001). Augmented dickey fuller (ADF) and the Philip Perron (PP) unit roots tests used to determine the order of integration of the variables under study.

Optimum Lag Selection Test

The lag length selection criteria test will be follow and is mainly to show the appropriate number of lags that would give the best Cointegration and that of optimum lag determined must be free from serial correlation problem in order to avoid getting spurious result. In order to select the appropriate model of the (HQC).

long run underlying equation, it is necessary to determine the optimum lag length (k) by using proper model order selection criteria such as; the Akaike Information Criterion(AIC), Schwarz Bayesian Criterion (SBC) or Hannan-Quinn Criterion

○ **ARDL Model**

This study employed Autoregressive Distributed Lag (ARDL) bounds test approach for co-integration developed by Pesaran, Shin and Smith (2001) to estimate the correlation between variables under study. The ARDL approach gives more statistical advantages than other co-integration techniques. ARDL test procedure provides valid results whether the variables are I

(0) or I(1) or mutually co-integrated and provides very efficient and consistent estimates in small and large sample sizes (Pesaran, Shin & Smith 2001). The ARDL approach, this approach is applicable to this study as all the series are either I(0) or I(1). The ARDL model is shown in equation 4.

○ **ARDL Bounds Test Model**

The statistic used to determine whether a long-run relationship exists between the variables through testing the significance of the level lags of the variables in ARDL bounds testing

$$\Delta UNE_{1t} = \theta_0 + \sum_{h=1}^U \beta_{1h} \Delta \ln TRO_{2t-i} + \sum_{i=0}^U \beta_{2i} \Delta \ln DIV_{t-i} + \sum_{j=0}^U \beta_{3j} \Delta \ln FDI_{t-i} + \sum_{k=0}^U \beta_{4k} \Delta \ln POP_{t-i} + \alpha_1 UNE_{2t-i} + \alpha_2 \ln TRO_{t-i} + \alpha_3 \ln DIV_{t-i} + \alpha_4 \ln FDI_{t-i} + \alpha_5 \ln POP_{t-i} + \mathcal{E}_t \dots \dots \dots (4)$$

ARDL Model (Long Run)

$$UNE_t = \delta_i + \sum_{i=1}^M \theta_i \ln TRO_{t-1} + \sum_{i=1}^M \theta_i \ln DIV_{t-2} + \sum_{i=1}^M \theta_i \ln FDI_{t-3} + \sum_{i=1}^M \theta_i \ln POP_{t-4} + \mu_{it} \quad (5)$$

stands for the natural logarithm sign, θ_0 is the drift parameter, $\theta_1 \dots \theta_4$ are the long-run coefficients, \sum is the summation sign, M is the maximum lag, t is the time trend, UNE is the unemployment, **ARDL Model (Short run and Error Correction)**

$$UNR_t = \gamma_i + \sum_{i=1}^M \beta_1 \Delta \ln TRO_{t-1} + \sum_{i=1}^M \beta_2 \Delta \ln FDI_{t-1} + \sum_{i=1}^M \beta_3 \Delta \ln DIV_{t-1} + \sum_{i=1}^M \beta_4 \Delta \ln POP_{t-1} + \varphi ECT_{t-1} + \varepsilon_t \quad (6)$$

Where: $\beta_1 - \beta_4$ are the short-run values, δ is the value of error term, Δ is the short-run sign or the change parameter, A is the maximum or

• **Diagnostic Tests**

The diagnostic tests will also be applied to test the accuracy of the model which includes the

3. Data analysis and Presentation

• **Unit Root Test**

As discuss in methodology section, the unit root test was carried out using Augmented Dickey Fuller (ADF; 1981) and Philips Perron (PP, 1988) test was carry out to check for the presence of

approach is Wald or F test. To check for the existence of long-run cointegration between the independent variables and the dependent variable, the study use ARDL bound test

TRO is the trade openness, FDI is the foreign direct investment, DIV is the domestic investment, POP is the population and ε is the error term

optimum lag length and \sum is the summation or sigma.

serial correlation LM test, the heteroscedasticity test, the normality test, the Ramsey Reset test for specification and the stability test

stationarity among the variables of study. The stationarity tests were conducted at level and at first difference, the results of the unit root test is presented in table1.

Table 1 Unit Root Test Result

Variables	Order of integration	Augmented Dickey Fuller(ADF)			Philips Perron (PP)			Prob.	
		ADF Critical Values			PP Critical Values				
		1%	5%	10%	1%	5%	10%		
UNE	I(0)	-	-	-	0.007	-	-	-	0.0000
		3.61045	2.93898	2.60793	4	3.60559	2.93694	2.60685	
		3	7	2		3	2	7	
ΔLTRO	I(1)	-	-	-	0.000	-	-	-	0.000
		3.61558	2.94114	2.60906	8	3.61045	2.93898	3.61045	
		8	5	6		3	7	3	
ΔLFDI	I(1)	-	-	-	0.000	-	-	-	0.000
		3.61558	2.94114	2.60906	2	3.61045	2.93898	2.60793	
		8	5	6		3	7	2	
ΔLDIV	I(1)	-	-	-	0.000	-	-	-	0.000
		3.61558	2.94114	2.60906	0	3.61045	2.93898	2.60793	
		8	5	6		3	7	2	
ΔPOP	I(1)	-	-	-	0.000	-	-	-	0.00
		4.21186	3.52975	3.19641	0	4.21186	3.52975	3.19641	
		8	8	1		8	8	1	

Source: Author Computation using E-views10 (2024)

As reported in Table 1, both the ADF and PP tests indicate that all variables are non-stationary at the level except for the unemployment rate, which is stationary at the first difference. This implies that all variables are integrated of order one, while only the unemployment rate is integrated at both

the level and the first difference. Therefore, the variables may exhibit a long-run relationship, supporting the use of ARDL as the preferred method for model estimation. As mentioned in methodology, ARDL is applicable to mixed orders of integration.

• **Optimum Lag Selection**

Table 2 Optimum Lag Selection Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-103.4533	NA	0.000242	5.862338	6.080030	5.939085
1	8.991639	188.4212	2.17e-06	1.135587	2.441737*	1.596066
2	46.91970	53.30430	1.17e-06	0.436773	2.831381	1.280985
3	68.74041	24.76945	1.71e-06	0.608627	4.091693	1.836571
4	117.2102	41.91984*	7.63e-07*	-0.660012*	3.911512	0.951664*

*Indicates lag order selected by the criterion

From Table 2 the optimum lag selection result shows that all the criteria selected a lag four (4), except SC Information Criterion, which indicate

lag one (1), but considering the SC criterion The best lag for analysis is lag one (1) as shown majority of the criterion

ARDL Bound Test

Table 3. ARDL Bound Test Result

Model	F-stats	Lag	Level of significance	Bounds critical values	
				[Unrestricted intercept & no trend]	
				I(0)	I(1)
UNE _t = F (TRO _{it} ,DIV _t ,FDI _t ,POP _t)	13.67	1			
			10%	1.9	3.01
			5%	2.26	3.48
			2.5%	2.62	3.9
			1%	3.07	4.44

As reported in table 3 ARDL bounds test result shows that the computed F-statistic 10.48640 is greater than the upper bound critical value of 3.01 at 10 percent, 3.48 at 5 percent, 3.9 at 2.5 percent

and 4.44 at 1 percent level of significant. This indicates the presence of strong Cointegration among the UNE, TRO, FDI, DIV and POP.

• **ARDL Long Run Estimate**

Table 4 ARDL Long run Result

UNE (D.V)		
Regressors	Coefficients	T-statistics / Probability
<i>L</i> TRO	-0.730555	-0.456248 (0.0522)**
<i>L</i> DIV	-3.378464	-1.845872 (0.0768)*
<i>L</i> FDI	1.402401	1.042333 (0.3072)
<i>L</i> POP	21.715476	2.063363 (0.0496)**

* **, **, * Denotes 1%, 5% and 10% significance level respectively.

Source: Source: Author Computation using E-views 9 (2023).

According to Table 4, the natural logarithm of trade openness (TRO) exhibits a negative and significant impact on unemployment (UNE) at the 5 percent significance level in the long run. Specifically, a 1 percent increase in trade openness is associated with a -0.73 decrease in Nigeria's unemployment in the long-term. This finding contrasts with the results reported by Isiaka (2017). In the long run, domestic investment shows a negative effect on

unemployment at the 10% significance level. This suggests that a 1 percent increase in domestic investment results in a -3.37 percent decrease in the country's unemployment in long-run equilibrium. This result aligns with the findings of Musa et al. (2020). Conversely, the coefficient of foreign direct investment (FDI) indicates a positive and statistically insignificant effect on unemployment (UNE) in Nigeria in the long run.

Regarding population growth, the results indicate a positive impact on unemployment in Nigeria at the 5 percent significance level in the long run. Specifically, a 1 percent increase in population

growth in Nigeria corresponds to a 21.71 percent increase in the country's unemployment. This finding is consistent with the results reported by Ammani et al. (2024).

• **ARDL Short Run**

Table 5 ARDL Short Run Result

UNE (D.V)		
Regressors	Coefficients	T-statistic/ Probability
<i>D(LTRO)</i>	-0.782744	-0.444966 (0.0602)*
<i>D(LDIV)</i>	12.451587	2.530971 (0.0180)***
<i>D(LDIV(-1))</i>	-3.127362	-0.554674 (0.5840)
<i>D(LDIV(-2))</i>	16.570536	2.971945(0.0065)***
<i>D(LFDI)</i>	1.502585	1.126905 (0.2705)
<i>D(LPOPG)</i>	444.469435	4.374442 (0.0002)***
<i>D(LPOPG(-1))</i>	1803.047977	2.989367 (0.0062)***
<i>D(LPOPG(-2))</i>	1423.428988	2.636955 (0.0142)***
<i>D(LPOPG(-3))</i>	528.748908	2.466004 (0.0209)**
<i>ECT_{t-1}</i>	-0.282437	-5.426480 (0.0000)***

***, **, * Denotes 1%, 5% and 10% significance level respectively

Source: Source: Author Computation using E-views 10 (2024)

According to Table 5, trade openness (TRO) exhibits a negative and significant impact on unemployment (UNE) in Nigeria at the 10 percent significance level. Specifically, a 1 percent increase in trade openness is associated with a -0.78 percent decrease in the country's unemployment in the short run. This finding aligns with Isiaka's (2017) research.

The short-run analysis further reveals that domestic investment (DIV) has a negative and statistically insignificant impact on unemployment (UNE) at lag one, but becomes positive and significant at the 1 percent level at lag two. This suggests that a 1 percent increase in domestic investment leads to an increase in

unemployment at lag two. Conversely, the coefficient for foreign direct investment (FDI) shows a positive and insignificant impact on Nigeria's unemployment (UNE) in the short run. Regarding population growth, the results indicate that a 1 percent increase in population growth leads to increases in unemployment by 18.0 at lag one, 14.4 at lag two, and 528.74 at lag three. This positive relationship is significant at the 1% level across all three lags, consistent with the findings of Ammani et al. (2024).

The error correction term (ECT) is negative, less than one in absolute value, and statistically significant at the 1% level. This indicates a high adjustment mechanism in the model, with a speed of adjustment to equilibrium of -0.25, corresponding to a 25 percent rate of adjustment.

• **Goodness Fit of Model**

Goodness fit the model is presented in table 6

Table 6 Goodness Fit Model Result

R-square	0.711
Durbin Watson-statistics	1.88

Source: Source: Author Computation using E-views 10(2024)

From Table 6, R-square shows that 71 percent of the proportion of the dependent variable has been explained by the independent variables. This shows that the model is good fit. The Durbin Watson statistics shows that the model is free

from first order serial correlation because it falls within the range of 1.5 and 2.5. , this means that the independent variables are jointly significant in explaining the dependent variable.

ARDL Diagnostic Tests

Table 7. ARDL Diagnostic Tests

Diagnostic Tests	F-statistic	LM-statistic
Serial Correlation Test	1.310889 (4,21)	7.392587 (0.2983)
Heteroscedasticity Test	0.107555 (4,28)	0.499371 (0.9789)
Normality Test	0.014162 (0.992944)	Not Applicable

Source: Author Computation using E-views 10(2024)

From Table 7, serial correlation test using was employed in the study to test for the presence of serial correlation. The null hypothesis for no serial correlation was not rejected since p-value is greater than five percent.

Heteroscedasticity was also estimated using Breusch-Pagan-Godfrey test and from the test result reported in Table 7, the null hypothesis of variance is constant (homoscedasticity) because the probability value is greater than five percent. The study also tested for the normality of the errors in the model through the Jarque-Bera and its probability values as reported in Table 7, the result revealed that the Jarque-Bera p-value was insignificant which implies the acceptance of null hypothesis that errors were normally distributed in the ARDL model.

5. Conclusion and Recommendation.

- **Conclusion**

The study aim to examine the impact of trade openness on unemployment in Nigeria covering 1982-2022, the study concluded that, trade

Breusch-Godfrey serial correlation LM test openness (TRO) has negative and significant impact on unemployment (UNE) in Nigeria at 10% level of significance in the short run. Similarly the long run estimate, the study found that, trade openness (TRO) has negative and significance impact on unemployment at 5% level significance.

- **Recommendation**

The study revealed a negative and statistically significant relationship between trade openness and unemployment in Nigeria, in light with these the study recommended that,

- i. The country must embark on necessary reforms and adopt sound policies to reposition itself and provide employment solutions to address the issue of unemployment, which drives insecurity, before it can fully enjoy the benefits associated with trade openness.
- ii. There is a need to create an enabling environment to reform open-border economic

activities. This includes providing adequate security for the protection of life and property, constructing good roads for the distribution of goods, ensuring standard electricity supply, and encouraging local investors by offering them long-term loans at low interest rates. These measures will attract both domestic and foreign investors to increase production capacity within

the country and provide more employment opportunities for the substantial population.

iii. The government should also enhance education and skills acquisition development for the substantial population to equip individuals with the necessary skills for employment and productivity.

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Self- Efficacy and Career Enhancement Of Bayero University Dental Graduates

By

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ABSTRACT

Traditionally, clinical student mentoring has focused on advancing mentees from novice to more respectable positions within clinical practices. Mentoring, a relationship where an expert (mentor) offers career, psychological or instrumental support to an individual with less experience (protégé), can enhance the protégé's career behaviour and development. With medical entrepreneurship on the rise, a focus on students' entrepreneurship and career development abilities is critical for leadership, team building, and business practices. The objective of this research was to understand the career decision-making self-efficacy factors relevant to the strategic framework of the faculty of dentistry, Bayero University career enhancement initiative. The participants were students and alumni of the faculty of dentistry, at Bayero University Kano. A survey research design was adopted and quantitative was used. Data was collected through a structured (close-ended) questionnaire using a career decision-making and self-efficacy scale of 25 items. Using Structural Equation Modeling (SEM), this research mapped the intricate relationships between the research variables, offering insights into how targeted career enhancement initiatives can bolster self-efficacy and guide students toward successful careers in dental practice. Findings from the study indicated that planning and goal selection were significant predictors of career choice, while self-appraisal, occupational information, and problem-solving showed varied influences. The study recommends a structured mentoring program for dental students and alumni targeted toward both academic and dental practice. This will provide them with professional networking opportunities, career planning, personal growth and entrepreneurial skills development.

Keywords: Career development, Decision-making, Dental Practices, Graduates, Nigeria, Self-efficacy, University students.

1. Introduction

The dental profession is an attractive career choice for high school students seeking admission to universities. However, many developing countries including Nigeria have a scarcity of dental professionals. In Africa, the average density per 10,000 population was 0.44 for dentists (Gallagher, et al., 2023); and in 2017, it was about 0.21 in Nigeria (Amedari et al., 2022). Generally, in labour market, researchers have identified skills shortage and skill mismatch among Nigerian graduates as many could not find productive work (Gallagher, et al., 2023, Joshua, et al., 2015; Olorunfemi, 2021; Olubusoye et al., 2023; Oluwatola et al., 2023; Pitan & Adedeji, 2021). The existing

labour market skills do not match with future social, economic and technological trends. These skills gaps have a negative impact on job performance, they increase workloads and supervision, and higher operating costs (World Bank, 2021).

In addition, to improved oral health care accessibility and availability of dental practitioners, it is imperative to develop an innovative model in response to the needs of the workforce (Amedari et al., 2022; Gallagher, et al., 2023). Employers are more interested in skills and competencies compared to degree certificates (Tejan & Sabil, 2019). Universities

must equip their graduates with the necessary skills that are sought by employers. Among the recommendations for improved dental care in the West African sub-region are capacity building and the development of human resources through suitable training and retraining programs (Fomete & Adebayo, 2018). Ajao (2012) emphasized the need to train more dentists to meet the current and future demands of professional dentists. Similarly, labour market policymakers have emphasized the role of career guidance in the productivity and employability of graduates (UNIDO, 2017).

Reacting to the changing demand of the labour market, the faculty of dentistry, at Bayero University Kano (BUK) was established in 2013 to address/ cater for the dearth of professional manpower in dental practices in Northwestern Nigeria. However, after the graduation of the first set in 2018, there were no clear goals for career and academic advancement. Although, graduates have general idea of dentistry but little is known about the underlying opportunities in dental specialties, professional networking, and higher education opportunities. It has been noted that students face some challenges when choosing a career, such as career planning due to a lack of information about professional opportunities and interests (Akhsania et al., 2020).

To meet the expectations of the labour market, it is imperative to develop a career development framework for Bayero University dental graduates. The Faculty of Dentistry - BUK

career enhancement initiative (now Alumni Resource Hub [ARH]) was launched in 2018 to support dental graduates. The ARH initiative is one of the first career enhancement frameworks at Nigeria University that centres on an evidence-based strategic framework. The Alumni Resource Hub is similar to a career service center that creates graduate employability strategies. One way to respond to calls for greater accountability from colleges and universities regarding graduate employment is through a career in services (Helens-Hart, 2019).

ARH provides individualized career mentoring by pairing mentees with mentors with relevant expertise and developing a customized career plan with milestones, skills, and actions that are targeted to the protégée's specific goals, challenges, and needs. This initiative aims to empower and accelerate graduates' personal growth, skills development, continuous learning, professional networking and global career adaptability. The process is facilitated by a dedicated Hub with virtual learning resources, workspace, and support services, which is managed by a faculty ARH committee and a Sub-Dean (Alumni) who is responsible for designing and implementing the ARH strategic plan framework.

Hence, career decision-making self-efficacy is relevant for Bayero University dental students because of work challenges due to the current labour market demand, and economic and social issues in Nigeria. Students with career decision-making self-efficacy will be able to respond positively to the environment as it is

relevant and a strong predictor of their job satisfaction and performance. Graduates who have a high level of self-efficacy can see opportunities and hold more optimistic views to pursue their careers (Tejan & Sabil, 2019). Developing strategies to assist dental graduates to better understand the labour market challenges and career path decisions is a worthy topic of research. As indicated by Tejan and Sabil (2019), self-efficacy held by university students plays an important role in enhancing their career success. Therefore, the purpose of this study was to examine the influence of self-efficacy on the career decision-making of Bayero University Kano dental graduates.

2. Literature Review and Theoretical Framework

This section comprises of literature review on the concept and empirical studies of the subject matter of the research.

2.1 Career Enhancement

Career is the progress and actions that people take all through their lives; it specifically relates to individual's occupations and composed of the jobs they hold, as well as the works they have accomplished over a certain period (Baruch, 2004; Brown & Lent, 2012; Guichard, 2001). According to Barnett and Bradley (2007), career enhancement is the process of improving and advancing one's professional skills, knowledge and credentials to achieve greater success and opportunities in their chosen career. Greenhaus et al. (2010) described career enhancement strategies as any kind of activity, behavior or experience that will enable an individual to meet their career goals. Career

enhancement implementation involves working through or with other people towards a relationship-oriented strategy (Ekmekcioglu et al., 2020). These include enhancing work objectives and plans, looking for means of improving knowledge and skills through advice and information from others about training or work assignments, working on diverse job tasks to improve skills, working extra hours and networking (Feij et al., 1995). Researches (Gould & Penley, 1984; Nabi, 2003) have identified three inter-personal career enhancement strategies for career success (i) communicating career goals and aspirations (self-nomination), (ii) developing a network of contacts for information and support (networking), and (iii) seeking guidance from mentors (mentorship).

Similarly, Gould and Penley (1984) identified seven strategies for career enhancement: First, creating career opportunities (developing expertise critical to one's department's operations and assuming leadership in areas appearing to have no current leadership). The second strategy comprises of extending work involvement (preoccupation with work-related issues outside the working environment). Thirdly, self-nomination, i.e. making your superiors aware of your accomplishments, presenting yourself as a person who gets things done and making your superiors aware of your career aspirations and objectives. The fourth strategy is seeking career guidance from an older, more experienced person or mentor. Fifthly, networking, i.e. contacts inside and/or outside the organization.

The sixth is opinion conformity ([an] individual thinks more highly of another, and finally, other enhance-ments, i.e. expressing a favorable evaluation of the superior..

2.2 Self-Efficacy

Bandura (1995) defined self-efficacy as the beliefs in one's capabilities to think, feel, and make an action or attain a goal. Self-efficacy is the belief about one's capability of showing skills and performing actions needed to achieve a desired goal in a specific domain or situation (Bandura, 1977; Maddux, 2002). Efficacy can be developed through mastery experiences, social models, social persuasion, and reducing stress reactions. Successes build a strong belief in personal efficacy, while failures undermine it. Social models inspire people to master similar activities, while social persuasion encourages greater effort and resilience. Reducing stress reactions and altering negative emotional proclivities can also help modify self-beliefs of efficacy.

Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes. Career decision-making self-efficacy is described as a belief in a person's ability to be involved in education, work planning and decision making (Taylor & Betz 1983). It acts as a mediator between perceptions of selected academic majors, career expectations and the main affective commitment that are indirectly related to

positive expectations of results (Conklin et al., 2013). It was further explained that it is important not only to identify low self-efficacy decision making within clients but also to understand how to overcome it in career counseling (Conklin et al., 2013).

2.3 Social Cognitive Career Theory

Lent et al. (1994) developed social cognitive career theory which focuses on three domains. The first is how basic education and career interests are developed. Secondly, how educational and career choices are made and thirdly, how academic and career successes are achieved. The authors provide three segments for the career development: (a) interest, (b) the process of making a career choice involves choosing a goal, and (c) performance and persistence in career attainment (Lent et al., 1994). This career model focuses on the role of self-efficacy as predictor in career development. Personal goals are the most central, and they are more solid compared to the belief system applied in outcome expectations and self-efficacy. Personal goals determine how individuals organize, sustain and guide their individual efforts even though there is no external assistance. Self-efficacy is developed through life experience (gender, race, disability, personality, and predispositions). Social Cognitive Career Theory is applied to explain the way the various variables can result in a successful career.

2.4 Self Efficacy and Career Enhancement

According to Posnanski (2002), self-efficacy expectations are associated to professional

development when considering a person's views about career-related behaviors, educational and occupational choice, and performance and persistence in the implementation of those choices. They are represented in a person's conviction about the results of performance or conduct (outcome expectation) and perception of his or her capacity to carry out a specific task or activity (Hackett & Betz 1981). Hamzah et al. (2021) suggests that improving career development self-efficacy among university students can significantly enhance their career adaptability, as it directly correlates with their ability to achieve set goals. Students with goal-setting, planning and problem-solving skills often experience less career indecisiveness, and accurate self-appraisal and occupational information gathering can decrease career indecisiveness (Duru et al., 2021).

The benefits of self-efficacy beliefs in the areas of career development such as choosing academic and career interests, selection of academic and career options, and implementing academic and occupational plans (Betz, 2000; Buenconsejo & Datu, 2020; Lent et al., 1994; Lent et al., 1999). According to Rigotti et al. (2020), people might feel more in charge of their professional development and have higher expectations for their career-related self-efficacy when they integrate their social surroundings and self. Similarly, self-efficacy beliefs held by students were found to be predictive of career-related decisions and occupational performances, according to meta-

analytic research (Lent et al., 1994; Lent et al., 2002; Lent et al., 1999).

2. Methodology

A cross-sectional study was carried out at Faculty of Dentistry, Bayero University Kano. The population comprises of Bayero University dental students and alumni. A structured questionnaire was distributed online between September and October, 2023 to dental students and graduates using google forms. The questionnaire includes the Career Decision Self-Efficacy Scale – Short Form (CDSES-SF). The CDSES-SF consists of 25 items divided into five subscales: Self-appraisal (items 5, 9, 14, 18, 22), Occupational Information (items 1, 10, 15, 19, 23), Goal Selection (items 2, 6, 11, 16, 20), Planning (items 3, 4, 12, 21, 24) and Problem Solving (items 7, 8, 13, 17, 25). Respondents are asked to rate their level of confidence in completing specific career decision-making tasks using the following five-point Likert scale: No confidence at all (1), Very little confidence (2), Moderate confidence (3), Much confidence (4), and Complete confidence (5).

The data collected in the study were analyzed using SPSS 27 and STATA version 18. Descriptive statistics such as frequency and percentage were used to characterize the level of variability in this study. Inferential statistics was used as the frame of statistical computations applicable in making inferences from the findings. The Pearson product moment correlation was used to establish the direction and magnitude of relationship between two variables (Babbie, 2010).

4. Results

This section consists of data analysis, presentations and interpretations.

4.1 Characteristics of Respondents

Table 1: Demographic Profile

Demographic	Particulars	No. of Respondents	% of Respondents
Gender	Male	55	52
	Female	51	48
Age	16-23	35	33
	24-31	30	28
	32-39	41	39
Status	Alumni	33	31
	Students	73	69
Career interest	Practice	36	34
	Academic	30	28
	Both	40	38
Total		106	100

Source: Author's computation using SPSS 27

Table 1 presents a detailed breakdown of the demographic characteristics of respondents in a study on career enhancement initiatives for Bayero University dental students and alumni. The gender distribution of the respondents shows a near-equal representation, with 55 male respondents (52%) and 51 female respondents (48%). This balanced gender ratio suggests that both male and female perspectives are well-represented in the study. The respondents are divided into three age groups. The largest group is the 32-39 age range, representing 39% of the total respondents. This age group may consist of individuals who have completed their undergraduate studies and are likely more experienced in their careers, whether in practice or academia.

In terms of status, 31% of respondents are alumni, while the remaining 69% are current students. The higher percentage of student respondents suggests that the faculty has more students enrolled in the program as compared to

dental graduates. Alumni, who make up 31% of the respondents, bring a different perspective, likely reflecting on how their career decisions have played out post-graduation and how career enhancement initiatives could have been more effective in preparing them for professional challenges.

Career choice is a critical factor examined in the study, with respondents divided into those interested in practice (34%), academia (28%), or both (38%). The largest group is those interested in both practice and academia (38%), indicating a significant interest in dual career paths among the respondents. This suggests a need for career enhancement initiatives that support the development of skills and opportunities in both areas. The 34 percent and 28 percent documented on interested solely in practice and interested solely in academia respectively highlights the importance of tailored initiatives that cater to specific careers.

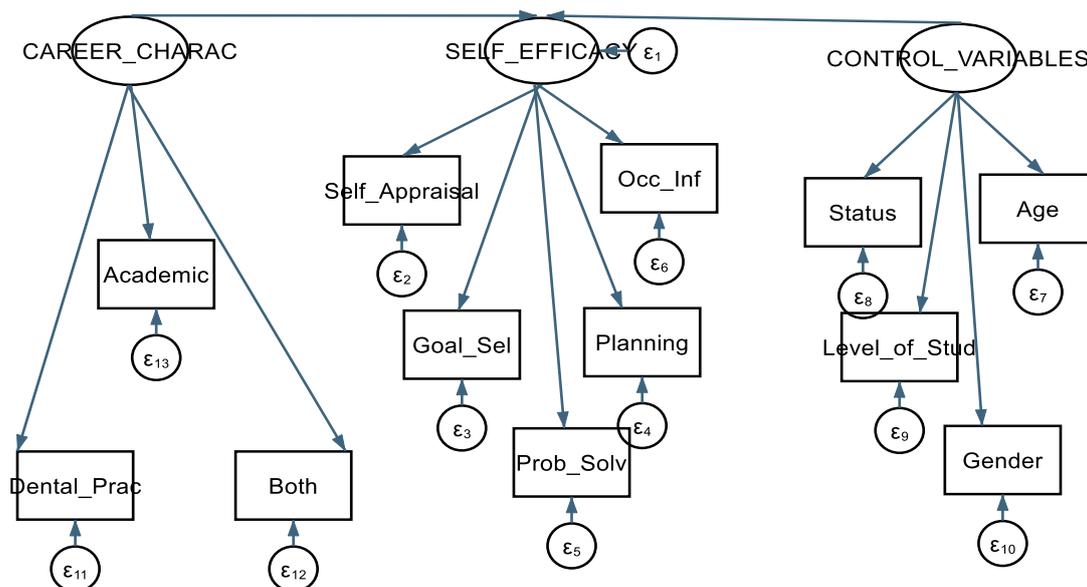


Figure 1: Path Diagram Showing Relationships Among Study Variables

This study explores the influence of career enhancement initiatives on the career choices and self-efficacy of dental students and alumni at Bayero University, Kano. Figure 1 suggests that career choices among dental students and alumni are not isolated decisions but are influenced by their perceived self-efficacy, which is further affected by demographic factors such as age, gender, educational status and

educational level. The relationship between these variables is integral in understanding how students and graduates navigate their professional journeys in the field of dentistry, whether in practice, academia, or a combination of both. These variables interact to shape an individual's confidence and effectiveness in their career path, influencing their ability to achieve success in their chosen field.

4.2 Relationship Between Career Choice and Self-Efficacy

Table 2: Correlation of career choice and self-efficacy

Self-Efficacy Variables	Academic Only	Dental Practice Only	Both Academic & Dental Practice
Self-Appraisal	0.65	0.82	0.82
Occupational Information	0.97	0.87	0.87
Goal Selection	-2.4	-0.23	-0.23
Planning	0.66	0.72	0.72
Problem solving	0.92	0.82	0.87

Computation of Correlation Analysis Using STATA 18

Table 2 shows the relationship between career choice and self-efficacy of Bayero University Dental Graduates. The analysis

focused on five key self-efficacy variables: Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem-

Solving. The results of the correlation analysis reveal several significant insights into how self-efficacy influences the career decisions of these graduates. The findings demonstrate that self-efficacy plays a crucial role in determining career choices among Bayero University dental graduates. Specifically, there are strong positive correlations between self-efficacy in Self-Appraisal, Occupational Information, Planning, and Problem-Solving and the likelihood of pursuing a career in academics, dental practice, or both. For instance, the high correlation coefficients for Self-Appraisal (0.65, 0.82, 0.82 and Problem Solving (0.92, 0.87, 0.87) suggest that graduates who have a high level of confidence in their ability to assess their skills and solve complex problems are more inclined to commit to a specific career path, whether in academics, dental practice, or a combination of both. This implies that graduates who perceive themselves as competent and resourceful are more likely to make decisive career choices that align with their perceived strengths.

Conversely, the negative correlation observed between goal selection and career choice (with coefficients of -0.24, -0.23, and -0.23) suggests a different dynamic at play. Graduates with higher self-efficacy in goal selection appear less likely to commit to a single career path, which may indicate a broader consideration of career options or a reluctance to specialize too early in their careers. This finding could reflect the

complexities and uncertainties faced by graduates as they navigate their career paths, potentially leading to a more exploratory approach to career planning. The negative correlation could also suggest that these graduates value flexibility and adaptability, preferring to keep their options open rather than committing to a specific career track. This has important implications for career guidance, as it suggests that graduates with high self-efficacy in goal selection might benefit from counselling that helps them align their broad career goals with more concrete plans, ensuring that they can capitalize on their strengths while also making informed decisions about their future.

4.3 Self-Efficacy Factors and Enhancement of Graduates' Career Choice.

The regression analysis is used to determine the critical self-efficacy factors that influence Bayero University Dental Graduates' career choices, specifically among the options of "Academic," "Dental practice," and "Both" (academic and dental practice). The regression Table is provided in Appendix 2. The independent variables examined were Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem-Solving. The model revealed that planning and goal selection were significant predictors of career choice, while self-appraisal, occupational information, and problem solving showed varied influences. The model's goodness-of-fit, with a Log likelihood of -62.818516

and a Pseudo R² of 0.6325, indicates that approximately 63.25% of the variance in career choice is explained by the included variables, demonstrating a strong explanatory power of the model.

The analysis revealed that Planning is a significant positive factor for choosing both "Dental practice" and "Both" career paths over an "Academic only" career. Specifically, a unit increase in planning significantly raises the likelihood of selecting a "Dental practice" career (coefficient = 1.115771, $p=0.026$) or a combination of both academic and dental careers (coefficient = 1.457655, $p=0.003$) compared to an "Academic only" career. This suggests that graduates who engage in strategic planning are more inclined towards practical, career-oriented paths. Conversely, Goal Selection showed a significant negative relationship with the choice of "Dental only" (coefficient = -0.3111373, $p=0.008$) and "Both" careers (coefficient = -0.5328857, $p=0.007$), indicating that a strong focus on goal selection may lead graduates to prefer an academic career over other options. Interestingly, Problem Solving was a significant negative predictor for choosing a combined career path ("Both" vs. "Academic only"), with a coefficient of -1.303856 ($p=0.026$), suggesting that those with strong problem-solving skills may lean towards a singular, focused career choice. The non-significance of Self-Appraisal and Occupational Information suggests that these factors may not be

crucial in determining career choice among the graduates in this context.

4.4 Discussion

The findings from the analysis of career enhancement initiatives for Bayero University dental students and alumni offer significant insights into the relationship between career choices, self-efficacy, and demographic factors. By examining the relationship between career choice and self-efficacy of Bayero University dental students and alumni, this study seeks to expand knowledge in career decision-making self-efficacy research. These insights are crucial for understanding how dental students and alumni make informed decisions about their careers.

First, our research showed that self-efficacy has an influence on the career paths of dental students and alumni. Self-efficacy is crucial in today's educational environment since students must possess competencies that are suitable for their unique needs to be prepared for the workforce. Researchers who examined students' levels of self-efficacy in making decisions about their careers found that students who were unsure of their career choices also showed lower levels of self-efficacy, indicating a lower level of trust in their ability to complete tasks that would allow them to make decisions about their careers (Khot, 2022; Martini et al., 2023; Malahayati & Wulandari, 2018). Specifically, dental students in Turkey reported that there is high self-efficacy among students (Ersan et

al., 2017). Previous research revealed a relationship between career decisions and self-efficacy. Researchers have found that students' identification of the self-efficacy domain was crucial in shaping their confidence and promoting their interest in a STEM career, particularly one that enabled them to carry out research (Amelink et al. 2015; Kelly & Hatcher, 2013). This relationship suggests that the confidence individuals have in their abilities to assess their skills, acquire relevant occupational information, set goals, plan effectively, and solve problems significantly impacts whether they opt for a career in dental practice, academia, or a combination of both.

The most important predictors of career decision-making self-efficacy among Bayero University dental students and alumni were self-appraisal and problem-solving skills. Students who exhibit high levels of self-efficacy, particularly in areas such as self-appraisal and problem-solving, tend to have a clearer direction in their career choices. This could be because individuals who are confident in their abilities to evaluate their strengths and weaknesses are better equipped to identify career paths that align with their skills and interests. Furthermore, those who are adept at solving complex problems may feel more prepared to face the challenges associated with specific career paths, making them more likely to commit to a particular direction.

Conversely, the negative correlation between goal selection and career choice highlights a more nuanced dynamic. Graduates with high self-efficacy in goal selection may be less likely to commit to a single career path, reflecting a broader consideration of available options. This result is consistent with other research on dental students. The participants' lowest self-efficacy score was in goal-setting for professional decision-making (Yoon & Park, 2022). According to Social Cognitive Theory, self-efficacy is a critical factor in determining one's motivation and performance in achieving their goals. In the context of career planning, self-efficacy can be an essential predictor of one's ability to set and accomplish career goals (Rose et al., 2023). To assist students in the dental faculty in establishing their professional goals, career education programs are necessary. As suggested by Jo (2021), clearly defined goals have a positive effect on proactive job preparedness and career success.

Enhancing goal-setting abilities among dentistry students can lead to higher career self-efficacy. In "goal setting," everyone needs to set specific goals to carry out career behaviour. Such goals should be based on outcome expectations obtained through expectations and behaviours about self-efficacy. Amelink et al. (2015) found that mentorship can boost dental students' goal-setting abilities, which in turn predicts increased career self-efficacy. According to

Komarraju et al. (2013), the mentorship received by students is beneficial, especially through feedback and the opportunity to communicate with an expert increases self-efficacy. In their study, learner elucidated the infectious nature of their mentor's passion. stated that experiences in which they were given mentor roles contributed to their increased sense of self-efficacy (Komarraju & Nadler, 2013).

In this study, we also examined the effect of demographic factors (age, gender, educational status, educational level) on career decision-making self-efficacy. The study reveals that various factors impact self-efficacy, with some showing weak correlations. Age positively correlates with self-appraisal and problem-solving, suggesting older students have higher confidence. However, demographic factors and occupational information may not be the primary drivers of self-efficacy among Bayero University dental students and alumni. Gender does not significantly influence self-efficacy, indicating gender parity in the academic environment. Both male and female students may have similar confidence in their chosen career paths. This is in contrast to prior researches (Choi & Lee, 2019; Hwang & Yu, 2022) that reported self-efficacy and career choice are related to individual characteristics of dentistry students. Individual characteristics have been reported to have a significant influence on career choice,

decision-making, and career decision-making self-efficacy (Brown, 2002).

For the career choice of dental graduates, the degree of comprehension among dental students and alumni was assessed. There is an increasing need to acquire abilities to handle a variety of responsibilities due to the expanded position of dentists, which includes managing dental practices. To do this, core dental practice competencies should be determined by the objectives, learnability of dental education programs, and curriculum composition of the programs, while career planning in mentorship programs should be geared toward goal setting in dental students and linked to current dental competency levels. The majority of students desire to pursue both an academic and dental career; those who choose to pursue both do not necessarily have high or low self-efficacy. As suggested by Romero Galisteo et al. (2022) entrepreneurial skill development is crucial to health professionals. Furthermore, as anticipated, it will be feasible to alter and impact university-based students' views toward entrepreneurship.

5. Conclusions and Recommendation

The results of the study have shown that career choice and demographic factors have a significant influence on the self-efficacy of Bayero University dental students and alumni. This finding is consistent with previous studies on the

career decision-making self-efficacy of university students. Therefore, universities should provide career counseling, and a structured mentorship program for the current students and younger alumni that focus on enhancing entrepreneurial skills for successful dental practice. The goal is to enhance career planning and personal growth which have been identified as the most important factors for career enhancement of graduates.

5.1 Limitations and Suggestion for Further Studies

This study investigated career decision-making self-efficacy among dental students and alumni (Faculty of Dentistry) in only one public Nigerian university. It is suggested that similar studies should be conducted with students across the College of Health Sciences, from other disciplines and from various other public and private higher education institutions in Nigeria.

A cross-sectional self-reported data collection technique was used for the current study. The researchers recommend that future researchers use a longitudinal strategy to examine the relationships tested in this study in follow-up investigations at the workplaces of the same generation of students after their graduation.

Furthermore, since career decision-making is generally important to the smooth transition of university students from an educational setting to the competitive labour market, the researchers recommend that this study be replicated in other

developing countries in Africa where youth or graduate unemployment poses a serious challenge.

The sample size selected in this study was limited. Perhaps a larger sample size would provide greater confidence in the conclusions drawn from this study.

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Competitive Capabilities And Performance Of Small And Medium Manufacturing Enterprises: Empirical Evidence From Southwestern Nigeria

By

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ABSTRACT

The study examined the effect of competitive capabilities on performance of the selected Small and Medium Manufacturing Enterprises (SMMEs) in Southwestern Nigeria. A survey research design was used for the study. Primary data were collected through the administration of structured questionnaire. The population comprised of the 1,983 registered SMMEs as contained in the directories of Small and Medium Enterprises (SMEs) associations across the six states of Southwestern Nigeria. The study sample of 333 SMMEs in Southwestern Nigeria was determined using Taro Yamane (1967) sampling formula. A multi-stage sampling technique was used for the distribution of the sample size among respondents. In the first stage, a stratified sampling technique was used in which each state in the Southwestern Nigeria represented a stratum. At the second stage, Probability Proportional to Size was used to distribute the sample size among the states. A random sampling was later used at the third stage to select the sample from each state in the region. Data collected were analysed using multiple regression. The result revealed that competitive capabilities including cost, quality, delivery and flexibility had significant effect on performance while the effect of innovation was insignificant. The study therefore concludes that competitive capabilities constructs enhanced the performance of SMMEs in Southwestern Nigeria.

Keywords: Quality, Cost, Flexibility, Delivery, Innovation, Manufacturing, Performance

1. Introduction

Sustainable development of developing countries like Nigeria depends largely on the performance of their indigenous micro, small and medium scale enterprises (Suleiman, Aliyu & Bello, 2021). These enterprises are generally considered as the engine of economic growth as a result of their immense contribution towards employment generation, poverty reduction, export earnings and gross domestic product (Suleiman, Aliyu & Bello, 2021). Small and Medium Scale Enterprises (SMEs) play a significant role in the development of economy of a nation. SMEs have been acknowledged as the most important contributors

to Gross Domestic Product (GDP), wealth creation and employment generation across firms, sectors and countries (OECD, 2023). The distinct role of SMEs in the economic growth of developing countries has been globally recognized. In recognition of the vital role of SMEs, governments at all levels have developed several initiatives and guidelines to enhance SMEs' growth and development (Danjuma & Peter, 2020). Despite the importance of these economic units, they are being constantly dragged to the point of collapse due to several challenges confronting them which make them incapable of developing competencies and capabilities to sustain themselves (Vinayachandran, 2024).

In Nigeria, micro, small and medium enterprises constitute more than 96% of the whole businesses in the economy, contribute more than 46% of GDP, provide above 87% of jobs and are the key drivers of the manufacturing sector and economic growth (KPMG, 2023). The sector's performance and growth in manufacturing, agriculture, services; and so on, has been considered a major economic driver which has contributed immensely to the country's economy (Eniola & Ektebang, 2014). Sustainable performance and competitiveness of SMEs will pave ways for numerous investments and job opportunities in the economy. Even though SMEs have been recognized as vital for the Nigerian economy, they are also confronted with challenges that limit their growth in the economy. SMEs contribution to GDP in Nigeria is much lower when compared with their contribution in countries at the same development level with Nigeria (Abada & Albert, 2016). Evidently, this low performance can be seen in the fact that most SMMEs in Nigeria are operating below capacity with many of them collapsing (Ikon & Chuckwu, 2018).

In order to improve their performance in the marketplace nowadays, firms pay major attention to giving value to the customer which requires most of them to direct their efforts towards offering products and services of better value than those of competitors (Kadiane et al., 2023). As the business environment keeps changing and becoming more complex, organizations continue searching and adopting new ways to stay competitive and current in the market (Makena, 2014; Maina et al., 2020). Furthermore, the effects of globalization and the entry of multinational firms require the micro, small, and medium enterprises operating in the

manufacturing sector to develop more unique products with added value to be competitive enough (Vinayachandran, 2024). As evidenced by past studies (Koufteros et al., 2002; Zulkiffli & Perera, 2012; Schoenherr et al. 2012; Ho et al., 2016; Kyengo & Kilika, 2017; Peng et al., 2019; Ali et al., 2021; Vinayachandran, 2024), development of competitive capabilities by firms impacts positively on their business performance. Competitive capabilities from the view of manufacturing businesses include quality, price, delivery dependability, product innovation and flexibility. Capabilities in the terms of lower cost, improvement in quality, products and processes innovations, improved productivity and quick delivery are all what these enterprises needed to achieve success in this challenging market environment. Consequently, the major issue that worries managers of manufacturing organisations today is providing the best performance in the market and this forces them to adopt a variety of strategies for better performance (Saber et al., 2014).

The top position being maintained by the developed economies in the manufacturing operations has been achieved through installation of competitive manufacturing capabilities, which has been aided by formulation of pro-manufacturing policies (Mkala et al., 2018). However, studies on the impact of competitive capabilities especially in the context of SMEs are scarce in Nigeria. Most studies conducted on the topic such as Koufteros et al., (2002), Zulkiffli and Perera (2011), Schoenherr et al. (2012), Ho et al. (2016) Ali et al. (2021) and Vinayachandran (2024) are from foreign countries., hence the need for this study to examine the effect

of competitive capabilities on performance of SMMEs in southwestern Nigeria.

2. Literature Review

This section reviews the related concepts of competitive capability, quality, cost, flexibility, delivery innovation and performance. It also includes theoretical review and empirical review.

2.1 Conceptual Review

2.1.1 Competitive capability

According to Thurer et al., (2014), competitive capabilities of firms refer to the strengths possess by them in meeting customer's desire compared to competitors' ability to act in similar manner. Similarly, Competitive capabilities are seen as the ability to engage in competition based on various competitive dimensions by a manufacturer and gain more attention than competitors (Latuconsina, 2021). These capabilities are apparent in terms of pricing, cost, efficiency in operations, products offerings and other similar factors (Maina et al., 2020).

For a firm to generate useful strategy and create core competency, corporate competitive capabilities are essential tools. Putting in place a market responsive and effective competitive strategy that would be responsive to customer value, increased returns, revenue growth has been considered as a major way to achieve this. To win orders, Teece et al. (1997) as cited in Koufteros et al. (2002) argued that a firm should be in possession of competitive capabilities which are customer oriented and can withstand relatively the competitors' strengths. Business strategy serves as the main driver for firm in setting competitive priorities and developing plan of activities.

In previous studies, measurement of competitive capability has been done by means of different indicators but no agreement exists in these studies for determining competitive capability as every study has its own measures of the concept (Hosseini & Sheikhi, 2012). Koufteros et al. (1997) as cited in Sukati et al. (2011) highlight the five properties of competitive capability which include price competitiveness, customer value addition, premium pricing, delivery dependability, and innovation in product. Schoenherr et al. (2012) regard competitive capabilities as a plant's actual performance as compared to those of its rivals with most regularly examined capabilities being cost, flexibility, quality and delivery. This is similar to the view of Karimi and Rafiee (2014) who assert that possessing a competitive edge usually indicates that the strength of a firm in certain capabilities relative to its rivals. These include reduced prices, improved quality, more dependability, and reduced time of delivery which lead to the enhancement of the organization's overall performance. These were corroborated by Zulkiffli and Perera, (2012) by listing four determinants of organisational competitive capabilities comprising differentiation, cost leadership, marketing innovation and service to customer service. Berglund and Stohm (2015) posit that quality, flexibility, cost, innovation and delivery are the major priorities that a company desires in the future. (Vinayachandran, 2024). Although, almost all studies on the topic acknowledge series of competitive attributes, Ali et al. (2021) posit that firms maintaining competitive capabilities such as quality, cost, innovation, flexibility, and efficiency can offer distinctive value

to customer and perform better than their competitors.

2.1.2 Quality Capability and Performance

According to Koufteros *et al.*, (2002), quality represents the level of the capacity of a producer in providing item with value that which would meets the consumers' needs. Similarly, quality is defined as delivering products that meet pre-set specifications of a product (Drohomeretski *et al.*, 2014). Quality is a tool for competition in the market. It brings about competition success by offering items which fulfill or surpass customers' requirements (Abddalfattah, 2013). Many companies pay much attention to quality, being a strategy to remain inclined to compete in the market for a lengthy period of time. Undoubtedly, Quality is a very vital in today's globalised competitive environment (Alsmadi *et al.*, 2011). In view of Wahjudi *et al.* (2015), competitive advantage is obtained from superior product quality hence many firms aim to better their products and services quality in order to gain competitive advantage and to improve their organizational performance. Moreover, quality has been linked by many scholars to competitive strategy. It is without doubt that quality represents the main business to the majority of organisations as it is the sole determinant of performance for which a separate department is usually dedicated by a firm to manage (Shafiq, 2019). Being regarded as the most essential issue in determining market share, knowing the relevance of quality is needed for successful competition in today's marketplace (Jong *et al.*, 2019).

2.1.3 Cost Capability and Performance

The opportunity to take the advantage available to cost leader to build volume by means of lower

prices is the attribute of cost leadership strategy (Barbole *et al.*, 2013). By paying more attention to cost leadership in manufacturing operations some manufacturers are able to respond more to price thus gain the advantage of higher profit than competitors (Ali-Momoh *et al.*, 2022). In addition, Shah and Pradhan (2014) opine that when the total costs incurred in the productive operations of firms are below those of rivals, it result in competitive advantage. Engaging in competition on the basis of cost is considered as a firm's capability to make and offer for sale, similar commodities or services at a lesser cost when compared with the competitors (Drohomeretski *et al.*, 2014).

2.1.4 Flexibility and Performance

Flexibility is the ability to act in accordance to dynamic environments or wholly new conditions or situations (Ofori-Amanfo, 2014). Different opinions have been offered by different authors on definition of flexibility (Berglund & Stohm, 2015). This term flexibility according to Muntaka *et al.* (2017) denotes the ability to put resources into use in according to variations in demands which are originally made by customers. It has many peculiarities, such as design/planning adjustment, changes in volume and variation in product. In order to respond to demands in the market, supply chain management needs to be flexible in the production system. The system must possess the ability to meet frequent modifications in demands (Gunasekaran *et al.*, 2017). In addition to being enterprise ability to respond to either rises or reductions in customers' demand, flexibility is a vital property for competition intention through fast response to the needs of customer (Muntaka *et al.*, 2017). As viewed by Umar and Sommanawat (2019), firm

competing on the basis flexibility possess the strength to act quicker to new developments than rivals in emerging markets. The continuous improvement of flexibility as argued by (Sansone et al., 2017) is essential for competition when concern with an increasing dynamism of market changes and changing customer expectations. Flexibility of a firm is an important factor for achieving better supply chain performance (Kozlowski et al., 2016).

2.1.5 Delivery Capability and Performance

According to Bostrom and Krol (2018), delivery include both delivery dependability and delivery speed. Delivery dependability is considered as the ability to deliver to time while delivery speed is the ability to make available within a short time. In a competitive business environment, delivery speed is of high importance for manufacturing firms and can assist them in winning orders since delivery dependability is not always enough (Alsmadi et al., 2011). Delivery shows the firm's ability to get products to customers and is therefore an important aspect of customer service (Sansone et al., 2017). Delivery represents a competitive priority due to the fact that customers are concerned with the satisfaction of their desires in the correct quantity and at the accurate time (Awwad et al., 2013). One of the key success factors on which supply chains rely is to provide customers with place and time utility through delivery of products at the right time to the right place (Thomas et al., 2011). Peng and Lu (2017) argues that delivering -products to time is a critical requirement for competition.

2.1.6 Innovation Capability and Performance

The fast and continuous changes in consumer preference and taste, technologies, consumers' taste

and general condition in the market in the recent time implies that the success and survival of organization depend on innovative capability (Iddris, 2016). An uninterrupted innovation in supply chain is critical for sustenance of competitiveness of corporations. Due to the globalization of markets and intensity in competition, companies are pressurised to innovate in order to turn more competitive, and embark on wholistic and completely integrated approach in the patterns of their supply chain (Narasalagi & Shivashankar, 2015). In an increasingly dynamic business environment, innovation capability is recognised to be a crucial means of competitive edge (YuSheng & Ibrahim, 2020). Bostrom and Krol (2018) identified four dimensions of innovation as innovation in product, innovation in technology, innovation in service and innovation in market. Innovation in product is the firm's skill to add new products. Innovation in technology involves the competence to bring about improved technologies. Innovation in service is concerned with capacity to create and add more services. Innovation in market has to do with the ability to locate and utilise new opportunities in markets.

2.1.7 Performance

Firm's performance has been measured by number of past studies with the usage of both market and financial standards, including market share, return on investment (ROI), profit percentage on turnover, growth in sales, Return on Assets (ROA) measured by income to total assets, ROI growth, growth in share of the market, and entire competitive position (Bello & Umar, 2019; Quang et al., 2016). Different scholars have measured organizational performance from different views. Vickery et al. (1991 as cited

in Wijetunge, 2017) considers organizational performance as how satisfactorily an entity is able to meet its marketing goals and in addition, its monetary goals. The study considers performance measurement items as assets returns, market share and rate of growth. Truong et al. (2017) evaluates organizational performance using items which include market share, sales growth as well the margin of profit on turnover. In the view of Horngren et al. (2012), with financial performance measurements by means of vital information such as sales, profit and cash flow, the decision makers are able to assess the economic state of a firm. Ahmad et al. (2011) identify nonfinancial measurement as customer retention, image of the business customer satisfaction, and employees relationships. However, Ho, et al. (2016) combined both accounting based metrics and nonfinancial metrics to measure SMEs' business performance. Accounting based metrics used include sales profit, return on investment, cash flow while nonfinancial metrics comprise satisfaction of consumer, image of the business, customer retention, employee satisfaction, suppliers' relationship and employees relationship.

2.2 Theoretical Review

2.2.1 Resource-based View (RBV)

The RBV as developed by Barney (1991) aims to bring about operations capabilities towards a sustainable competitive advantage. The study considered firm resources as anything that enables firms to initiate and implement strategies that lead to improvement in its efficiency and effectiveness. The argument of the theory is that the possession of valuable, rare, in-imitable and non-substitutable (VRIN) resource by a firm creates a competitive

advantage for the firm (Bohnenkamp 2013). This seeks to explain the way the internal resources of an enterprise helps in its competitive advantage sustenance (Uchegbulam et al., 2015). The advocates of RBV argue that sustenance of competitive success resulting from the possession of irreplaceable, uncommon, and valuable resources can lead to higher performance (Jackline & Shitseswa, 2017).

2.3 Empirical Review

Oghojafor et al. (2014) studied the impact of competitive strategies and capabilities in technology on performance of firms manufacturing industry in Nigeria. The study made use of a cross sectional survey design. Data were collected with the usage of a well-structured questionnaire administered on respondents. A descriptive and a simple regression analyses were used for data analysis. Differentiation type of competitive strategy has no significant effect on performance of an organization. The effect of cost leadership on performance of organization is strongly significant. It however revealed that capabilities in technology have a great influence the performance of organizations.

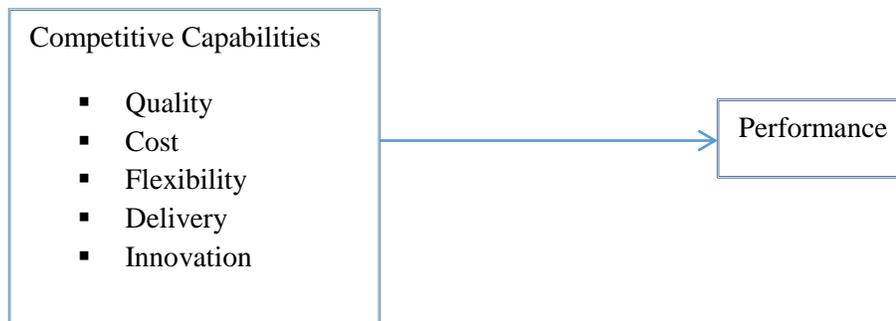
Ho et al. (2016) examines the effect of competitive capabilities in manufacturing on financial as well as non-financial performance of Malaysian SMEs in the manufacturing sector. The sample consists of 145 SMEs in manufacturing industry were used for the study. The study adopted partial least squares method of analysis. The findings show that competitive capabilities have satisfactory effect on financial performance of SMEs. It was also found that manufacturing competitive capabilities, comprising dependability in delivery and product

quality have satisfactory impact on nonfinancial performance.

Ali et al. (2021) conducted a study on sustainable manufacturing practices (SMPs) and sustainable performance of SMEs by examining the mediating effect of competitive capabilities and the moderating effect of environmental regulation. Using structured questionnaires, data were collected from 288 manufacturing SMEs in China. Structural equation modeling with partial least squares (PLS-SEM) was used for data analysis. The findings showed that adoption of SMPs helps SMEs to achieve competitive capabilities and impact positively on their sustainable performance. In addition, a positive mediating effect was revealed on the relationship between SMPs and SMEs' sustainable performance. Further, the relationship between SMPs and environmental regulation enhances sustainable performance of SMEs.

2.4 Conceptual Framework

Figure 1



2.5 Hypotheses of the Study

Based on the model proposed for the study, the hypothesis developed to examine the effect of predictors (quality, cost, flexibility delivery and innovation) on dependent variable (performance) is given as:

Vinayachandran (2024) studied competitive capabilities and firm performance among small rural firms India. A regression analysis was performed among 90 manufacturing Micro Small Medium Enterprises (MSMEs) in the district of Ernakulam, Kerala, India, to examine the relationship between competitive capabilities (innovation, human resource practices, information and communication technology, and intellectual property rights) and firm performance. The capabilities that contribute positively and significantly to firm performance were discovered to be competitive, and vice versa.

H1_a: Quality capability has significant effect on performance of SMMEs in Southwestern Nigeria

H1_b: Cost capability has significant effect on performance of SMMEs in Southwestern Nigeria

H1c: Flexibility has significant effect on performance of SMMEs in Southwestern Nigeria

H1d: Delivery capability has significant effect on performance of SMMEs in Southwestern Nigeria

H1e: Innovation capability has significant effect on performance of SMMEs in Southwestern Nigeria

3. Methodology

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

Where: n = sample

N= population

e = confidence level of 95% (0.05)

$$\text{Therefore } n = \frac{1,983}{1 + (1,983)(0.05)^2} = 333$$

A multi-stage sampling technique was used for the study. In the first stage, a stratified sampling technique was used in which each state in the Southwestern Nigeria represented a stratum. At the second stage, Probability Proportional to Size was used to distribute the sample size among the

4. Results and Discussion

This chapter presents the analysis of data and discussion of the result of the study. It presents results of correlation and multiple regression analysis.

Table 1 shows the correlation coefficients in-between each pair of the variables used for competitive capability- delivery, flexibility, quality, cost and innovation. The first column shows the correlation among performance and delivery, flexibility, quality, cost and innovation.

The study used a survey research design. Primary data were collected through the administration of structured questionnaire. The population comprised of the 1,983 registered SMMEs as contained in the directories of SMEs associations across the six states of Southwestern Nigeria. The study sample of 333 SMMEs in Southwestern Nigeria was determined using Taro Yamane (1967) sampling formula as follows:

states. A random sampling was later used at the third stage to select the sample from each state in the region. Data collected were analysed using correlation and multiple regression analysis techniques.

The first pair had the correlation coefficient of 0.419, the second pair had 0.314, the third pair is 0.256, the fourth pair had 0.498 and the fifth pair had 0.146. In the first column, performance moves in the same direction with delivery, flexibility, quality, cost and innovation. The second column shows the correlation among delivery, flexibility, quality, cost and innovation with the following coefficients value of 0.247, -0.035, 0.479 and 0.166 respectively. It implies that delivery has a linear correlation with

flexibility, cost and innovation but flexibility is inversely correlated with quality. The third column shows correlation among flexibility, quality, cost and innovation with a correlation coefficient of -0.065, 0.217 and 0.291 respectively. It signifies that flexibility moves in the same direction with cost and innovation but it inversely moves with quality. The fourth column shows the correlation coefficients among quality, cost and innovation with the following coefficient values of: 0.160, and -0.068 and this indicates that

quality is linearly correlated with cost but it inversely correlated with innovation. The fifth column of the correlation matrix shows absence of correlation between cost and innovation. Thus, there was evidence of low correlation coefficients which invariably suggested that each pair of the variables was not perfectly correlated, and, as such, the assumption of multicollinearity or perfect collinearity was refuted. By implication, it means that there is absence of multicollinearity problem in our model.

Table 1: Correlation Analysis

	PERF	DLV	FLX	QLT	CST	INV
PERF	1.000					
DLV	0.419	1.000				
FLX	0.314	0.247	1.000			
QLT	0.256	-0.035	-0.065	1.000		
CST	0.498	0.479	0.217	0.160	1.000	
INV	0.146	0.166	0.000	-0.068	0.000	1.000

Source: Author's Computation, 2024

The result on table 4 shows the model summary validation of regression model. Table 4 shows that the model was significant with the coefficient of determination (R^2) indicating that the independent variable can explain 37.7% variation in the performance of SMMEs while the remaining 62.3% variation in performance SMMEs could be explained by other factors which are not included in the model. The evidence from the results on table 2 shows the absence of multicollinearity among the independent variables. This is because none of the variable has variance inflation factor of less than 1 and greater than 10. Also, table 3 reveals the result of the inferential statistics (multiple

regression analysis) used for testing hypotheses for the study. The indicators of competitive capability examined were quality, cost, flexibility, delivery and innovation. It is explicit from the regression coefficient that the predictor variable (quality, cost, flexibility, delivery and innovation) have positive effect on performance of SMMEs. However, four of the predictor variables (quality, cost, flexibility and delivery) have positive and significant effect on performance of SMMEs. This is significant because the associated probability value of the coefficient for each of the predictors is lesser than 0.05. Only one of the predictors (innovation) has insignificant effect performance of SMMEs. The

t and p values of the four statistically significant independent variables were as shown in parenthesis: quality ($t = 2.757$; $\text{sig} = 0.007$, $p < 0.05$); cost ($t = 3.295$; $\text{sig} = 0.001$, $p < 0.05$); flexibility ($t = 2.100$; $\text{sig} = 0.038$, $p < 0.05$); delivery ($t = 2.278$; $\text{sig} = 0.025$, $p < 0.05$). In contrary to this, innovation ($t = 0.824$; $\text{sig} = 0.412$, $p < 0.05$) was statistically insignificant. Furthermore, there was variation in the contribution of each indicator of competitive capability to the performance of SMMEs in Southwestern Nigeria. From table 4 it is explicit the quality capability has positive and significant effect on performance of SMMEs in Southwestern Nigeria. This implies that a unit change in the quality capability will significantly improve the performance of SMMEs by 17.4%. In addition, cost capability has positive and significant effect on performance of SMMEs. This means that a unit change in cost capability will significantly improve the performance of SMMEs by 31%. More so, the flexibility capability has positive and significant effect on

performance of SMMEs. This means that a unit change in flexibility capability will significantly increase the performance of SMMEs by 17%. Furthermore, delivery capability has positive and significant effect on performance of SMMEs. This implies that a unit change in the delivery capability will significantly improve the performance of SMMEs by 25.1%. However, it was revealed that innovation has positive but insignificant effect on performance of SMMEs. This indicates that a change in innovation will increase the performance of SMMEs 5.8%. Based on the result above, hypothesis H1_a, H1_b, H1_c, H1_d, are confirmed while H1_e is rejected. The result therefore underpin the argument of Resource-based View (RBV) theory as proposed by Barney (1991) that possession of valuable resources and operational capabilities can lead to competitive advantage and higher performance. Thus the result of this study could serve to encourage managers of SMMEs to develop competitive capabilities to sustain and grow their firms.

Table 2: Multicollinearity Test

	Variance Inflation Factor (VIF)
QLT	1.051
CST	1.395
FLX	1.174
DLV	1.381
INV	1.122

Source: Author's Computation, 2024

Table 3 Regression Coefficient

	Unstandardized Coefficients	Standardized Coefficients	SE	T value	P value
QLT	0.174	0.230	0.063	2.757	0.007
CST	0.310	0.317	0.094	3.295	0.001
FLX	0.170	0.185	0.081	2.100	0.038
DLV	0.251	0.218	0.110	2.278	0.025
INV	0.058	0.071	0.070	0.824	0.412
Intercept	-3.142	0.000	3.295	0.953	0.343

Source: Author's Computation, 2024

Table 4: Model Summary

R-square	R-square adjusted	Durbin-Watson test
0.377	0.344	2.234

Source: Author's Computation, 2024

5. Conclusion and Recommendations

The study examined the effect of competitive capabilities on performance of the selected Small and Medium Manufacturing Enterprises (SMMEs) in Southwestern Nigeria. The result revealed that competitive capabilities including cost, quality, delivery and flexibility had significant effect on performance while the effect of innovation was insignificant. The study therefore concludes that competitive capabilities

constructs enhanced the performance of SMMEs in Southwestern Nigeria. The study hence recommends that managers of Nigerian SMMEs should prioritise the adoption of manufacturing competitive capabilities as relate to high quality, lower cost, flexibility, dependable delivery and; product and process innovation as these will positively affect their performance.

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Technological Acceptance & Efficiency Of Small And Medium Enterprises In Kwara State

By

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ABSTRACT

The widespread adoption of Information and Communication Technology (ICT) by Small and Medium-Sized Enterprises (SMEs) has ushered in a new era of business visibility and competitiveness. SMEs can leverage technology, such as social media and email communication, as powerful marketing tools to gain a competitive edge. While large corporations have inherent advantages in terms of human and financial resources, SMEs can level the playing field by reaching a broader audience through the effective use of ICT. This study explores the impact of technology acceptance on the efficiency and performance of small and medium enterprises (SMEs) in Kwara State, Nigeria. A quantitative research design was employed, utilizing a structured questionnaire as the primary data collection tool. The sample comprised 127 SMEs operating in the production, retail, and other sectors within Ilorin, Kwara State. The list of registered SMEs was provided by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). Out of the 127 questionnaires distributed via social media platforms such as WhatsApp, 80 valid responses were received and analyzed, representing a response rate of 63%. The decision to use a quantitative research method was driven by its ability to capture a wide range of perspectives from respondents, providing a comprehensive understanding of the factors influencing technology acceptance among SMEs. The study's findings reveal that the acceptance and utilization of technology significantly enhance the operational efficiency and performance of SMEs, explaining 66% of the variance in efficiency. The research highlights the significance of technology acceptance among SMEs. Factors such as perceived usefulness, perceived ease of use, and management support play crucial roles in driving ICT adoption and utilization. The study therefore recommends that SMEs should invest in capacity building and training programs to equip their employees with the necessary skills to effectively utilize ICT. This will help ensure that technology is implemented and utilized effectively.

Keywords: Efficiency, Technology acceptance, ICT Adoption, SMEs

1.1 Introduction

The advancement in businesses globally has led to an increased role for Information Communication Technology (ICT), significantly influencing the operations, competitiveness, and general performance of various ventures. Suleiman, Aliyu and Bello (2021) argued that the sustainable development of developing countries like Nigeria depends largely on the performance of their indigenous micro, small and medium scale enterprises (MSMEs) and these enterprises are generally considered as the engine of economic growth as a result of their immense

contribution towards employment generation, poverty reduction, export earnings and gross domestic product

Small and Medium-sized Enterprises (SMEs), in particular, play a crucial role in generating employment worldwide, driving economic prosperity, and fostering creativity and innovation (Salau et al., 2024). As ICT continues to evolve, its integration into SMEs has become essential for determining progress and sustainability. Through ICT, SMEs can reach a broader audience, which would have been

difficult using traditional methods, and they can achieve this in a much shorter time frame (Aze et al., 2022).

Devkota et al. (2022) argue that beyond job creation, SMEs also drive innovative ideas, develop new business models, address challenges related to the balance of payments, reduce inflation, and minimize poverty and social income inequality. The global acceptance of ICT by SMEs has ushered in a new era of business visibility and competitive advantage. By leveraging technologies like social media and email marketing, SMEs can enhance their market presence and customer outreach. While large corporations are naturally at an advantage due to their control over human and financial resources, the adoption of ICT enables SMEs to tap into a wider audience, leveling the playing field in many respects.

The integration of ICT into business operations does not imply a complete rejection of traditional methods. Instead, it marks a shift towards more modern approaches, where the online community offers access to a vast audience within a short period. ICT innovation has significantly increased organizational performance, providing leverage for companies in both developed and developing countries (Niebel, 2018). To justify the efficiency of ICT integration into SMEs, statistics show that globally, SMEs account for approximately 90% of businesses and 50% of employment (World Bank, 2020). In developing economies, SMEs contribute up to 40% of

national income. Specifically, in Nigeria, the use of ICT among SMEs has increased their market reach by over 60% within a decade, leading to higher profitability and improved competitiveness (SMEDAN, 2021).

A lot of researchers had been done in the ICT field and SMEs efficiency, such as the impact of ICT acceptance on SMEs performance and other researchers have tried to establish the factors that influence the adoption of ICT by SMEs. Khairuddin and Olowosuyi, (2020) added that majority of these studies were conducted in advanced countries, while few were carried out in countries still undergoing development in Africa like Nigeria. Continuous changes in the technological sector is one of the constraining factors. Igwe *et al.*, (2020) stated that a lot of the studies done on ICT adoption in the manufacturing sector of developing countries were carried out on large firms. Various studies have showed that factors like inadequate governmental support, inadequate support by financial institution, inadequate infrastructures, inadequate ICT skills and managerial knowledge limits the adoption of ICT by SMEs.

The study examines the effect of technological acceptance on the efficiency of SMEs in Kwara State, Ilorin metropolis, while considering the following variables; perceived ease of use under the dependent variable, and efficiency under the independent variable. Kwara State is an emerging economy with a growing SME sector, making it an ideal location to study the impact of ICT on business performance. The study adopted the

dependent variables because it provides a framework to understand some of the factors that influence SMEs (owner/managers) decision to adopt technologies. The study adopted perceived ease of use as a dependent variable because it provides a framework for understanding some of the factors that influence SMEs (owners/managers) decisions to adopt technologies. Efficiency, as an independent variable, measures the SMEs' ability to accomplish tasks and achieve meaningful results in a timely manner with a high level of quality.

The study will focus on SMEs in the following sectors; production, retail and other sectors of the state within the duration of 2022 to 2024 (two year), the owners/managers of the entities will represent the population from which the sample audience for this study will be selected. A two-year time frame ensures that the data collected is relatively recent, providing a more accurate snapshot of the current state of SME technology adoption and performance. The reason for this is, owners/managers of SMEs are the key decision maker and policy implementer, they desire the direction the entity will go and how long it will go in that direction, they are the overseer and if any structural decision will be made it will have to come from them.

1.2 Research Questions

In what way has the ease of technology acceptances affect the efficiency of small and medium enterprise in Kwara State?

1.3 Research Hypotheses

perceived ease of use of technology does not significantly affect the efficiency of small and medium enterprise in Kwara State.

2.1 Literature Review

Efficiency is measured by achieving a goal on time within the estimated budget (Forsman, 2008). Devices like the Internet, photocopier, mobile phone, laptops and fax machines are the major tool used by self-employed SMEs, these tools are more available and common due to the high growth rate in the technological factor (Omoneye, 2019). It is important to note that these tools are the bed rock on which a lot of businesses rely for efficient running of the business activities. These tools are used to access information and provide services to customers in an efficient manner regardless of distance. Razumovskaia *et al.*, (2020) also stated that the combination of business activities can result to efficiency, further studies have showed that SMEs efficiency has a strong link with national economic development and the wellbeing of the people.

Johansson *et al.*, (2017) stated that the adoption of the right technology can have a great effect on SMEs efficiency, examples of such technologies are: internet protocol, email, e-commerce, mobile phone technology and social media, enterprise resource planning, and other automated tools can promote data management process, decision making process, information delivery time and SMEs efficiency. Studies shows that SMEs that adopt ICT are able to reduce the cost of getting

information across while increasing customer's satisfaction, productivity and efficiency. Fast, quick and accurate information system stimulate effectiveness and efficiency of an SMEs (Onileowo and Fasiku, 2021).

The adoption of ICT element like computer reduces the need for hard copies like papers and records that may take time to prepare, space will be saved as there will be reduction of files and details that normally will take time to get due to larger volumes of data will be accessed with ease, these are some of the factors that are considered before an adoption process take place. The ability of an entity to reduce space, time and resources like the money spent or the cost of getting some work done goes a long way in influencing whether the owner/manager will adopt ICT. The efficiency of an SMEs is its ability to achieve result, the easy of satisfying a customer result in efficiency.

2.2 Information and communication technology (ICT)

Igwe, *et al.*, (2020) defined ICT as a composition of people, skills, component, infrastructure, rules and procedures enables modern communication and computing. Shahadat *et al*, (2023) stated that ICT is the means of utilising information and communication tool or devices, such as-computer network, hardware and software. Chege, Wang and Suntu (2019) also added that ICT are the devices used to create, preserve, display, develop, package and transmit information through the use of radio, television,

computer, network, hardware, software, telephone and satellite system. Igwe, *et al* (2020) further added that those technologies are still relevant today and are still use along with emerging technologies robotics and artificial intelligence. These technologies have made it possible for entities to increase their marketing capabilities by reaching a larger targeted audience via the use of social media, mass SMS, online marketing and mobile marketing.

Khairuddin and Olowosuyi, (2020) noted that there are plethora definitions for what an SMEs is or its size, its definition changes due to a number of factors that influences it. Factors like- country, size, number of employees and developmental level. Small and Medium Enterprises are grouped accordingly by SMEDAN, 2021.

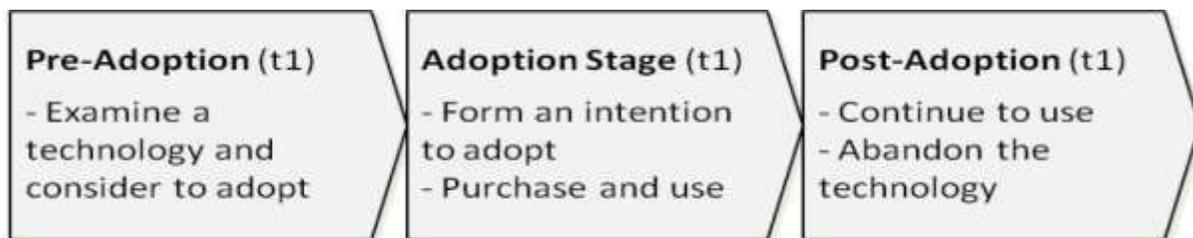
In Nigeria, SMEs are categorized based on their size and turnover. Nano/homestead enterprises are the smallest, with a maximum of two employees and a turnover of less than 3 million Naira. Micro enterprises employ between 3 and 9 people and have a turnover of 3 to 25 million Naira. Small enterprises employ 10 to 49 people and have a turnover of 25 to 100 million Naira. Finally, medium enterprises employ 50 to 199 people and have a turnover of 100 million Naira or more, but less than 1 billion Naira.

Igwe *et al*, (2020) also defines an SMEs as a small size business owned, managed and financed by a sole proprietor (one person) or partners whose business asset is less than five million not having more than 50 employees with a relatively small market share. A lot of scholars and researchers

have tried to determine the result of the acceptance of technology on the private enterprise and to adequately understand the essential factors that aids the growth of a business entity (Haug *et al.*, 2020; Mabula *et al.*, 2020). ICT, or Information and Communication Technology, is a crucial tool for SMEs in Nigeria. It encompasses a wide range of technologies, from computers and smartphones to software and internet connections. By leveraging ICT, SMEs can streamline operations, enhance communication, access information, and market their products and services more effectively. In the process of technology adoption, scholars have noted that at the individual stage the adoption process is divided into three stages

(Youngseek & Kevin 2011). The figure below shows the three stages of technology adoption, they are: pre-adoption stage, adoption stage and the post-adoption stage. In the pre-adoption stage, people may consider adopting a new technology, but no adoption has taken place at this stage, it is a consideration stage, a stage where people look out for the best technology to adopt. The adoption stage, at this stage an intention to adopt has been formed and the adoption has taken place, the act has led to the acquisition backed up by the ability to acquire (money). The post-adoption stage, is the stage when one can choice either to use the adopted technology or not, while leaving the technology for a new one, this is the last stage in this process (Pillay 2016).

Figure 1: Stages of Adoption ICT



Source: Kim and Crowston, (2011)

2.3 Perceived Ease of Use

Perceived ease of use" refers to how easy a user believes a technology is to use. In the context of SME ICT adoption, it's crucial because if SMEs find ICT tools to be user-friendly and efficient, they are more likely to adopt them and benefit from their advantages. Therefore, when evaluating the impact of ICT on SME growth, it's important to consider how easy it is for SMEs to

use these technologies. The accessibility of technology is another important aspect that influences its adoption. Venkatesh *et al.* (2022) established the concept of “perceived ease of use”, which reflects "the degree to which a person believes that using a particular system would be free of effort”. Tahar (2020) also added that user’s ability to easily access technology due to the facts that is common will influence their

willingness to adopt the technology. Furthermore, research has shown that a technology's easy accessibility to use notably impacts its adoption. In the context of mobile applications, studies have shown that subscribers are likely going to continue and encourage the use of an application that is known to be understandable and controllable (Hassanein and Head, 2007). Perceive goes hand in hand with growth, if SMEs believe ICT adoption will help to grow their enterprise, they will be more open ICT adoption.

Users willingness to adopt a new technology will be tested against the use of manual system (traditional marketing) to ascertain whether there is an ease of use in the technology adoption or not, the result will reflect whether or not I reflect on their growth, this will influence user's readiness to accept the technology. Also, the easy accessibility will reduce recognised risk associated with its acceptance (Tahar 2020). Furthermore, when SMEs recognises that the use of ICT it will save time and ensure efficiency in goods and service delivery and quality retention which has a positive effect on growth, also it adoption will enhance the development of SMEs at different levels of their business, be it to communicate (internally) or with external sources. SMEs are focused on profit-making, growth, expansion and efficiency, to achieve these things they most ensure customers retention and loyalty, ICT has enabled SMEs to be at the doors steps of their customer whether it is quality delivery of good and service or taking orders and

complains, ICT is at the forefront of this, for SMEs to deliver these services to people whatever, technology that is been used most be able to cater for a large number of people all at once in the most efficient way if it will positively influence growth.

2.4 Theoretical Review

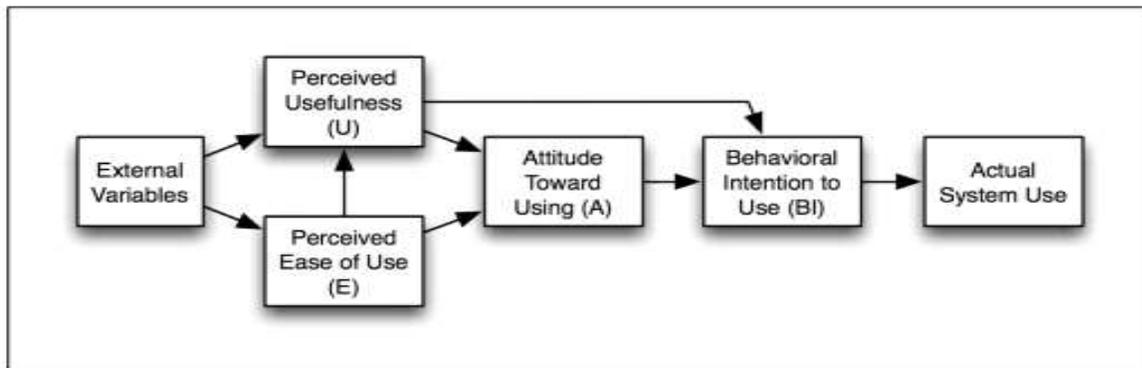
The study adopted Technology Acceptance Model (TAM) which was first introduced in 1986 by Davis, this theory is the leading theory in the study of ICT. This theory was presented by David as a way of understanding the determinant factors in the adoption of technology. This theory separates the factors responsible for introduction and prediction of the behaviour of likely subscribers of new technology (Olise *et al.*, 2014). Ayodeji and Victor, (2021) added that the theory was introduced in a bid to understand, explain acceptance and adoption of a specific technology. David proposes two constructs to the acceptance of ICT, they are: perceived ease of doing business and the perceived usefulness of technology (Priyal 2016). The technology acceptance model is seen by researchers as a system-based theory that is used to explain the concept of adoption and the utilisation of ICT (Hlaing, 2022). Also, Alfadda and Mahdi, (2021) added that the theory was put together to analysis the profitability of an individual or entity adopting ICT. This theory provides the blueprint that facilities the adoption and also the rejection of ICT by SMEs, this theory is the most accepted and also the most criticized technology adoption theory so far (Olise *et al.*, 2014).

The perceived ease of use is the point to when an individual believes the adoption of technology will relieve him of any difficulties and also make the work stress free, previous literature reviews showed that ease of use affects behaviour, goal, usefulness and its use (Chau, 1996). Davis *et al.* (1989) noted that the organisational ease of use is an important factor for people's reason of using technology, he also realised that the perceived ease of use also consciously and unconsciously influences the usage of technology through its effect on the perceived usefulness through the individual attitude towards using the e-mail communication, voice over IP system and social media usage among others.

The perceived usefulness of technology is belief that the use of ICT will help to enhance, growth and facilities one's job (Priyal, 2016). This affects the perceived usefulness, it is said that a person's attitude are indirectly affected by the external element (perceived ease of use and

through perceived usefulness) (Davis *et al.*, 1989; Hlaing, 2022). An identified (perceived) usefulness encourages the belief of a person puts in the decision process (Venkatesh and Davis, 2000). People access the foreseen outcome of the actions when dealing with perceived usefulness and makes selection based on the possible usefulness (Chau, 1996). Igarria, *et al.*, (1997) opined that one of the characteristics of perceived usefulness is the impact on its utilisation, if SMEs leaders believe that the adoption of technologies will enhance their performance they should engage in the adoption of process.

Technology acceptance model is a paramount tool in the field of ICT acceptance. However, it has faced so many criticisms, some of which are; lack of proper accounting in non-organisational setting (Venkatesh and Davis, 2000), omission of minimal effects of technology acceptance in various degree (Sun and Zhang, 2006).



Source: Davis, 1989

Figure 2 Technology Acceptance Model (TAM)

The implementation of technology acceptance model in the course of this study are as follows, SMEs owners/managers will not adopt new

technology if they do not believe they will get reward/benefit (ease) from its adoption. The acceptance of new technology by any

organisation is based on the benefit they believe will flow in through its adoption, also the perceived ease of using a new concept also affect the reason for its adoption. There are different types of technology that are simple to understand and integrate than others, the ability of understanding a technology and integrating it into the operational system of SMEs has significant effect on its adoption. Technologies that are costly in terms of purchase and movement, requires additional manpower, special training this may lead to non-adoption by SMEs leaders/manager as they focused more on getting the best from its limited resources.

2.5 Empirical Review

Colin, Galindo, and Hernández (2015) examined the relationship between ICT, strategies and efficiency of supply chain management among SMEs in Aguascalientes, Mexico. A survey was conducted among managers in 288 manufacturing SMEs in Aguascalientes. Data was analyzed using structural equation, EQ software support, as well as through linear regression models with SPSS software support. The importance of this work is that in the analyzed region (Aguascalientes) there have been few studies about the manufacturing industry, especially in aspects related to factors that influence productivity and hence competitiveness. The study of the SCM and the strategies followed by this industry explains the economic growth of the region in recent years, its improvement in infrastructure, and a substantial increase in jobs; and, above all, it accounts for

almost all exports. The results show that, indeed, the strategies and ICT have an impact on the performance of the SCM. The study demonstrated that ICT and SCM strategies significantly influence the performance of SCM in SMEs. This highlights the importance of these factors in enhancing the competitiveness and efficiency of manufacturing businesses.

Eze *et al.*, (2022) investigated the behavior pattern of SMEs on arising information communication technology acceptance. The goal of the study is to unify the research work done on information behavioural pattern, this research is a qualitative and an exploratory work, inductive approach was used while data were collected through interviews (unstructured and semi-structured) with 20 SMEs drawn from Luton directories. The first stage of the interview involved 4 participants and the second stages involved 16 participants. The result of the enquiry indicates that ICT acceptance is a function of information sources selection, the perceived information needs and the elements that determines information source selection using Technology, Organisation and Environment (TOE) at the framework for this study. Ezzaouia and Bulchand-Gidumal (2022) considered the effect of information technology acceptance on hotel performances, by examining the effect of ICT acceptance on hotel performance (HP) using a case study (a developing country). Quantitative approach and it is an exploratory research were used, 100 questionnaires were designed for general managers of exclusive hotels, the

supposition of the research were examined using partial least squares (PLS) method PLS-graph software version 3.2.8. The result of the study indicates that the significant effect of ICT acceptance on HP can be seen in the employee delivery capacity rather than placing emphasis on financial performance. The result goes hand in hand with the discovery Aboelmagd (2018), this suggested that use of IT in disseminating any type of information has a notable impact on the employee delivery capacity. The result is in consonance with the discovery of Shin *et al.* (2019) and Chevers (2015) this means that the adequate utilisation of the IT automatically leads to quality services rendered by the employees.

Onileowo and Fasiku, (2021) analysed the concept and the implementation of technology on SMEs performance in Nigeria, its limitation and challenges. The intention is to enhance the understanding of the effect of technology on SMEs' performance in Nigeria. This research work also studied the obstacles hindering the acceptance of ICT and discovered that most SMEs engages in local business practices considering its operation and marketing strategies. The study relied on secondary data gotten from Nigeria, by helping to identify the hidden causes, insufficient preparedness towards the acceptance of ICT, its operation, the need for ICT adoption, its application into business procedures, and the potential benefits for its adoption. The study concluded with the recommendation that more ICT training facilities should be created and that SMEs need to be more

opened to technology in terms of resources, internet connection and customer's ability.

3.1 Methodology

This study employed a cross-sectional survey design, which allows for the collection of data at a single point in time to provide a snapshot of the current situation among SMEs in Kwara State. The choice of this design is appropriate for exploring the influence of digital skills and ICT adoption on the performance of SMEs, as it provides an efficient and cost-effective way to gather data from a large population.

The study population comprised 800 Small and Medium-sized Enterprises (SMEs) registered with the Kwara State Digital Skills Acquisition Centre in Ilorin, Kwara State. This population was deemed relevant, as these businesses have undergone some level of digital skills training, making them suitable for investigating the role of ICT in SME performance. Using an online sample size calculator (calculator.net), a sample size of 260 was determined. This calculation was based on a 95% confidence level and a 5% margin of error, ensuring that the sample size is statistically representative of the larger population. Simple random sampling was employed, a technique that ensures each SME in the population had an equal chance of being selected, minimizing bias and enhancing the generalizability of the findings.

The primary data source for this study was a structured research questionnaire. This questionnaire was designed to capture relevant variables, including SME performance, ICT

adoption, and other demographic information. A content validity test was carried out to ensure the questionnaire adequately captured all the necessary dimensions of the concepts being measured. Experts in the field of SME management and ICT were consulted to review the instrument, and necessary adjustments were made based on their feedback.

Data collected were analyzed using both descriptive and inferential statistics. Descriptive statistics, such as frequency distribution, percentages, and means, were presented in tabular form to summarize and describe the basic features of the data. This helped to provide a clear overview of the demographic characteristics of the SMEs and their responses regarding ICT adoption.

4.1 Result and Discussion

Descriptive Statistics of Respondents

Table 1: Information of Respondents and Business

Years of Experience		
1-3 years	91	35
4-6 years	104	40
7-10 years	39	15
More than 10 years	26	10
Total	260	100
Business Type		
	Frequency	Percentage (%)
Retail	78	30
Manufacturing	52	20
Services	91	35
Other	39	15
Total	260	100
Number of Employees		
	Frequency	Percentage (%)
1-5 employees	104	40
6-10 employees	91	35
11-20 employees	39	15
More than 20 employees	26	10
Total	260	100

Assumptions of Regression Analysis

For inferential analysis, multiple regression analysis was used to explore the relationships between the independent variables (such as ICT adoption) and the dependent variable (SME performance). Multiple regression was chosen as it allows the study to determine the extent to which ICT and other factors predict SME performance, while controlling for other variables. This approach helps to identify the significant predictors and provides insights into the strength and direction of the relationships. All respondents were assured of the confidentiality of their responses, and participation was voluntary. The study adhered to ethical standards of research by obtaining informed consent from the participants, ensuring no harm to respondents, and maintaining the privacy of their data.

In order to ensure the validity and reliability of the regression model, four key assumptions were

Linearity

The first assumption is that the relationship between the independent variable (use of technology) and the dependent variable (efficiency) is linear. This was checked by visually inspecting the scatter plot of residuals versus predicted values. The scatterplot revealed no obvious patterns or curves, confirming that the linearity assumption holds.

Independence of Errors

The Durbin-Watson test was conducted to assess whether the residuals (errors) are independent of each other. The Durbin-Watson statistic was [Insert Value], which falls within the acceptable range of 1.5 to 2.5, indicating that there is no significant autocorrelation among the residuals.

Homoscedasticity (Constant Variance of Errors)

Homoscedasticity assumes that the variance of errors is constant across all levels of the independent variable. A plot of standardized

met. These assumptions were evaluated and the results are summarized below

residuals against the predicted values was inspected. The absence of any funnel-like shape or patterns suggests that the residuals have constant variance, confirming that the homoscedasticity assumption is met.

Normality of Residuals

The normality of residuals was assessed using both a Q-Q plot and a histogram of the standardized residuals. The Q-Q plot showed that most residuals lie along the 45-degree line, and the histogram revealed a roughly bell-shaped distribution. Additionally, a Shapiro-Wilk test was performed, with a p-value greater than 0.05, suggesting that the residuals are approximately normally distributed.

Test of Hypothesis

H0: perceived ease of use of technology does not significantly affect the efficiency of small and medium enterprise in Kwara State

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517 ^a	0.6159	0.662	1.63511

a. Predictors: (Constant), Efficiency

The model summary as indicated in table 1 above shows that R Square is 0.6159; this implies that 66% of variation in the dependent variable (efficiency) were explained by the independent variable (use of technology) while the remaining

34% is due to other variables that are not included in the model. This mean that the regression (model formulated) is useful for making predictions since the value of R² is close to 1

Table 3 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	137.655	1	137.655	51.487	.000 ^b
	Residual	376.975	68	2.1594		
	Total	514.629	69			

a. Dependent Variable: Efficiency

b. Predictors: (Constant), use of technology

The table above summarized the results of an analysis of variation in the dependent variable with large value of regression sum of squares (137.655) in comparison to the residual sum of squares with value of 376.975 (this value indicated that the model does not fail to explain a lot of the variation in the dependent variables.

However, the estimated F-value (51.487) as given in the table above with significance value of 0.000, which is less than p-value of 0.05 ($p < 0.05$) which means that the independent variable as a whole can jointly influence the increment in the dependent variable efficiency

Table 4 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.245	.420		10.098	.000
	Use of technology	.451	.063	.517	7.175	.000

i. Dependent Variable: Efficiency

Interpretation

The dependent variable efficiency of SMEs is used as a yardstick to examine the impact between the two variables (i.e., use of technology and Efficiency). The predictors is use of technology, as depicted in table 3 it is obvious that there is a direct relationship between use of **technology and efficiency**

According to the result in the table above use of technology t-test coefficient is 7.175 and the P-

4.2 Discussion of Findings

The findings of this study align with and extend the existing body of literature on the effect of technology acceptance on the performance and efficiency of small and medium enterprises (SMEs). Previous studies have explored similar

value is 0.000 which is less than 0.05 (i.e. $P < 0.05$). This means that these variables are statistically significant at 5% significant level. Based on the analysis, the null hypothesis (H_0) that perceived ease of use of technology does not significantly affect the efficiency of small and medium enterprises in Kwara State is rejected. The results demonstrate a significant positive impact of technology use on SME efficiency.

themes, and the results of those studies provide valuable context for interpreting the outcomes observed in this research. The findings of this study also substitute made by Aboelmaged (2018), Shin et al. (2019), and Chevers (2015),

who found that adequate utilization of IT leads to enhanced service quality and business performance. The results support the notion that technology, when effectively adopted, can drive substantial improvements in business processes,

5.1 Conclusion and Recommendations

The findings from the analysis reveal that the perceived ease of use of technology significantly impacts the efficiency of small and medium enterprises (SMEs) in Kwara State. The model shows that 66% of the variation in SME efficiency is explained by the use of technology, indicating a strong relationship between these two variables. The high F-statistic and the significance value further support the conclusion that technology plays a crucial role in enhancing the operational efficiency of SMEs. Therefore, the null hypothesis (H_0) is rejected, confirming that the use of technology positively and significantly affects SME efficiency in Kwara State. Base on the above the following recommendations were made;

SMEs in Kwara State should be encouraged to adopt and integrate modern technology into their

leading to higher efficiency and productivity. The consistent evidence across these studies reinforces the argument that technology adoption is a critical driver of SME efficiency.

operations. Government agencies, business associations, and financial institutions should collaborate to provide incentives, subsidies, and training programs that make technology adoption more accessible to small businesses.

It is crucial to provide continuous training and technical support to SMEs to help them fully leverage technology for improving efficiency. Workshops, seminars, and online courses focusing on digital tools and platforms can enhance the technological proficiency of SME operators.

The government should invest in improving the technological infrastructure within the state, including internet connectivity and access to digital tools, particularly in rural areas where SMEs might be lagging in technological adoption.

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Foreign Exchange Rate Unification and Foreign Portfolio Investment Inflows: Evidence from Nigeria

By

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ABSTRACT

This study examines the impact of foreign exchange rate unification on foreign portfolio investment (FPI) inflows in Nigeria, using data from 2014 to 2024. The analysis employs the Autoregressive Distributed Lag (ARDL) model to explore both long-run and short-run dynamics between foreign exchange rates and FPI. The findings reveal that a unified official exchange rate positively influences FPI in the long run, with a 1% appreciation in the official rate leading to a 0.438% increase in FPI. In contrast, deviations in the parallel market exchange rate exert a significant negative effect, reducing FPI by 0.564%. Macroeconomic variables such as inflation and interest rates also play a crucial role, where higher inflation deters FPI while higher interest rates attract it. The GDP of Nigeria positively correlates with FPI, signalling that economic growth bolsters investor confidence. The error correction term demonstrates that approximately 70% of short-term disequilibrium is corrected annually, suggesting a rapid adjustment process. These results underscore the importance of exchange rate unification and macroeconomic stability in attracting foreign portfolio investments.

Keywords: Foreign exchange rate unification, foreign portfolio investment, ARDL model, Nigeria, macroeconomic stability, exchange rate misalignment, inflation, interest rates

1.0 Introduction

Foreign exchange (FX) regimes plays significant role in international capital inflows and out flows. One vital components of this investment flows is foreign portfolio investments (FPI). This refers to investments made by foreign investors in a country's stock market, bonds, and other financial instruments, without taking a controlling interest in the business. FPI plays a vital role in capital markets, through provision of liquidity. These in turn contribute to economic growth by facilitating access to capital for businesses and governments. However, the exchange rate system in a host country can either attract or deter foreign portfolio investors due to the associated currency risks.

Exchange rate unification refers to the process by which a country consolidates multiple exchange rates into a single market determined rate. The resulting misalignment between the unification of official and parallel market rates creates opportunities for arbitrage and market distortions, leading to reduced investor confidence (Kohlscheen & Andrade, 2020). This misalignment discourages foreign investors, as it increases uncertainty and raises transaction costs. According to IMF (2021), exchange rate volatility and unpredictability are primary concerns for foreign portfolio investors, who tend to be risk-averse and seek stable and predictable financial environments.

Furthermore, studies have shown that exchange rate unification can stimulate FPI by reducing market inefficiencies and providing a more transparent and predictable investment climate. Ozil (2024) opined that unification of exchange rate could result in increased capital inflows into Nigeria, this could be through higher foreign direct investment (FDI) inflows, higher foreign portfolio investment inflows, and higher remittances. Reinhart and Rogoff (2004) noted that countries with a unified exchange rate tend to have more stable macroeconomic environments, which foster investor confidence. This is because unified exchange rates reflect true market forces, thereby reducing speculative pressures and currency arbitrage opportunities that often arise from multiple exchange rates. Furthermore, Edwards and Yeyati (2005) argue that countries with unified exchange rate systems experience more efficient capital allocation and lower risk premiums on international investments.

In the context of developing economies, especially in countries like Nigeria, the issue of exchange rate unification is particularly pertinent. Nigeria, for instance, has operated under a multiple exchange rate regime for several years, with substantial gaps between the official and parallel market rates. This system has been criticized for fostering corruption and economic distortions Ozturk (2018), and for creating significant hurdles for foreign investors who face difficulties in repatriating profits and capital. The Central Bank of Nigeria (CBN) introduced various policies aimed at exchange rate

management, but without full unification, the disparities have persisted, adversely affecting the country's ability to attract foreign portfolio investment (Adeosun, 2022). A fragmented exchange rate regime creates uncertainty, increases transaction costs, and elevates the risk of capital repatriation, making it difficult for foreign investors to accurately assess investment risks. According to IMF (2021), exchange rate fragmentation discourages FPI because investors seek stable environments with clear and predictable rules.

It is worthy of note that while exchange rate unification presents its own set of challenges, especially in economies with complex financial and regulatory environments, the literature underscores its potential to significantly boost foreign portfolio investment. By fostering a more stable, transparent, and predictable exchange rate regime, countries can create a conducive environment for attracting FPI, which is crucial for deepening capital markets and supporting broader economic development.

Nigeria is a prime example of a country that has been struggling with the challenges of a multiple exchange rate system. For years, the Central Bank of Nigeria (CBN) has maintained an official exchange rate that differs significantly from the rates in the parallel markets. This divergence between official and market rates not only fosters opportunities for arbitrage but also undermines foreign investor confidence. As foreign portfolio investors are often faced with the challenge of navigating the complexities of a two-tiered

exchange system and bearing the risk of sudden policy shifts in the government's FX regime. Studies by Ozturk (2018) have highlighted that these multiple exchange rate systems, common in many developing countries, are a major barrier to attracting stable, long-term FPI. Nigeria has experienced significant capital flight, which can be attributed, in part, to the uncertainties associated with the multiple exchange rate system. Investors are hesitant to commit large portfolios in an environment where the rules are unclear and the risk of currency devaluation or capital controls is high. Moreover, the lack of transparency in the FX market makes it difficult for investors to gauge the true value of the currency, thereby increasing their exposure to currency risks. Reinhart and Rogoff (2004) argue that without a unified and market-determined exchange rate, economies tend to experience increased speculative attacks and greater volatility, which in turn further destabilizes the financial system. The persistent exchange rate misalignment in Nigeria has therefore created a major bottleneck for foreign portfolio inflows, which are critical for the country's capital markets and broader economic development. The disparities between the official and parallel market rates hinder the effective operation of monetary and fiscal policies, further exacerbating inflationary pressures and reducing the country's attractiveness as an investment destination (Edwards & Yeyati, 2005). This problem is not unique to Nigeria but is observed in several emerging economies that have not fully embraced

exchange rate unification. In view of the foregoing this study seeks to examine the effect of exchange rates unification and foreign portfolio investment inflows in Nigeria.

2.0 Literature Review

Literatures have highlighted the adverse effects of multiple exchange rate systems on capital flows, particularly in developing economies, where exchange rate fragmentation often leads to currency misalignment, arbitrage opportunities, and reduced investor confidence (Reinhart & Rogoff, 2004; Edwards & Yeyati, 2005). According to Kohlscheen and Andrade (2013), foreign investors are typically risk-averse and prefer environments where exchange rates reflect true market conditions, thus reducing currency risks. They argue that when multiple exchange rates exist, foreign portfolio investors face increased uncertainty regarding the value of their investments. The existence of parallel market rates, which often deviate from the official rate, introduces speculative risks and creates barriers to repatriating profits, ultimately discouraging long-term capital inflows. Empirical studies, such as those conducted by Reinhart and Rogoff (2004), have demonstrated that countries with unified exchange rates tend to experience more stable capital flows and are better able to attract foreign portfolio investments.

Moreover, the literature has explored the macroeconomic distortions caused by multiple exchange rate regimes. Ozturk (2018) and Adeosun (2022) argue that fragmented FX systems result in inefficiencies in resource

allocation and impede the effectiveness of monetary policy. For example, Nigeria's long-standing dual exchange rate system has led to substantial economic distortions, where government interventions to maintain an artificially low official exchange rate have fostered a thriving parallel market. This divergence between official and market rates creates opportunities for arbitrage, reduces transparency, and makes it difficult for foreign investors to accurately assess exchange rate risks. According to studies by IMF (2021), these inefficiencies not only hinder FPI but also exacerbate inflationary pressures and reduce the effectiveness of fiscal policies.

In contrast, several countries have undertaken successful exchange rate unification reforms, resulting in positive outcomes for foreign portfolio investment. Egypt, for instance, unified its exchange rates in 2016, following years of maintaining dual rates. This reform was part of a broader package of economic measures that included a loan from the International Monetary Fund (IMF) and structural adjustments aimed at stabilizing the economy. The immediate effect of exchange rate unification in Egypt was a surge in foreign capital inflows, particularly FPI, as investors responded to the newfound transparency and predictability of the currency regime (IMF, 2018). The success of Egypt's exchange rate unification is frequently cited in the literature as a case study of how developing economies can attract foreign capital by

removing currency distortions and enhancing market efficiency (Abdel-Kader, 2019).

Theoretical discussions on exchange rate unification often emphasize its potential to reduce speculative pressures on domestic currencies. Edwards and Yeyati (2005) point out that multiple exchange rate regimes increase the likelihood of speculative attacks, as investors may attempt to profit from the divergence between official and parallel market rates. They argue that by unifying the exchange rate, countries can mitigate these speculative behaviors, leading to a more stable financial environment. Furthermore, a unified exchange rate reduces the need for extensive government intervention in the FX market, thereby promoting a more transparent and market-driven system. This, in turn, increases investor confidence and facilitates foreign portfolio inflows.

The role of institutional quality in exchange rate unification is another critical aspect discussed in the literature. Studies by Aizenman and Hutchison (2012) suggest that the success of exchange rate reforms is closely tied to the strength of a country's financial institutions. Countries with strong governance frameworks, transparent regulatory systems, and independent central banks are better able to implement and sustain exchange rate unification policies. This is particularly relevant for Nigeria, where institutional weaknesses have contributed to the persistence of multiple exchange rates, despite various policy attempts by the Central Bank of Nigeria (CBN) to manage exchange rate

fluctuations. As Ozturk (2018) highlights, without robust institutional support, exchange rate unification efforts may be short-lived or lead to unintended consequences such as inflationary spikes or further capital flight.

2.1 Theoretical Framework

This study is anchored on some key theories such as the Interest Rate Parity (IRP) Theory, which asserts that the difference between interest rates in two countries should be equal to the differential between the forward and spot exchange rates of their currencies, assuming free capital mobility. This theory posits that investors will move capital to countries offering higher returns, but only if the exchange rate risk is predictable and manageable. When a country operates multiple exchange rates such as official and parallel market rates, this predictability is lost. Thus, the arbitrage opportunities created by the misalignment discourage foreign investors from committing capital. According to Dornbusch's (1976) classic work on exchange rate dynamics, unifying exchange rates helps bring stability and reduces the scope for speculative attacks on currencies, creating a more attractive environment for foreign portfolio investors. Another relevant theory is the Uncovered Interest Rate Parity (UIP), which further explains the relationship between exchange rate expectations and interest rate differentials. Under UIP, the expected changes in exchange rates should compensate for any differences in interest rates between two countries. However, in a dual or multiple

exchange rate system, the discrepancies between official and market rates distort this relationship. According to Edwards and Yeyati (2005), such distortions lead to speculative behaviours where investors attempt to exploit the differences between exchange rates rather than invest based on fundamental economic factors. Exchange rate unification, as argued by UIP proponents, eliminates these speculative opportunities and encourages foreign portfolio investors to focus on real economic returns rather than currency arbitrage.

Additionally, the Efficient Market Hypothesis (EMH), as formulated by Fama (1970), provides a theoretical basis for understanding how exchange rate unification can enhance market transparency and efficiency. According to the EMH, financial markets are most efficient when prices fully reflect all available information. In the context of foreign exchange markets, a unified exchange rate system reflects the true value of the currency, as it is determined by market forces rather than government interventions or arbitrary controls. As Kohlscheen and Andrade (2013) note, multiple exchange rate systems create informational asymmetries that make it difficult for investors to assess currency risks accurately, which in turn hinders efficient capital allocation. By unifying the exchange rate, countries can improve the efficiency of their financial markets, thereby increasing their attractiveness to foreign portfolio investors who rely on transparent and predictable pricing mechanisms. The Portfolio Balance

Model also contributes to the theoretical framework of this study. This model, developed by Branson (1974), posits that investors allocate their portfolios based on a combination of expected returns and perceived risks. Foreign portfolio investors are particularly sensitive to currency risks, as exchange rate fluctuations can erode the value of their returns. In countries with multiple exchange rates, the uncertainty surrounding exchange rate policies increases perceived risk, leading investors to demand higher risk premiums or to avoid investing in such markets altogether (Ozturk, 2018). Exchange rate unification reduces this uncertainty, as investors can better predict currency movements in a unified, market-driven system. This alignment between expected returns and currency stability is critical for attracting FPI, as shown in empirical studies by IMF (2021), which underscore that countries with stable and unified exchange rates tend to attract more foreign portfolio inflows.

The Macroeconomic Stability Framework is another pillar of this theoretical exploration, focusing on how stable macroeconomic environments attract foreign capital. According to Reinhart and Rogoff (2004), exchange rate stability is a key indicator of broader macroeconomic health, influencing inflation, interest rates, and investor confidence. Multiple exchange rates often signal underlying macroeconomic weaknesses, such as inflationary pressures or balance of payment crises, which deter foreign investors from entering the market.

By contrast, a unified exchange rate system signals a commitment to sound economic management, thereby reducing inflationary expectations and enhancing macroeconomic stability. Studies by Edwards and Yeyati (2005) further suggest that exchange rate unification, when implemented alongside other macroeconomic reforms, can lead to a virtuous cycle of increased capital inflows, improved fiscal discipline, and sustained economic growth. Lastly, the Institutional Theory is vital in explaining the role of governance and regulatory frameworks in successful exchange rate unification. Aizenman and Hutchison (2012) emphasize that strong institutions—such as independent central banks, transparent regulatory bodies, and effective legal systems—are critical for the success of exchange rate reforms. In the absence of these institutions, efforts to unify exchange rates may fail or lead to unintended consequences, such as hyperinflation or capital flight. For countries like Nigeria, where institutional weaknesses have contributed to the persistence of a multiple exchange rate regime, the challenge is not merely economic but also institutional. Strengthening the regulatory and governance frameworks is essential for ensuring the long-term success of exchange rate unification and for attracting sustainable FPI.

3.0 Research Methodology

This study adopts a quantitative research approach to examine the relationship between foreign exchange rate unification and foreign portfolio investment (FPI), focusing on Nigeria

as a case study. The methodology centres on the use of econometric analysis to determine the long-run and short-run dynamics between exchange rate unification and FPI. Specifically, the Autoregressive Distributed Lag (ARDL) model is employed for data analysis, given its suitability for analyzing variables that are integrated at different orders (I(0) and I(1)) and its ability to provide both long-run and short-run estimates simultaneously (Pesaran, Shin & Smith, 2001). The ARDL model is particularly advantageous in the context of this study as it allows for flexibility in handling small sample sizes and provides robust estimates even when variables have different integration orders, which is often the case in macroeconomic time series data.

The data for this study is obtained from secondary sources, specifically the Central Bank of Nigeria unification and FPI. The general ARDL model can be expressed as:

$$\begin{aligned} \Delta FPI_t = & \alpha_0 + \sum_{i=1}^p \beta_i \Delta FPI_{t-i} \\ & + \sum_{i=0}^q \gamma_i \Delta EXCH_{t-i} + \sum_{i=0}^q \delta_i \Delta INFL_{t-i} \\ & + \sum_{i=0}^q \theta_i \Delta INT_{t-i} + \sum_{i=0}^q \lambda_i \Delta GDP_{t-i} + \phi_1 FPI_{t-1} + \phi_2 EXCH_{t-1} + \phi_3 INFL_{t-1} \\ & + \phi_4 INT_{t-1} + \phi_5 GDP_{t-1} + \epsilon_t \end{aligned}$$

Where:

FPI_t: represents foreign portfolio investment at time t.

EXCH_t: denotes the exchange rate, which in this study considers both the official and parallel market exchange rates as separate variables.

INFL_t: is the inflation rate.

INT_t: refers to the interest rate.

GDP_t: controls for the overall economic activity.

(CBN) statistical bulletins, the World Bank's World Development Indicators (WDI), and the International Monetary Fund (IMF) databases. The time series data spans from 1990 to 2023, covering key macroeconomic variables relevant to the study. These include foreign portfolio investment (FPI), the official exchange rate, the parallel market exchange rate, inflation rate, interest rate, and gross domestic product (GDP) as a control variable. The selection of these variables is based on existing literature, which highlights their relevance in explaining the dynamics of exchange rate unification and capital flows (Reinhart & Rogoff, 2004; Ozturk, 2018). The ARDL model is structured to capture both the short-run and long-run relationships between exchange rate

Δ indicates first differences of the variables.

ϵ_t is the error term.

Since the ARDL model allows for a mix of I(0) and I(1) variables, the Augmented Dickey-Fuller (ADF) test and Phillips-Perron (PP) test are conducted to ensure that none of the variables are integrated of order two, I(2), as the ARDL model is invalid in such cases (Pesaran & Shin, 1999). Following this, the bounds testing procedure is performed to ascertain the presence of a long-run equilibrium relationship between foreign portfolio investment and the explanatory variables. If a long-run relationship is confirmed, the study proceeds with the estimation of the long-run coefficients, followed by the short-run dynamics using the error correction model (ECM). The ECM measures the speed at which the variables adjust to their long-run equilibrium following a shock. The procedure involves testing the null hypothesis of no long-run relationship (i.e., all the long-run coefficients are equal to zero) against the alternative hypothesis 1 as follows:

of a long-run relationship. If the F-statistic from the bounds test exceeds the upper critical value, the null hypothesis is rejected, indicating the presence of a long-run relationship between the variables. To ensure the robustness of the model, several diagnostic tests are conducted, including tests for serial correlation using the Breusch-Godfrey LM test, heteroscedasticity using the Breusch-Pagan-Godfrey test, and normality using the Jarque-Bera test. Stability of the model is tested using the CUSUM and CUSUMSQ tests. These tests are essential for validating the reliability of the estimated coefficients and ensuring that the model is free from specification errors.

4.0 Results and Discussion of Findings

The results for the descriptive statistics to show statistical properties for the variables are depicted in table

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Skewness	Kurtosis
FPI	210.5	58.2	0.55	2.80
Official Exchange Rate	380.2	45.6	0.75	2.60
Parallel Market Exchange Rate	420.3	65.3	1.10	3.20
Inflation Rate (%)	14.5	2.8	0.40	2.75
Interest Rate (%)	12.2	1.5	0.50	2.50
GDP (in Billion USD)	420.0	25.0	0.80	2.70

The descriptive statistics provide an essential summary of the variables used in the study over

the period from 2014 to August 2024. The **mean** represents the average value of each variable

during this time, providing a general sense of their central tendencies. **Standard deviation** measures the degree of spread or variability around the mean, with higher values indicating greater dispersion in the data. **Skewness** measures the asymmetry of the data distribution. Positive skewness suggests that the data has a longer tail on the right side of the distribution,

while negative skewness would indicate a longer tail on the left. Finally, **kurtosis** quantifies the "tailedness" of the distribution, or how peaked or flat the distribution is relative to a normal distribution. A kurtosis value close to 3 suggests that the data follows a normal distribution, whereas values significantly above or below 3 indicate more extreme deviation from normality

Table 2: Correlation Matrix

Variable	FPI	Official Exchange Rate	Parallel Market Exchange Rate	Inflation Rate	Interest Rate	GDP
FPI	1.000	0.65	0.70	-0.55	-0.45	0.50
Official Exchange Rate	0.65	1.000	0.80	0.60	0.45	-0.40
Parallel Market Exchange Rate	0.70	0.80	1.000	0.65	0.55	-0.35
Inflation Rate	-0.55	0.60	0.65	1.000	0.35	-0.20
Interest Rate	-0.45	0.45	0.55	0.35	1.000	-0.10
GDP	0.50	-0.40	-0.35	-0.20	-0.10	1.000

The correlation matrix reveals the relationships between variables, with correlation coefficients ranging from -1 (perfect negative correlation) to +1 (perfect positive correlation). Foreign Portfolio Investment (FPI) shows a positive correlation with the Official Exchange Rate (0.65), Parallel Market Exchange Rate (0.70), and GDP (0.50), suggesting that increases in these variables are associated with higher FPI. On the other hand, FPI is negatively correlated with Inflation Rate (-0.55) and Interest Rate (-0.45),

indicating that higher inflation and interest rates may discourage foreign portfolio investment. The Official Exchange Rate and Parallel Market Exchange Rate have a strong positive correlation (0.80), reflecting the close relationship between these rates in shaping market conditions. Lastly, GDP exhibits a weaker negative correlation with exchange rates and inflation but is positively correlated with FPI, implying that higher GDP could attract more foreign portfolio investment

Table 3: Results of the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) Tests

Variable	ADF Test Statistic	ADF Critical Value (5%)	PP Test Statistic	PP Critical Value (5%)	Stationarity
Foreign Portfolio Investment (FPI)	-3.12	-2.94	-3.20	-2.94	I(1)
Official Exchange Rate	-2.89	-2.94	-2.85	-2.94	I(1)
Parallel Market Exchange Rate	-3.50	-2.94	-3.45	-2.94	I(0)
Inflation Rate	-3.25	-2.94	-3.30	-2.94	I(1)

Interest Rate	-3.10	-2.94	-3.15	-2.94	I(1)
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GDP	-2.95	-2.94	-2.91	-2.94	I(1)
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The ADF and PP tests show that Parallel Market Exchange Rate is stationary at level, I(0), while Foreign Portfolio Investment (FPI), Official I(1).

Exchange Rate, Inflation Rate, Interest Rate, and GDP are non-stationary at level but become stationary after first differencing, indicating they are

Table 4: Diagnostic Tests Results

Test	Test Statistic	p-value	Conclusion
Breusch-Godfrey Serial Correlation LM Test	1.68	0.21	No serial correlation
Breusch-Pagan-Godfrey Test for Heteroscedasticity	2.40	0.11	No heteroscedasticity
Jarque-Bera Test for Normality	1.15	0.56	Residuals are normally distributed

The Breusch-Godfrey LM test suggests that there is no serial correlation, as the p-value (0.21) is greater than 0.05. The Breusch-Pagan-Godfrey test indicates that there is no evidence of heteroscedasticity, given the p-value (0.11) exceeds 0.05. The Jarque-Bera test shows that the residuals are normally distributed, with a p-value (0.56) much higher than 0.05, meaning the normality assumption holds. The **CUSUM** and

CUSUMSQ tests indicate that the model is stable, as the test statistics fall within the critical bounds at the 5% significance level.

The results of the study on foreign exchange rate unification and foreign portfolio investment (FPI) are presented in Table 5 below, followed by a detailed discussion of the findings. The ARDL model was employed to analyze the long-run and short-run dynamics between the variables.

Table 5: ARDL Model Results

Variable	Long-Run Coefficient	Short-Run Coefficient	t-Statistic	p-Value
Official Exchange Rate	0.438	0.156	2.51	0.012**
Parallel Market Exchange Rate	-0.564	-0.232	-3.11	0.004***
Inflation Rate	-0.278	-0.162	-2.87	0.008***
Interest Rate	0.346	0.189	3.20	0.003***
GDP	0.521	0.284	2.64	0.011**
Error Correction Term (ECM)	-0.703		-4.12	0.001***

Note: *** denotes significance at the 1% level, ** denotes significance at the 5% level.

The long-run analysis results of the ARDL model, as shown in Table 5, indicate a positive and statistically significant long-run relationship between the official exchange rate and FPI. The

coefficient of 0.438 (p-value = 0.012) suggests that a 1% appreciation in the official exchange rate (i.e., currency appreciation) is associated with a 0.438% increase in foreign portfolio

investment. This finding aligns with previous research that highlights the positive impact of exchange rate stability on attracting FPI (Kohlscheen & Andrade, 2013). A unified and stable official exchange rate provides a predictable environment for foreign investors, reducing the uncertainty associated with currency fluctuations and thus encouraging higher capital inflows. Conversely, the parallel market exchange rate shows a negative and significant long-run effect on FPI, with a coefficient of -0.564 (p-value = 0.004). This implies that the greater the deviation of the parallel market exchange rate from the official rate, the more foreign portfolio investment declines. This result is consistent with studies by Reinhart and Rogoff (2004), who argue that multiple exchange rate regimes introduce currency risk and distortions that deter foreign investors. The negative relationship underscores the importance of exchange rate unification in mitigating the arbitrage opportunities and uncertainties that emerge in dual-rate systems, which in turn hinder FPI.

Inflation also shows a significant negative long-run effect on FPI, with a coefficient of -0.278 (p-value = 0.008). High inflation erodes the purchasing power of returns on investment and increases the risk premium demanded by foreign investors (Ozturk, 2018). This result is in line with the theoretical expectation that macroeconomic instability, reflected through high inflation, diminishes investor confidence, particularly in countries with multiple exchange

rates, where inflationary pressures are often exacerbated by currency misalignments. Interest rates, on the other hand, have a positive and significant long-run relationship with FPI, with a coefficient of 0.346 (p-value = 0.003). This finding indicates that higher interest rates attract foreign investors seeking higher returns, provided that the exchange rate risk is manageable. This result corroborates the portfolio balance theory, which suggests that foreign investors allocate their capital based on the expected return-risk trade-off. When exchange rates are unified and stable, higher interest rates are more effective in attracting FPI, as foreign investors are not deterred by exchange rate volatility (Branson, 1974). GDP, representing overall economic performance, also has a significant positive effect on FPI, with a coefficient of 0.521 (p-value = 0.011). This finding aligns with the literature that suggests that stronger economic growth signals a healthier investment climate, thus encouraging more foreign capital inflows (IMF, 2021). A unified exchange rate system that supports macroeconomic stability is likely to enhance the confidence of foreign investors in the long-term growth prospects of the economy, further boosting FPI.

Furthermore, in the short run the official exchange rate continues to have a positive impact on FPI, but the effect is smaller (coefficient = 0.156, p-value = 0.012). This suggests that in the short term, currency appreciation in the official market leads to moderate increases in FPI, reflecting the gradual nature of capital allocation

decisions by foreign investors. Similarly, the negative short-run effect of the parallel market exchange rate remains significant, with a coefficient of -0.232 (p-value = 0.004), indicating that exchange rate misalignments continue to deter foreign investment, even in the short term. The error correction term (ECM), which measures the speed of adjustment towards long-run equilibrium, is significant and negative (-0.703, p-value = 0.001). This result confirms the existence of a long-run relationship between the variables and indicates that about 70.3% of the short-term disequilibrium is corrected each year, meaning the system returns relatively quickly to long-run equilibrium after a shock. The significance of the ECM term further validates the robustness of the ARDL model in capturing the adjustment process between exchange rate unification and FPI.

5.0 Conclusion

This study investigates the relationship between foreign exchange rate unification and foreign portfolio investment (FPI) inflows in Nigeria, covering the period from 2014 to 2024. The results indicate that a unified official exchange rate positively impacts FPI, while discrepancies between the official and parallel market rates significantly deter foreign investment. Macroeconomic factors such as inflation, interest rates, and GDP also influence FPI. Higher inflation negatively affects investment inflows, whereas higher interest rates and GDP growth foster increased foreign investment. The speed of adjustment towards equilibrium, indicated by the

significant error correction term, highlights that exchange rate unification contributes to quicker recovery from short-term shocks.

Overall, the findings emphasize the critical role of a unified and stable exchange rate in creating a conducive environment for foreign portfolio investment. Consistency in the exchange rate, combined with macroeconomic stability, strengthens investor confidence and encourages capital inflows into Nigeria.

6.0 Recommendations

1. Promote Exchange Rate Stability: The government and the Central Bank of Nigeria should prioritize exchange rate unification to reduce arbitrage opportunities between the official and parallel markets. This will help mitigate currency risks and uncertainties that deter foreign portfolio investment.

2. Strengthen Macroeconomic Fundamentals: Efforts to control inflation should be intensified to preserve investor confidence. Inflation-targeting policies, including prudent fiscal management and effective monetary policy, will help maintain a stable economic environment conducive to FPI.

3. Attractive Interest Rates: While maintaining a balance between growth and inflation, policy-makers should continue to offer competitive interest rates that attract foreign investors seeking higher returns without exacerbating exchange rate volatility.

4. Enhance Economic Growth: Policies that foster sustainable economic growth should be implemented, as a stronger GDP enhances the

attractiveness of Nigeria as a foreign investment destination. Investing in infrastructure, technology, and education can further strengthen long-term growth prospects.

5. Monitor and Regulate the Parallel Market: To minimise the impact of the parallel exchange rate market, stronger regulatory oversight is needed. Measures to limit the divergence between the official and parallel market rates will create a

more predictable and stable exchange rate regime, which is crucial for attracting FPI.

6. Continued Research and Policy Evaluation: Continuous monitoring of the foreign exchange rate system and its impact on investment flows is necessary. Regular evaluation of policies related to exchange rate management will help identify areas for improvement and adapt to changing global economic conditions.

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Effects of Dynamic Capability on SMEs Performance in Kano State

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ABSTRACT

Dynamic capabilities are primary drivers of a firm's performance and thus of key interest to managers. Yet the way in which dynamic capabilities secure the competitive advantage for SMEs has received little empirical attention. This study set out to uncover the influence of dynamic capabilities on the SMEs performance in Kano, Nigeria. One hundred and thirty two copies of questionnaire were distributed to various SMEs in Kano and only One hundred and twenty one questionnaires were fully retrieved. Participants filled out a questionnaire, which was then analyzed using multiple linear regressions. As a consequence of the study, SMEs performance was positively impacted by managing threat and reconfiguration capabilities while sensing and seizing capabilities does not significantly affects firm performance. This led to the conclusion that the SMEs in Kano have a defensive strategy to tackle most of the threats that may affects the smooth operations of their business and also the study recommended that SMEs should continue to cultivate these capabilities in other to improve on their operational performance.

Keywords. Dynamic Capability, SMEs Performance, Seizing Capability, Reconfiguration Capability, Sensing Capability

Introduction

SMEs are integral part of the private sector world-wide; hence their performance becomes attractive to academics and practitioners in the field of management. Sustainable development of developing countries like Nigeria depends largely on the performance of their indigenous micro, small and medium scale enterprises (Suleiman, Aliyu & Bello, 2021), they play a vital role by providing employment delivering, social service delivery and also helps in the development of country's economy through employments generation and boosting export (Hong & Lu, 2016).

Firm performance is the extent to which the firm attains financial efficiency in terms of future

expectations on return on production investment, return on marketing investment and increase in sales (Suleiman, Aliyu & Bello, 2021). It is also a factor that is used to measure how the strategy set by the firm as a product market achievement where each company has an interest in knowing the market performance of its products (Frisch & Schroeter, 2011). SMEs represent key economic ingredients for development of most developing countries, they are considered to be the engine determinant of economic, social and political development (Taouab 2019)

SMEs performance is basically the same as organizational performance because SMEs are a type of small and medium business, and hence the

development of SMEs and their performance reflects the firm growth and the capability which reflects the outcome over time and the development of capability from a complex blend of networks, knowledge and innovation (Ojotu et al., 2019), also the result made by management efforts continuously and the intended outcome is an important indication of firms commitment towards achieving business performance, because the reflection of companies commitment during a certain period of time especially base on operational activities in optimizing its resources is related to the ability to achieve a firm performance. Firm performance has become a relevant concept in strategic management research and is frequently used as a dependent variable According to (Karabag & Berggren, 2014), firm resources and strategy are the key determinants of firm performance, strategies such as differentiation, low-cost, or focus constitute factors that influencing firm performance.

Bourguignon (1997) argues that performance should be viewed as an activity with a certain "behavior" (under a dynamic perspective, meaning "to perform") rather than merely as a "result" (under a static perspective). Accordingly, the firm's primary focus was on how successfully businesses could utilize the resources at their disposal to accomplish goals that aligned with the company's stated objectives while also taking into account the relevance of those goals to their consumers (Peterson, Gijbers, & Wilks, 2003).

However, dynamic capacity is intended for multiple purposes, such as resource integration,

reconfiguration, development of new resources, or resource shedding, according to Ambrosini and Bowman (2009). According to Susanti & Mba (2015), the goal of the dynamic capabilities approach is to help businesses understand how and why certain businesses develop a competitive advantage in quickly changing environments; it also shows how well a business can adapt to environmental changes. As a result, businesses need to be able to respond to changes that arise outside of their organizational boundaries (Susanti & Mba. 2015). For this reason, it's critical to repurpose current resources into new functional competencies that are more appropriate for the business environment.

SMEs are generally considered as the engine of economic growth as a result of their immense contribution towards employment generation, poverty reduction, export earnings and gross domestic product (Suleiman, Aliyu & Bello, 2021)). In Nigeria, it is quite obvious that micro, small, and medium-sized businesses might be a driving force behind the country's economic change, as a result of the sector's significant contributions to the GDP, creation of jobs, exports, growth in local value addition, and technical innovation. The dynamic character of the industry also leaves it susceptible to a high death rate brought on by abrupt changes in economic policy, worldwide trends, global shocks in international marketplaces, and several unanticipated circumstances. Other than that, they faced numerous problems. Low managerial, technical, and entrepreneurial capacities and

abilities, as well as unreliable infrastructure, a hostile business environment, poor service delivery, a heavy regulatory burden, the prevalence of the informal sector, and low international competitiveness, are all identified by (SMEDAN 2023) as factors impeding the growth of SMEs in Nigeria. Similarly, NBS and SMEDAN (2023) report that the number of micro, small, and medium-sized enterprises (MSMEs) in Nigeria fell to 39.6 million from 41.5 million in the year before 2019. This shows that throughout the period, MSMEs in Nigeria decreased by 4.6%. According to the research, around two million MSMEs shuttered their doors between 2019 and 2021. Therefore it is against this background that this study investigates the effects of dynamic capability on SMEs performance in Nigeria.

Research Objectives

The main objective of this study is to investigate the effects of Dynamic capability on SMEs performance in Kano, other specific objectives include.

- i) To examine the effects of sensing capability on SMEs performance in Kano
- ii) To determine the effects of seizing capability on SMEs performance in Kano
- iii) To identify the effects of Recon-figuration capability on SMEs Performance in Kano.

Research hypotheses

Hp 1 There is significant relationship between sensing capability and SMEs performance

Hp 2 There is significant relationship between seizing capability and SMEs performance

Hp3 There is significant relationship between reconfiguration capability and SMEs performance.

2.0 Literature Review

2.1 Concept of Firm Performance

Firm performance is a very used and dynamic concept which expresses the accomplishment of firm activities from a task associated with efficiency and effectiveness; Ali (2003) defined organizational performance as the actual output or results of an organization as measured against its proposed goals and aims. Carroll (2004) also view firm performance in terms of profitability market value, total return on shareholders, economic value added customer satisfaction, based on stakeholders expectations therefore measuring firm performance using financial analysis has been the traditional tool for investors, decision makers, creditors and other stakeholder as many scholars consider financial performance as same with firm performance (Delen, Kuzey and Uyar, 2013). But however, the concept of performance of a business firm is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of achieving a shared purpose (Alchian & Demsetz, 1972, Mata 1995) hence business can measure its performance both with financial and non-financial measures

The more general notion of organizational effectiveness is not the same as the concept of company performance. The largest of the three overlapping concentric circles, which represents

organizational success, is part of the broader construct, according to Venkatraman, & Ramanujam, (1986). According to Cameron (1986a), organizational efficiency encompasses all facets of how an organization operates. Operating and financial results are covered by business performance, often known as firm performance, which is a subset of organizational effectiveness. It is possible to better understand operational performance as an antecedent to financial performance, mitigating the effect of resources, as stated by Venkatraman, & Ramanujam, (1986). Although it might be a precondition for financial success, isn't customer pleasure also a performance result in and of itself? This is dependent upon the definition of company performance used by the researcher in their research (Combs, J. G., et al., 2005). Distinguishing between antecedents and performance outcomes is made easier by characterizing performance as the satisfaction of stakeholders (Connolly et al., 1980; Keats 1988; Zammuto, 1984). From the standpoint of the customer, a stakeholder, customer pleasure is evidently an outcome in this instance and is thus integrated into business performance.

2.2.1 Dynamic capability

Many strategy scholars remain skeptical about the value of the concept of dynamic capabilities (Winter 2003), Dynamic capabilities typically involve long-term commitments to specialized resources, Cyert and March, (1963) view dynamic capability as absorptive capability, Cohen and Levinthal, (1989) as organizational

routine, the concept emerged as a complement to RBV which attempt to explain firms competitiveness and performance in a dynamic business environment (Albasri, 2020). Thus, the dynamic capabilities view is considered for some scholars as an extension of the RBV in order to understand strategic change (Teece et al., 1997) by looking at how capabilities are influenced by market dynamism (Eisenhardt and Martin, 2000) or increasingly demanding environments (Teece et al., 1997). (Nimfa et al., 2021) in their study asserted that dynamic capability explains the relationship of innovation competitive advantage's two components (customer preference and strategic business model) with product quality, while technology adoption is considered a core dynamic capability needed by SMEs to sustain growth in the competitive business environment.

In the same vein, dynamic capabilities are complex systems of actions and resources which are directed at renewing, updating, modifying, or replacing the existing rent-yielding resources and capabilities of the firm, typically in response to a changing environment, therefore because of these growing changes in business, SMEs need dynamic capabilities to enable them to sense and seize new opportunities and renew the existing market base they also have to adapt quickly to competition and new challenges through continuous renewal of their competence (Bii & Onyango, 2018). Also one of the most obvious sources of complexity in empirical articles on DCs is the conceptual breadth adopted, and the

methods of measuring them, Garrido et al., (2020) explore a measurement model for dynamic capability and its relationship with firm performance. The underlying foundation of the model is the relationship between DCs and OP. Many studies as, , Schilke (2014), Teece (2007), and Wang and Ahmed (2007), among others have proposed and confirmed this relationship. However, the model presented by Garrido et al., (2020) is different from previous empirical studies and is a positive evolution in relation to them because of two central elements. The first of these elements is the scale designed specifically to measure DCs, created using the basic framework defined by Teece (2007) and supplemented with aspects from other studies. The secondly the proposal acknowledges the full complexity of the concept of DCs and breaks down measurement of it into its distinct dimensions of “Sense”, “Seize”, and “Managing Threat and Recognition” (Teece, 2007). These dimensions are important, because each of these capabilities has different concepts and functions and even though they are all components of DCs, they may have different relationships with OP or have different roles to play in achieving it.

2.2.2 Sensing Capability

Sensing capability, which has to do with scanning, creating, learning, and understanding actions, is the firm's capacity to detect opportunities and risks. Organizations could sense the opportunities and challenges from both the inside and the outside by focusing on the increasingly complex internal and external

business environment through observation and information gathering. For businesses to learn, observe, filter, shape, and calibrate prospects, sensing capabilities are frequently analytical systems (Xiao, et al 2023). Considerable amount of research has been carried out on the relationship between sensing capability and SMEs performance, studies such as Lindblom, et al (2008) studied market-sensing capability and business Performance of retail entrepreneurs, the result of the study show that a weak positive relationship is found to exist between market-sensing capability and company growth. However, no positive relationship is found between market-sensing capability and profitability. Similarly, (Nedzinskas et al., 2013) also study the relationship between dynamic capability and SMEs performance of and sensing capability as one of the dimension of dynamic capability under study, the result shows a positive relationship with non-financial performance of an organization. Also (Ardyan, 2016) studied market sensing capability and SMEs performance: The mediating role of product innovativeness success, the result of this study shows that entrepreneurial orientation and product innovativeness have positive and significant effect on SMEs performance but market sensing capability and speed to market have no significant effect. Zhou et al., (2017) examine the relationship between dynamic capability and organizational performance with innovation as a mediator, sensing capability was also adopted as one of the measures of dynamic

capability in the study the result of the study shows a positive and significant relation between sensing capability and organizational performance.

2.2.3 Seizing Capability

The ability of an organization to take advantage of opportunities or counter dangers is known as its "seizing capability." Teece (2007) noted that firms have to adapt by launching new goods, procedures, or services in response to perceived threats or new opportunities. However, reaching an agreement, choosing wisely, and allocating organizational resources are also sensible ways to take advantage of possibilities. The business process patterns of the corporation could be completely planned through the use of this capability. Studies on seizing capability and firm performance has been giving attention in the literature, Min & Kim, (2021) studied the effect of opportunity seizing capability on new market development and small and medium-sized enterprise performance: role of environmental uncertainty in the IT industry, the result form the study indicate that indicate that new market development is an important link between a firm's opportunity seizing Capability and relative performance. Similarly Xiao, (2023) study the how digital transformation improve government performance: The mediating role of partnering agility, seizing capability was measured as one of the study variable, the result of the study indicates a positive and significant relationship between seizing capability and government performance. More so, Houessou et al., (2023) also investigate

market opportunities seizing capability and fish farming firm performance: A dynamic managerial capability perspective the results of from reveal that owner-managers' DMCs (dynamic Management capability) including business ties (BTs), political ties (PTs), and managerial cognition (MC) demonstrate a significant effect at improving performance.

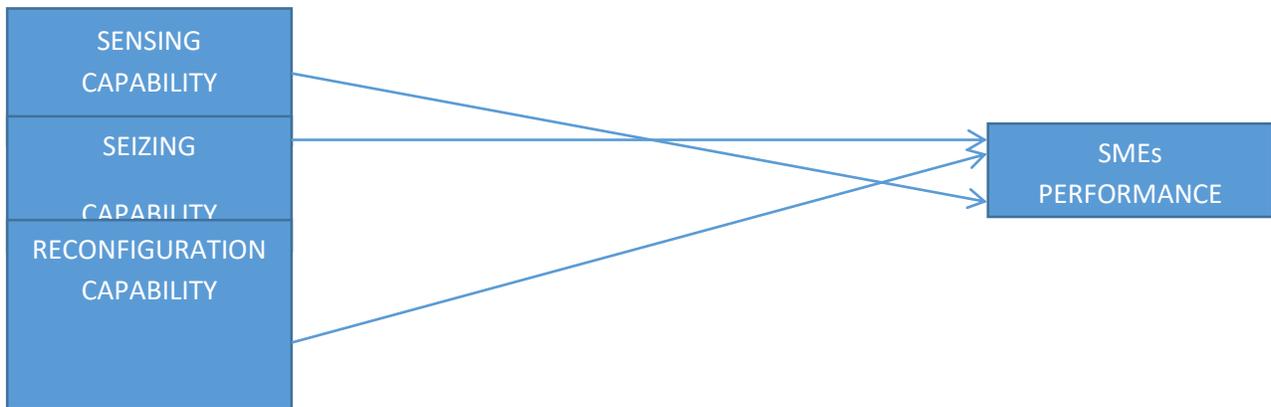
2.2.3 Reconfiguration Capability

Managing threat and reconfiguring capability is when opportunities are perceived and captured then the company reconfigures resources to adjust changes and opportunities in the corporate environment. According to Fitriati et al., (2020) firms ability to be able to survive and compete in markets that have rapid dynamic change, hence In order to sustain profitable growth, it is important for a company to recombine and to reconfigure assets and organizational structures when markets and technologies change. The relationship between managing threat and reconfiguration capability and SMEs performance has been giving attention in the literature; considerable amount of research has been carried out on the relationship between managing threat and reconfiguration capability. Nyachanchu, (2017) studied the role of dynamic capabilities in the performance of manufacturing firms in Nairobi county, Kenya, the study uses reconfiguration capability as one of the measure of dynamic capability, the result of the study indicate that all the three dimensions of the dynamic capability (sensing capability, seizing capability and reconfiguration capability have a

significant and positive effect on performance. Similarly, Xiao (2023) investigate how digital transformation improve government performance: with partnering agility as a mediator, the result of the study shows that transformation capability and partnering agility have significant positive effects on government performance. In the same vein Zhou et al (2017)

examine the dynamic capabilities and organizational performance: the mediating role of innovation in china, the result from the partial least square equation modeling reveals that the direct relationships between two dimensions (sensing and reconfiguration) and company performance were significant.

**The Conceptual Model
Dynamic Capability**



Methodology

Cross-sectional survey design was used in this investigation, to achieve the research aims. A cross-sectional study collects data for a specific study at a single point in time (Cavanna et al., 2001). The most popular kind of survey is the cross-sectional survey, which takes a more quantitative rather than qualitative approach. It offers a methodical approach to data collection that enables the methodical comparison of variables with one another (Sullivan 2004). In order to get quantitative and quantifiable data in relation to one or more variables that will be examined. The population of the study comprises of all the SMEs within Kano state. As at the time

of collecting the data for this research, there is no actual figure of the total number of SMEs in Kano state, however, SMEDAN in collaboration with NBS report 2021 estimated the number to stand at approximately 1.6 million SMEs in Kano. Thus 384 SMEs were sampled base on Krejcie and Morgan (1970) sampling table, and a convenient sample technique was used, Out of the 384 copies of questionnaire that were distributed only one hundred and twenty one (121) were fully retrieved and were used for data analysis. Multiple linear regression was used to analyzed the data. The unit of analysis for this study is the

organization, and the owner/managers of SMEs in Kano State.

Result and Discussion

Data Cleaning

Before beginning any multivariate analysis, data must be cleaned. This is because data screening and editing determine both the analysis's quality and its meaningfulness (Pallant, 2011). Outliers and missing data were therefore carefully examined and handled.

Missing Values

The lack of appropriate values for one or more variables during data analysis is referred to as missing value (Hair, Black, Babin & Anderson, 2010). The researcher attempted to reduce or ensure that the data is free from any missing value right from the field in light of the detrimental effects of missing data in the analysis. The researcher and his assistance promptly reviewed all properly filled questionnaires to make sure all questions were answered correctly. Respondents are promptly reminded to politely and appropriately finish the inquiry if they are unable

to answer a particular question; therefore no missing value was detected at the time of the data analysis.

Outlier Detections

A total of 5 cases of multivariate outliers were recorded. In addition, Mahalanobis distance was examined to identify multivariate outliers. All cases with Mahalanobis distance exceeding 30 at a degree of freedom of 0.001 are removed. Because they exceeded the crucial value of 59.70, cases 113, 105, 114, 82, and 56 were eliminated. For further multivariate analysis, the 116 cases that remained were taken into account.

Assumptions of Multiple Regression Analysis

In accordance with the advice of Hair et al. (2010) and Palalllant (2001), the variables were examined for normality, linearity, multicollinearity, and homoscedasticity to ensure that they satisfied the fundamental and underlying assumptions of the multiple regression analysis. As a result, all of the multiple regression analysis's assumptions were satisfied

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	10.210	2.089		4.888	.000
	_RECONF	1.100	.088	.776	12.519	.000
	SEIZE	.078	.105	.060	.748	.456
	SENSE	.122	.157	.063	.776	.439
		Change Statistics				
R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
.845 ^a	.715	.707	5.22675	.715	89.330	3

Dependent Variable: FIRM_PERF

Multiple Regression Analysis

Multiple regression analysis was conducted in determining the relationship between (dynamic capability) sense, seize and managing threats and reconfiguration and firm performance. The results as indicated in table above table with predictors that were significant, $R = .842$, $R^2 = .715$, $\text{Adj. } R^2 = .707$, $F - \text{Change} = 89.330$. The multiple correlation coefficients between the predictors and the criterion variable was .845; the predictor accounted for 71.5% of the variance in the firm performance. Cohen (1988) classified R^2 into three as: a) 0.02 as weak; 2) 0.13 as moderate; 3) 0.26 as substantial. Based on the Cohen and Cohen (1983) and Cohen (1988) classifications the value of R^2 is ok. The generalizability of this model in the population was 715. The significant F-test shows that the relationship (89.330 , $p < 0.001$) signifies the overall significant prediction of independent variables to the dependent variable, but did not explain the relative contribution of each independent variable to the dependent variable (Green & Salkind, 2008).

However, hypothesis one which states that there is significant relationship between sensing capability and SMEs performance in Kano was tested with a ($\beta = .063$, $t = .776$, $p < .439$), this hypotheses is therefore rejected because the p value recorded a significant level of $p < .439$, hence this hypotheses was not supported base on the regression analysis and this shows that sensing capability is not related to performance of

SMEs in Kano. Secondly, hypothesis two also which states that there is significant relationship between seizing capability and SMEs performance in Kano was tested with ($\beta = .060$, $t = .748$, $p < .456$), this hypothesis is also not supported base on the regression analysis as the p value recorded a significant level of $p < .456$ this indicates that seizing capability is not significantly related to performance of SMEs in Kano, thus this hypothesis is also rejected. Lastly, hypothesis three which states that there is significant relationship between reconfiguration capability and SMEs performance in Kano state was tested using a regression analysis with a ($\beta = .776$, $t = 12.519$, $p < .000$). This indicates that, reconfiguration capability significantly influence SMEs performance in Kano state, as the p value recorded $p < .000$ which significantly shows strong relationship between the reconfiguration capability and SMEs performance in Kano. Thus one out of three independent variables impacted on the directional hypothesis. Therefore, hypothesis H1 and H2 are rejected, whereas H3 is supported.

Summary of Findings

This session summarizes the findings and interpretation of the empirical result for the study, conclusion and recommendation were drawn. Appropriate data collection process were followed for data collection, an acceptable response rate of 121 was obtained for data analysis. All the assumption of multiple regression analysis conducted was found to be

satisfactory and none of the condition was violated. Construct reliability was conducted for the variable and Cronbach alpha values were found to be good.

More importantly, multiple regression analysis of the construct was conducted, and it was found that sensing capability and seizing capability have no significant relationship with SMEs performance, but managing threat and reconfiguration capability has positive and significant effect on SMEs performance in Kano

Conclusion and Recommendations

This research is an attempt to investigate the relationship between dynamic capability on SMEs performance in Kano, the result from the multiple regression analysis reveals that only managing threat and reconfiguration among the dimensions of dynamic capability has significant and positive effects on SMEs performance in Kano. However sensing capability and seizing capability has no positive effects on SMEs performance in Kano. With regards to the managing threats and reconfiguration capabilities it is interesting to note that the SMEs in Kano

have a defensive strategy to tackle most of the threats that may affects the smooth operations of their business, hence it is therefore recommended that these firms should continue to cultivate these capability in other to improve on their operational performance.

However with regards to sensing capabilities, indicates that these firms under study lack much needed cordial relationship with their business stakeholders, as such it is therefore recommended that these firms should cultivate this relationship in order to develop better and more structured routines to scan the landscape and avoid falling behind. Also as regards to the seizing capabilities, the SMEs in Kano lack the capability to focus on management and on functional activities; invest in technology and design to reach a target market; therefore it is recommended that the SMEs should create, adapt, improve and, if necessary, substitute business models; acquire technologies externally and develop them internally and also perfect absorptive capacity through learning activities and accumulation of skills.

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