Gusau International Journal of Management and Social Sciences (GIJMSS)

Volume 7, No.3

October, 2024

© Gusau International Journal of Management and Social Sciences, 2024

ISSN (Print): 2735-9026
ISSN (Online): 2787-0383

All Rights Reserved
Apart from any fair dealing for the purpose of research, private study, criticism or review, as permitted under the Copyright, Designs and Patents Act of Nigeria, this publication may not be reproduced, stored in any form, or by means, except with the prior permission in writing of the Faculty of Management and Social Sciences, Federal University Gusau or in the case of reprographic reproduction, in accordance with the terms of licenses issued by the Copyright Licensing Agency; enquires concerning reproduction outside those terms should be sent to the following address:

Published by:
Faculty of Management and Social Sciences
Federal University Gusau
P.M.B. 1001
Gusau, Zamfara State
Nigeria
Email: gusauijmss@gmail.com, gjmss@fugusau.edu.ng
Journal Website: www.gijmss.com.ng
AJOL Website: https://www.ajol.info/index.php/gijmss

Printed by:
Ahmadu Bello University Press Limited, Zaria,
Kaduna State, Nigeria.
Tel.: 08065949711.
E-mail: abupress@abu.edu.ng
info@abupress.com.ng
abupress2013@gmail.com
Website: www.abupress.com.ng

ABOUT THE JOURNAL

Gusau International Journal of Management and Social sciences (GIJMSS) is a biannual (October and April) academic journal published by the Faculty of Management and Social Sciences, Federal University Gusau. The Journal welcomes contributions from the diverse fields of management and social sciences. The mission of the journal is to publish high quality papers from all over the world and make GIJMSS a high ranked journal.

GIJMSS adheres to a rigorous double-blind reviewing policy and all submissions are evaluated initially by the editorial Board and only those papers that meet the scientific and editorial standards of the journal, and fit within its aims and scope will be subjected to blind review. The Editorial Board reserves the right to modify for clarity papers adjudged acceptable for publication. Manuscripts subjected to rigorous blind peers review, and those that are accepted are published in the following issue of the journal.

Guidelines for Submission

- Contributions should be in English only.
- Manuscripts should be prepared according to American Psychological Association (APA) 7th Edition, Referencing style
- The manuscript must be typed using double space on A4 size sheets
- Manuscript should not exceed 15 pages in length
- Only original manuscripts, written in English language, are considered. In a covering letter, the author(s) should state that the manuscript is not being simultaneously submitted elsewhere and that the findings reported in the manuscript have not been published previously
- Submitted manuscripts will be subjected to plagiarism checks by the Editorial Board, and those found to be above 25% plagiarism level will not be considered for blind review and will be returned to the contributors
- Abstract should be between 100-200 words typed on a separate page
- There should be Keywords of at least five to six under the abstract
- Articles accepted become the copyright of Gusau International Journal of Management and Social Sciences
- Authors however, will be held responsible in case, copyright of others are violated
- Electronic copy of the manuscripts (in MS Word) should be submitted as an attachment to the email address: GUSAUIJMSS@gmail.com and copy to GJMSS@fugusau.edu.ng

- ❖ Manuscripts must be accompanied with a non-refundable assessment fee of ₦ 5,000. Upon acceptance, a publication fee of ₦ 30,000 is expected. Payments are to be made to:

Account Name: **Gusau International Journal of Management and Social Sciences**
Account Number: **0065189903**
BANK: **Sterling Bank**

EDITORIAL BOARD

Dr. Bashir Umar Faruk: Editor-in-Chief
Department of Economics, Federal University Gusau, Zamfara State, Nigeria

Prof. Dejo Abdulrahman: Member
Department of Sociology, Usmanu Danfodio University, Sokoto, Nigeria

Prof. Nasiru M. Yauri: Member
Department of Business Administration, Usmanu Danfodiyo University, Sokoto, Nigeria

Prof. Yahaya A. Zakari: Member
Department of Economics, Usmanu Danfodio University, Sokoto, Nigeria

Prof. Garba B. Muhammad: Member
Department of Political Science, Usmanu Danfodio University, Sokoto, Nigeria

Prof. B. B. Kasim: Member
Department of Public Administration, Usmanu Danfodio University, Sokoto, Nigeria

Prof. Musa Yelwa Abubakar: Member
Department of Accounting, Usmanu Danfodio University, Sokoto, Nigeria

Prof. Femi Rufus Tinuola: Member
Department of Sociology, Federal University Gusau, Zamfara State, Nigeria

Prof. Bawa Ahmed Abdul-Qadir: Member
Department of Business Administration, Federal University Gusau, Zamfara State, Nigeria

Dr. Yusuf Alhaji Hashim: Business Editor
Department of Business Administration, Federal University Gusau, Zamfara State, Nigeria

EDITORIAL ADVISORY BOARD

Prof. R. Ayo Dunmoye
Department of Political Science, Federal University Gusau, Zamfara-Nigeria

Prof. Jimi O. Adesina
Archie Mafeje Research Institute, College of Graduate Studies, University of South Africa

Prof. K. Awotokun
Department of Public Administration, University of Ife

Prof. Ahmad Martahda Muhammad
School of Government, College of Law, Government and International Studies, Universite of Utara Malaysia

Prof. R. Onah
Department of Public Administration and Local Government, University of Nigeria Nsukka

Prof. Tukur Garba
Department of Economics, Usmanu Danfodio University Sokoto

Prof. Yusuf Adamu
Department of Geography, Bayero University, Kano, Nigeria

Associate Prof. Muhammad Imdadul Haque
Department of Economics, Aligarth Muslim University, India

CONTENTS

Effect of Green Accounting on Organizational Financial Performances of Listed Companies in Nigeria 1
Olayemi O. AYOOLA-AKINJOBI

Firm Specific Dimensions and Stock Price of Listed Financial Service Firms in Nigeria 20
Ibrahim, L., Okpananchi, J., Agbi E. Samuel & Lateef O. Mustapha

Effects of Survival Strategies on the Success of Entrepreneurial Activities amid Banditry and Kidnapping in Gusau Metropolis, Zamfara State 47
Mulikat FolaShade Usman[1] and Lubabatu Musa Anka[2]

Service Provider Empathy and Responsiveness for Customer Satisfaction in the Telecommunications Sector 62
[1]Adedoyin, S.A. Ph.D & [2]Igbinedion Airenvbahahie

Usage Occasions on Customer Patronage among Fashion Firms in Port Harcourt 83
[1]Chukwu Godswill Chinedu, [2]Newman Godwill Evans & [3]Ikalama Awongo Theophilus

Assessing the Drivers and Inhibitors of Entrepreneurial Growth in North Western Nigeria: A Study of Zamfara Metropolis 109
Mulikat FolaShade Usman[1] and Lubabatu Musa Anka[2]

Absorptive Capacity and Organisational Performance: An Empirical Study of a Public Organisation in Delta State, Nigeria 125
Uzoma Heman Ononye Ph.D.

Effect of Health Expenditure on Health Outcomes in Sub-Saharan 152
[1]Ahmed Abdulraheem Adebowale, and [2]Idowu Daniel Onisanwa

Salient Foreign Policy implications of Nigeria's Role in Regional Integration and Peacekeeping in Africa 176
Ejiroghene Augustine OGHUVBU

Niger Delta Women Adaptive Measures against Oil Spillage: Interventions & Effectiveness 192
Victoria N. Azu Ph.D

Outcomes of Teenage Pregnancy in Selected Rural Communities of Akwa Ibom State 214
[1]ESSET, Dorcas Mark & ABRAHAM, Ubong Evans Ph.D

A Conceptual Review of the Knowledge and Perceptions of Female Secondary School Students towards Obstetric Fistula in Nigeria 237
Idayat Bolanle Oluwafemi & Ahmad Kainuwa, Ph.D

Effects of Non-Verbal Communication in Apparels: Opinion Survey of Adult Public Perception of the Secret Language of Jeans in Asaba Urban Delta, Nigeria 256
J. N. Odedede

A Review of Climate Change, Fodder Degradation and Access Deprivation as Drivers of Farmer - Herders' Conflict, Unsustainable Livestock Production and Insecurity in North-Western Nigeria 272
[1]Rabi'u Tukur, [2]Ismail Muhammed, [1]Mohammed Mohammed Sani and [1]Ali Danladi Abdulkadir

The Impact of Digital Banking on Financial Inclusion in Nigeria (2000-2022) 295
[1]OLUSANYA, Samuel Olumuyiwa & [2]EUCHARIA Chibuzo Ume

Effect of Green Accounting on Organizational Financial Performances of Listed Companies in Nigeria

Olayemi O. AYOOLA-AKINJOBI
Department of Accounting, College of Management Sciences, Joseph Ayo Babalola University, Ikeji-arakeji Osun state. Nigeria
Email: ooayoola-akinjobi@jabu.edu.ng
DOI: https://doi.org/10.57233/gijmss.v7i3.01

Abstract

Businesses depend on the environment to function and prosper economically. The growth in industrialization has resulted in environmental pollution and increased land use that harmed the natural environment, leading to extinction of some animals and plants. The environmental impact of the organizations made various stakeholders to canvass for green accounting. This study aimed at examined the effect of green accounting on financial performances of listed companies in Nigeria Group exchange (NXG) between the period 2013-2023 using expo facto research design. Secondary data of the selected organization were downloaded from the NXG websites. The dependent variable was financial performances proxy with earnings per share, while independent variable was green accounting. Using robust regression analysis, the study discovered that green accounting had negative and significant effect on earnings per share; implying that ₦1 increase in green accounting would reduce earnings per share by ₦36. Green accounting also had positive and significant impact on return on equity. This implied that organization expenses on protecting the environment increased which had short time negative effect on the earnings per share, but in the long run increase return on equity. The study recommended that companies should conduct environmental audits on a regular basis to evaluate their compliance with regulations, this would reduce the avoidable cost like compliance cost, restoration cost and it would improve earnings per share.

Keywords: Green accounting, financial performances, Earnings per share, Sustainability cost, restoration cost

1.0 Introduction

Firms are becoming increasingly interested in environmental accountability issues due to pressure from stakeholders like financial institutions, the government, socially conscious investors, and community lobby groups (Shektar, 2018). By disclosing green information, a corporation meets the information demands of its stakeholders and establishes a foundation for communication with them. Green reporting alters how the public perceives the business, assists important stakeholders in determining if the company is a good corporate citizen. Accounting for environmental costs enables businesses to accurately analyze the environmental impact of their operations. It reveals expenses that would have

been concealed under the traditional cost accounting methodology (Benlemlih, Shaukat, Qiu, & Trojanowski, 2016). Green accounting is, therefore, necessary in order to fully assess business performance and the development of shareholder value while integrating economic, environmental, and social concerns into corporate behavior in order to preserve resources for future generations.

The term "green accounting" was first used in the 1980s by Professor Peter Wood, an economist. Environmental accounting is another name for green accounting, other names for it include integrated accounting and resource accounting (Sadiku, 2021). It is a useful tool for balancing the benefits and drawbacks of activities in light of their potential effects on the environment.

Green accounting was developed as a way to gauge a level of income that may be retained without decreasing the supply of natural resources (Adula Harif & Natasha, 2024). Environmental accounting, according to Lawal (2016), involves making sure that corporate accounting systems and reporting are in agreement with the environmental costs that the organization is incurring.

It is vital to incorporate environmental costs into the accounting system in order to control and manage environmental costs as well as enhance the reporting entity's reputation. Iliemena (2020) states that disregarding environmental accounting regulations may lead to increased fines and penalties for environmental violations. It becomes clear that urgent attention is required to the problems of managing, restoring, and maximizing natural safety. To create, evaluate, and disseminate data on these crucial concerns and to act as a database for planning and making ecologically responsible decisions, an extensive overhaul of environmental accounting is required.

Organizations' careless actions toward the environment have had a negative influence, contributing to issues like global warming, climate change, natural disasters, water, air, and soil pollution (Utomo et al., 2020). Organizations frequently overlook the possibility that the actions they engaged in deplete natural resources and contaminate the environment (Varsha & Kalpaja, 2018). According to Porchelvi (2019), businesses are more focused on productive capital than the impact of production on the environment; which resulted in environmental problems like inadequate vegetation, land degradation, acid rain, water pollution, respiratory illnesses, airborne illnesses etc. (Odewole, 2017). Companies have faced pressure to cut pollution as a result of societal expectations and attitudes

that they should limit their own carbon emissions. Polluting firms occasionally resisted giving in to social, political, and governmental forces. Even when confronted with overwhelming proof to the contrary, a number of businesses have continued to deny guilt for pollution. Other businesses acknowledge their mistakes and promise to take decisive action, but they do nothing. Due to dearth of literature regarding environmental accounting practices and financial performances in developing countries especially in Nigeria; more studies are needed to establish the effect of green accounting practices on financial performances of organizations. This study aims at examining the effect of green accounting on organizational financial performances in Nigeria.

2.0 Literature review

2.1 Conceptual review

Organization performances

A company's ability to earn money and employ assets from its principal mode of business is measured subjectively by its financial performance. It serves as an overall gauge of a company's financial health over a specific time frame.

Earnings per share (EPS)

Earnings are superior global measure of firm periodic performance than other accounting data (Pawel, 2014). It can be used as a performance measure of the company's year-round financial health and to predict how the business will develop in the next months. When predicting future performances, financial analysts concentrate mostly on it. The accuracy of the EPS forecast is regarded to be a key aspect in market prediction since investors make important investment choices on EPS (Rajakumar & Shanthi, 2014).

The market price of a company's stock is frequently influenced by its earnings per share, but the relationship is rarely the other way around because a company's earnings per share is calculated by dividing its earnings by the total number of outstanding shares. A corporation with high earnings per share might see a rise in the price of its stock on the market; a higher stock price might make investors think favorably of the company's goods, leading to stronger demand, more sales, and eventually higher profitability. Poor earnings per share might also lead to lower stock prices, which would reduce customer confidence, lead to fewer sales, and eventually result in worse earnings per share, although these linkages are circular rather than linear (Islam, Khan, Obaidullah, & Alam, 2011).

Return on equity

This ratio measures the overall performance of an entity; it shows the earning power of investors' book value, often used in comparing two or more entities in an industry. A high return on equity is an indication that an entity accepts a strong investment opportunity and employs effective expense management. Return on equity is net profit after tax and preference dividend scaled by the number of shares.

Green accounting

Ilemona and Nwite (2020) define green accounting as a collection of strategies and guidelines used by the management of entities to give information about the physical flows, expenses, and anticipated benefits that drive the accomplishment of various environmental conservation activities. It includes the identification, measurement, and allocation of environmental costs, and the integration of these costs into a business, and encompasses how such information is communicated to the companies' stakeholders. In order to provide environmentally sound management and administrative systems, green accounting reveals the extent to which a business or organization has a positive or negative impact on the environment and quality of life; making the organization to showcase their corporate social responsibility, environmental cost reporting, and sustainable governance (Yeasin, 2021). Endiana (2020) posits that increased stakeholder trust leads to increased social trust and maximum business profitability. This study proxy green accounting with restoration cost, sustainability cost, compliance cost, and preservation cost.

Restoration costs

They are expenditures incurred in restoring a contaminated region to its pre-impact state. It is very crucial in determining how profitable a company is, especially in sectors where environmental effects are substantial. These expenses can affect profitability both immediately and over time and can also improve stakeholder relations and reduced regulatory risks.

Sustainability cost

Environmental sustainability costs are incurred to prevent the depletion of natural resources and the threat to the ability of future generations to achieve their basic requirements. Examples of such costs are expenditures incurred on converting warehouses, factories, and offices to renewable energy sources or reducing the usage of single-use plastics during production. Responsibly engaging with the

world is the practice of environmental sustainability. It aims to improve human well-being without placing an excessive burden on the planet's ecosystems that support life. It entails achieving equilibrium between the natural environment and consumerist human culture. Costs associated with environmental sustainability are centered on those expended to meet the needs of both present and future generations.

Compliance Cost

Environmental compliance cost is defined as any fee or expenditure of any kind required to make organizations conform to all current environmental laws. It refers to any significant out-of-pocket costs, fines, penalties, fees, or expenses incurred specifically to satisfy an Environmental Agency's requirement of compliance with all applicable local, state, and federal laws and regulations relating to the presence of any hazardous substances produced by the organizations.

Preservation costs

They are expenses incurred on reducing the impact of operations on the environment in order to preserve it. According to Martensson and Westerberg (2016), environmental issues such as pollution, spills, rising energy consumption, and greenhouse gas emissions have led many social and economic actors to believe that business operations are to blame for these situations. As a result, society is especially curious to know that organizations have substantial environmental preservation commitments. Making information on social and environmental impacts available to stakeholders is one strategy organizations have adopted to tackle this predicament and build a positive reputation. Expenditures associated with environmental protection can be incurred by businesses, governments, or individuals, and include costs associated with prevention, disposal, planning, control, shifting activities, and damage restoration.

2.2 Empirical review

Using an ex-post facto study approach, Egedegu, Ombu, and Etale (2024) examined the relationship between environmental accounting and the financial performance of Conoil in Nigeria. Regression analysis was used to extract secondary data from yearly reports that were obtained from the Nigerian Exchange Group (NXG) between 2008 and 2022. They found that the expenses associated with environmental restoration significantly reduce return on assets (ROA). Ahmed (2023) examined how the Baghdad Soft Drinks Company's

sustainable performance was impacted by the expense of green accounting. Using SPSS, the data from the 2022 financial statements was analyzed. The findings indicated a strong, positive, significant correlation and effect between the independent and dependent variables, and they suggested that the reports should disclose the social and environmental costs as well as the triple bottom line model's indicators separately in the reports and financial statements. Eze (2021) extracts data from the annual reports of 40 manufacturing businesses listed on the Nigerian Stock Exchange for the years 2010 to 2019 in order to investigate the impact of green accounting reporting on the financial performance of manufacturing enterprises in Nigeria using an ex post facto research approach. He employed the environmental disclosure index as the dependent variable and ROA, ROE, and share price as the independent variables. He found that the return on equity and return on assets were positively and considerably affected by green accounting disclosure.

Researchers Uniamikogbo and Ifeanyichukwu (2021) looked at the connection between the financial performance of forty Nigerian manufacturing companies and environmental accounting disclosure. The convenience sampling method was applied in conjunction with the secondary data source. The content analysis disclosure index and corporate annual reports for the 2010–2019 fiscal years were obtained from the sampled manufacturing businesses listed on the Nigerian Stock Exchange. Research using the panel data regression approach showed that the share price, return on equity, and return on asset of Nigerian industrial enterprises were significantly impacted by environmental accounting disclosures.

2.3 Theoretical framework

Legitimacy Theory

Legitimacy theory was originated by Lindbolm in 1994. According to him, it is a situation in which a corporation's values align with those of the broader social system of which it is a part. According to Juhmani (2014), legitimacy refers to the commonly accepted notion or assumption that an entity's actions are preferred, trustworthy, or appropriate within a certain socially created system of norms, values, and beliefs. In addition to making every effort to create harmony between the social principles associated with or implied by their operations and the conventions of proper conduct in the larger social system of which they are a part. Organizations always make sure that they function within the laws and standards of the communities in which they reside (Deegan, Rankin, & Voght, 2000). And

also made attempt to establish congruence between the social values associated with or implied by their activities and the norms of acceptable behavior in the larger social system of which they are part. The theory postulates that when organizational values and societal values are balanced, a social contract is created between the organization and the society.

When social expectations of an organization's behavior diverge from actual action, the legitimacy of the organization is always in jeopardy. If society is not satisfied that an organization is operating responsibly in a legal and acceptable manner, then the issue of legitimacy will arise and may occasionally result in the seizure of operations, which ultimately terminates the contract. This could have an impact on the future existence of the company (Deegan & Ranking, 1997). According to Ghazali (2007), the theory also lends credence to the notion that when a business has an adverse effect on the environment, the public may choose to denounce the enterprise as unfriendly to the environment, forgo buying its goods, or call for government intervention. In order to address this, the organization takes a number of actions, including speaking with the parties involved. Companies try to strike a balance between society ideals and corporate principles (Milne & Patten, 2002).

A drawback of the legitimacy theory is that it focuses more on the justifications for corporate information disclosure and pays less attention to the methods, justifications, and differences in environmental policies amongst organizations. Despite, the critics of this theory, it is sufficient for this study as underpinning theory because it serves as a useful tool for elucidating the motivations behind organizations' environmental reporting in Nigeria.

3.0 Methodology

Ex-post facto research methodology was used in this study since the data and the events being studied had already happened. This research targeted the manufacturing and oil and gas sectors that were listed on the Nigerian Exchange Group (NXG). The financial statements for the chosen listed firms on the Nigerian Exchange Group (NXG) that could be downloaded through their websites were the source of secondary data used in this study for the years 2013–2023. The dependent variable is organization financial performances proxy by earnings per share while the independent variable is green accounting proxy by sustainability cost, preservation cost, compliance cost while the control variable is firm size proxy by log of assets.

Table 1 Measurement of variables

Variables	**Proxy**
Dependent variable	
Financial performances	
Earnings per share	Profit after tax divided by the number of ordinary shareholders
Independent variables	
Environmental Restoration cost (restcost)	All costs incurred in restoring the environment to its previous state
Environmental sustainability cost (sustcost)	Total cost incurred on planting trees, and social responsibility costs
Environmental compliance cost (compcost)	All legal costs relating to environment
Environmental Preservation cost (prescost)	All costs incurred in preserving the environment
Control variable	
Firm size	Log of total assets

Model Specification

Y =f(X)

Y= financial performances= (EPS, ROE)

X= Green accounting= (restcost, sustcost, compcost, prescost)

Therefore,

$LogEPS_{it} = \alpha + \beta_1 logrestcost_{it} + \beta_2 logsustcost_{it} + \beta_3 logcompcost_{it}, + \beta_4 logprescost_{it} + \beta_5 logfirmsize_{it} + e_{it}$ ----------1

$LogROE_{it} = \alpha + \beta_1 logrestcost_{it} + \beta_2 logsustcost_{it} + \beta_3 logcompcost_{it}, + \beta_4 logprescost_{it} + \beta_5 logfirmsize_{it} + e_{it}$ ----------2

Where:

EPS= Earnings per share

ROE= Return on equity

Restcost = Restoration cost

Sustcost =sustainability cost

Compcost = Compliance cost

Prescost= Preservation cost

e_{it} = error term

α = Constant term

$\beta 1 - \beta 5$ = Parameters estimated

i = Firms t = Time periods

A-priori expectation

The a-priori expectation is that each model parameter is expected have positive effect on the dependent variables (financial performances). $\beta 1 ... \beta 5 > 0$ signifies that the presence of green accounting result in an increase in organization financial performance.

4.0 Result and Discussions

Table 2 Descriptive statistics

	ROE	EPS	COMPCOST	PRESCOST	RESTCOST	SUSTCOST	FIRMSIZE
Mean	1.2524	6.4393	2.3676	2.4066	2.5198	2.9334	3.6537
Median	0.2938	0.6500	2.3212	2.5114	2.4414	2.7599	3.7105
Maximum	12.0027	85.9000	3.6579	3.2949	3.8782	4.3967	4.396
Minimum	-4.0000	-84.8700	1.3495	0.6021	1.3495	1.7401	3.0154
Std. Dev.	1.5045	17.3978	0.4053	0.4905	0.5322	0.6825	0.3260
Skewness	1.4185	0.9693	1.1493	-0.8626	0.5012	0.3051	0.2789
Kurtosis	10.1262	10.6408	4.7887	3.9759	2.69752	2.1444	2.0506
Jarque-Bera	2206.158	2330.241	318.1164	147.3465	41.11771	41.41561	45.47911
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	1127.159	5795.285	2130.807	2165.963	2267.832	2640.028	3288.301
Sum Sq. Dev.	2035.024	272114.0	147.6689	216.3058	254.6386	418.7823	95.5421
Observations	900	900	900	900	900	900	900

Source: Author computation (2024)

In other to understand the effect of green accounting on financial performances of organization, table 2 showed the descriptive statistics for the variables used. Earnings per share (EPS) has a mean of 6.44, and median of 0.65 with standard deviation of 17.40 which shows a wide dispersion of variability from the mean, which suggest possibility of extreme value on the dataset; usage of robust regression analysis will eliminate the possibility of any outliner in the dataset. The maximum value was ₦85.9m and the minimum value -₦84.9m; this range signifies diverse performance outcomes among the sampled companies, reflecting potential impacts of green accounting on financial performances. The Skewness

was 0.96 and Kurtosis of 10.64. The kurtosis was 10.64 showing the distribution is peaked or leptokurtic relative to the normal and skewness is 0.97 implies that the distribution has a long-right tail.

Return on equity (ROE) has a mean of 1.25, and median of 0.29 with standard deviation of 1.51, the maximum value was 12 and the minimum value -4 showing variation on the return on equity of the sampled companies. The Skewness was 1.41 and Kurtosis of 10.13 indicating that the distribution has along right tail and leptokurtic relative to the normal. The Jargue-Bera probability for all the variables were less than 0.05 resulting in the rejection of the null hypothesis; it implies that the dataset was not normally distributed, hence the need for transformation of dataset.

Table 3 Correlation analysis

	ROE	EPS	COMPCOST	PRESCOST	RESTCOST	SUSTCOST	FIRMSIZE
ROE	1						
EPS	-0.1417	1					
COMPCOST	-0.2169	-0.0361	1				
PRESCOST	0.1922	-0.0609	0.2813	1			
RESTCOST	0.0964	-0.1202	0.6186	0.4988	1		
SUSTCOST	0.7331	-0.2314	-0.0621	0.2563	0.2164	1	
FIRMSIZE	-0.3003	0.1488	0.0874	-0.3168	-0.0269	-0.2593	1

Source: Author computation (2024)

Table 4: VIF

variables	prescost	sustacost	restcost	compcost	firmsize
Prescost		1.441	1.500	1.527	1.269
Sustcost	1.981		1.839	2.051	1.858
Restcost	3.279	2.925		1.958	3.340
Compcost	2.852	2.789	1.674		2.817
firmsize	1.093	1.165	1.317	1.299	

Source: Author computation (2024)

From table 3, the highest correlation value was 0.73 between return on equity and sustainability cost. Emory (1982) noted that values more than 0.80 can be problematic, while Hussain, Islam, and Andrew (2006) indicated that multi collinearity may be a source of concern when the correlation between variables is 0.9 and higher. Thus, the conclusion that there was no issue of high correlation among the variables which would have been an indication of a problem of multicollinearity. Also, the range of the variance inflation factor VIF computed using SPSS was between 1.269 and 3.340 indicating there were no severe multi-collinearity problems.

Regression analysis

Table 5 Effect of green accounting on earnings per share

Variables	Fixed effect estimate	Random effect estimates	GMM estimates
C			
Coefficient	-32.5116	-18.0682	-0.3612
P-value	(0.0609)	(0.1310)	(0.0000)
COMPCOST			
Coefficient	-0.8372	5.3961	12.7529
P-value	(0.7183)	(0.0056)	(0.0000)
PRESCOST			
Coefficient	1.2106	0.7189	6.6891
P-value	(0.5275)	(0.6723)	(0.0000)
RESTCOST			
Coefficient	-0.5476	-3.4284	-17.9181
P-value	(0.7888)	(0.0670)	(0.0000)
SUSTCOST			
Coefficient	-1.0459	-3.6667	-1.3595
P-value	(0.7411)	(0.0102)	(0.0000)
FIRMSIZE			
Coefficient	9.6292	7.9837	106.4140
P-value	(0.0160)	(0.0024)	(0.0000)
Model parameters			
R^2	0.7109	0.0330	
Adjusted R^2	0.6414	0.0265	
F-statistic	5.9044	5.0819	
Prob(F-stat)	0.0000	0.0000	
Durbin-Watson	2.5702	2.2779	

Model diagnostics			
Hausman test		0.0012	
Instrument Rank			38
j-statistics			80.2991
Prob-j-stat			0.0000
AR(1)			
AR(2)			0.9968

Source: Author computation (2024)

Based on the outcome of finding displayed on table 5, the fixed effects model is preferred above the random effects model as revealed by Hausman test with p-value (0.0012). The fixed effects model includes endogeneity problem; to eliminate the possible endogeneity the study used GMM approach developed by Arellano and Bond (1991).

From the individual independent variable statics shown in table 5, compliance cost is positively and significantly related with earnings per share. This is expressed in terms of a positive coefficient of 12.7529 and p-value 0.0000, which is less than 0.05, thus indicating a significant relationship suggesting that ₦1 increase in compliance cost would increase earnings per share by ₦13 when other variables are held constant. Similarly, there is a significant positive relationship between preservation cost and earnings per share with coefficient 6.6891 and p-value of 0.0000 less than critical value of 0.05. The result showed that ₦1 increase in preservation costs would increase earnings per share by ₦ 6.689 when other variables are held constant.

However, restoration cost (restcost) is significantly and negatively related with the earnings per share. This is expressed in terms of a negative coefficient of -17.9181 and p-value 0.0000, which is less than 0.05, thus indicating a significant relationship suggesting that an ₦1 increase in restoration cost reduced earnings per share by ₦17. Also, there is a significant negative relationship between sustainability cost (sustcost) and earnings per share with coefficient -1.3595 and p-value of 0.0000 less than critical value of 0.05. The result showed that ₦1 increase in the sustainability costs reduced earnings per share by ₦1.36 when other variables are held constant. The overall model has R^2 of 0.7109 and adjusted R^2 of 0.6414, indicates that about 71% of the dependent variable (EPS) was

explained by all the independent variables plus the control variable. The Durbin Watson is 2.5702 indicated the absence of autocorrelation among the successive values of the residual's variables in the model and implied that the model has a good fit and could be employed for interpretation.

The F statistics 5.9044 shows the overall significance of the variables used in the model, with probability of 0.0000 which is less than 0.05 indicating that the overall regression is statistically significant, hence the null hypothesis is rejected, thus the relationship between green accounting and organizational financial performances significant. The GMM estimation regression result of the relationship between green accounting and organizational financial performances showed that the estimated coefficient -0.3612 of the regression has parameters with a negative sign; which align with the fixed estimates results, thus a ₦1 increase in green accounting reduced earnings per share by ₦36. The J-statistics tests (80.2991) with p-values 0.0000 below 0.10, implied that failure to accept the null hypothesis. The AR (2) 0.9968 means that a null hypothesis of no second-order serial correlation could not be rejected. Effort made by organizations to comply with environmental regulations and laws resulted in additional costs, because firms have to invest in more environmentally friendly equipment's or cleanser to reduce the environmental impacts of the factory activities thus resulting in the reduction in earnings per share. This finding was supported by Ezeagba (2017).

Table 6 Effect of green accounting on Return on equity

Variables	**Fixed effect estimate**	**Random effect estimate**	**GMM estimates**
C			
Coefficient	0.6992	-0.5679	0.0116
P-value	(0.4629)	(0.3954)	(0.0000)
COMPCOST			
Coefficient	0.2119	-0.3494	0.8816
P-value	(0.0969)	(0.0017)	(0.0000)
PRESCOST			
Coefficient	0.1498	0.0582	0.5671
P-value	(0.1551)	(0.5356)	(0.0000)
RESTCOST			
Coefficient	-0.0574	0.0600	-0.9257
P-value	(0.6098)	(0.5615)	(0.0000)
SUSTCOST			
Coefficient	-0.4782	1.2425	-0.7848
P-value	(0.0061)	(0.0000)	(0.0000)
FIRMSIZE			
Coefficient	0.0349	-0.3215	-0.8290
P-value	(0.8732)	(0.0287)	(0.0000)
Model parameters			
R^2	0.7621	0.2384	
Adjusted R^2	0.7339	0.2334	
F-statistic	27.1056	46.6102	
Prob(F-stat)	0.0000	0.0000	
Durbin-Watson	2.1628	1.8245	
Model diagnostics			
Hausman test		0.0000	
Instrument Rank			37
j-statistics			72.6018
Prob-j-stat			0.0000
AR(1)			0.0670
AR(2)			0.0845

Source: *Author's Computation, (2024)*

Table 6 shows the regression analysis used to assess the effect of green accounting on return on equity. The Hausman specification test carried out to know which model is more appropriate for the study preferred the fixed effect model with the p-value of 0.0000 less than 0.05. The study also used GMM estimation to overcome endogeneity problem of fixed estimates.

The individual output revealed the effect of compliance cost on return on equity with coefficient 0.8816 and P-value 0.0000 is positive and significant, implying that a percentage increase in compliance cost would increase return on equity by 88%. Also, the effect of preservation cost on ROE (with coefficient 0.5671 and P-value 0.0000) is positive and significant implying that a percentage increase in preservation cost would increase return on equity by 57%.

However, sustainability cost with coefficient -0.7848 and P-value 0.0000 is lower than critical value of 0.05; thus, we concluded that the effect on ROE is negative and significant. Also, the restoration cost with coefficient -0.9257 and P-value 0.000 lower than critical value of 0.05 is negative and significant; a percentage increase in sustainability cost result in decrease in return on equity by 78%; and a percentage increase in restoration cost result in decrease in return on equity by 92%.

The coefficient of determination (R^2) is 0.7621, adjusted R^2 is 0.7339 indicated that 76% changes in dependent variable (return on equity) can be explained by the independent variables, while the remaining 24% is explained by other variables not captured in the model but captured by the error term. The Durbin Watson was within the acceptable range 2.1628 which signifies the absence of autocorrelation among the successive values of the variables in the model indicating that the regression model is a good fit.

The F-statistics 27.1056 shows the overall significance of the variables used in the model, with probability of 0.0000 which is less than 0.05 indicating that the overall regression is statistically significant, hence the null hypothesis is rejected, thus the relationship between green accounting and return on equity is positive and significant. The GMM estimation regression result of the relationship between green accounting and return on equity showed that the estimated coefficient 0.0116 of the regression has parameters with a positive sign; this corroborates the result given by fixed estimates, thus a percentage increase in green accounting would result in 1.16% increase in return on equity. The outcome

of this study was supported by the findings of Eze (2021) who discovered that green accounting positively and significantly influence return on equity.

The J-statistics test for over-identifying restrictions and the Arellano-Bond test for autocorrelation error were examined; the J-statistics tests (72.6018) yield all p-values 0.000 below 0.10, implied that failure to accept the null hypothesis. The AR (1) 0.0670 tests indicate that the residuals in first differences are correlated as expected, while the AR (2) 0.0845 means that a null hypothesis of no second-order serial correlation could not be rejected. Therefore, all results of the GMM model are valid. The study concluded that a company that practice green accounting send a positive signal to potential investors who may be interested in the organization, and thus resulted in more investment and higher return. Moreover, it has been observed and anticipated that societies are always alert and concerned about the impact of firms' business activities; hence, reporting on the environmental impacts of their operations increase's public positive perceptions about firms, which favourably affect their performance.

5.0 Conclusion and Recommendations

Green accounting had negative and significant effect on earnings per share; implying that ₦1 increase in green accounting would reduce earnings per share by ₦36, but had positive and significant impact on return on equity. This implied that green accounting reduced the earnings per share of stakeholders for short term due to additional cost incurred in complying with various regulations and ensuring that company is friendly with the environment, but it invariably increases the return on equity in the long run because investors interest are attracted for more investment.

In order to promote green technologies and cleaner production methods and foster an environmentally friendly environment, the study suggested that governments should educate businesses on the importance of implementing corporate environmental policies (such as green tax policies). To promote openness, respond to issues, and increase confidence in environmental management procedures, the corporations should increase their interaction with stakeholders, such as regional communities and environmental organizations. Similarly, companies ought to conduct environmental audits on a regular basis in order to evaluate their compliance with environmental regulations and identify areas where they may enhance their environmental performance.

References

Adula Harif & Natasha P (2024). A Review on Green Accounting Practices and Sustainable Financial Performance, *Journal of Business Management and Information Systems,* 11, 82- 88. DOI: https://doi.org/10.48001/jbmis.2024.si1015

Ahmed (2023). Analysis of green accounting cost and its effect on sustainable performance: an applied study. *Business Excellence and Management*, 13(4), 20-30

Benlemlih, M., Shaukat, A., Qiu, Y., & Trojanowski, G. (2016). Environmental and social disclosures and firm risk. *Journal of Business Ethics*, 1-14.

Egedegu E.T., Ombu E., & Etale L.M. (2024) Environmental Accounting and Financial Performance of Conoil Plc in Nigeria, *European Journal of Accounting, Auditing and Finance Research*, 12 (4), 16-32

Emory, E. 1982. Business Research Methods. Homewood, IL: Irwin

Endiana, N. L (2020). The Effect of Green Accounting on Corporate Sustainability and Financial Performance. *Journal of Asian Finance Economics and Business*, 7

Deegan, C., Rankin, M., & Voght, P. (2000) Firms disclosure reactions to social incidents: Australian evidence. *Accounting Forum* 24(1), 101- 130.

Deegan, C. & Ranking, M. (1997). The materiality of environmental information to users of annual reports. *Accounting, Auditing and Accountability Journal* 10(4), 562-583

Eze, E. (2021). Green accounting reporting and financial performance of manufacturing firms in Nigeria. *American Journal of Humanities and Social Sciences Research* (AJHSSR) 5 (7), 179- 187

Ezeagba, C.E., John-Akamelu C. R. & Umeoduagu, C. (2017). Environmental accounting disclosures and financial performance: A study of selected food and beverage companies in Nigeria(2006-2015).*International Journal of Academic Research in Business and Social Sciences 7(9),* 162–174

Ghazali, N.A.M. (2007). Ownership structure and corporate social responsibility disclosure: Some Malaysian evidence. *Corporate Governance*, 7(3), 251-266.

Hossain, M., Islan K. & Andrew J. (2006) Corporate Social and Environmental Disclosure in Developing Countries: Evidence from Bangladesh. Proceeding of the Asian Pacific Conference on International Accenting Issues Hawaii October.

Iliemena, R. O. (2020). Environmental accounting practices and corporate performance: Study of listed oil and gas companies in Nigeria. *European Journal of Business and Management*, 12, (22). www.iiste.org

Islam, M. A., Khan, M. A., Obaidullah, A. Z. M., & Alam, M. S. (2011). Effect of entrepreneur and firm characteristics on the business success of Small and Medium Enterprises (SMEs) in Bangladesh. *International Journal of Business and Management*, 6 (3), 289– 299

Juhmani, O. (2014). Determinants of corporate social and environmental disclosure on websites: The Case of Bahrain, *Universal Journal of Accounting and Finance*, 2 (4), 77-87

Lawal, B. A. (2016). *Effect of environmental accounting on the quality of accounting disclosures of shipping line in Nigeria* (Unpublished Doctoral dissertation). University of Agriculture and Technology, Jomo Kenyatta, Kenya

Martensson, K., & Westerberg, K. (2016). Corporate environmental strategies towards sustainable development. *Business Strategy and the Environment*, 25(1), 1 – 9. https//doi.org.10.1002/bsc.1852

Milne, M. & Patten, D. (2002). Securing organizational legitimacy: An experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing and Accountability Journal*, 15(3), 372 – 405

Muhaiminul Islam, N. R (2022). Green Accounting Practices in Financial & Non-financial Sectors and Its Applicability in Bangladesh. *International Journal of Advances in Engineering and Management (4)*, 1444-1459

Pawel, B. (2014). Do analysts disclose cash flow forecasts with earnings estimates when earnings quality is low*? Journal of Business Finance & Accounting*, 41(3-4), 401–434.

Rajakumar, I. M. P. & Shanthi, V. (2014). Forecasting earnings per share for companies in IT sector using Markov process model. *Journal of Theoretical and Applied Information Technology*, 59(2), 135- 147

Sadiku, T. J (2021). Green accounting: A Primer. *International Journal of Scientific Advances*, (2)

Shetkar, S. S. (2018). *Environmental accounting and ethical practices: an empirical study of selected business enterprises in Goa* (Unpublished doctoral thesis). Goa University

Uniamikogbo, E., & Ifeanyichukwu, A.P. (2021). Environmental accounting disclosure and financial performance of manufacturing firms in Nigeria. *Journal of Economics and International Business Management,* 9(2), 71 – 9

Yeasin,H.M.(2021).Green Accounting.
https://www.researchgate.net/publication/35076042

Firm Specific Dimensions and Stock Price of Listed Financial Service Firms in Nigeria

Ibrahim, L., Okpananchi, J., Agbi E. Samuel & Lateef O. Mustapha

Department of Accounting, Faculty of Management Sciences, Nigerian Defence Academy, Kaduna, Nigeria.
Corresponding Email: lawal6492@yahoo.com
https://doi.org/10.57233/gijmss.v7i3.02

Abstract

The study examines the effect of firm's specific dimensions on market share price of listed financial service firms in Nigeria. The study adopts correlation quasi-experimental research design. The population of the study was made up of the entire listed financial service firms in Nigeria which stands at 56 as at 31st December 2022. This includes deposit money banks, insurance firms and merchant banks. Census sampling techniques were adopted to arrive at a sample of 33 firms. Data for the period of 11 years (2012-2022) were collected using the secondary method of data collection from the annual reports and account of sampled firms. Data for the study were analysed using descriptive and inferential methods of data analyses with the help of STATA 13 statistical software. The findings of the study revealed that return on assets has positive significance effect on share price; growth opportunity has negative insignificance effect on share price and information asymmetry has negative significance effect on share price. Based on its findings the study concludes that firm specific dimensions have significance effect on stock market price of listed financial service firms in Nigeria. Based on its conclusion, the study recommends among others that listed financial service firms should try to improve their financial performance in the form of return on assets; To improve financial performance, also firms should optimize asset utilization by reallocating underperforming resources, adopting technology for efficiency, and managing costs to maximize profit margins. They should diversify revenue streams by exploring new markets and products while investing in workforce training to enhance productivity. To manage information asymmetry, firms must adopt transparent and timely financial reporting, leverage digital platforms for real-time disclosures, and engage with investors through regular meetings and updates.

Keywords: Growth opportunity, Information *asymmetry, Return on asset, Stock price*

1. Introduction

The share market price is one of the critical factors used by investors in accessing how well a business organization is governed. It also plays a crucial role in influencing the decision of existing and potential investors as to whether or not to invest in a particular company. Share Prices (SP) may be considered significant indexes for measuring capital market returns. SP is the price at which sellers and buyers are willing to exchange the stock. Demand and supply factors play a role

in determination of SP, as more buyers than sellers lead to an increase in share price and vice versa.

The share prices of public firms are influenced by various factors that can cause fluctuations depending on market conditions. One critical factor is firm-specific dimensions (FSD), which refer to unique characteristics inherent to a particular firm (Ahmad, Hunjra, & Taskin, 2023). These dimensions include profitability, growth opportunities, and information asymmetry (Andriani, Nurnajamuddin, & Rosyadah, 2021; Singh & Tandon, 2019; Kong et al., 2011). Such attributes often act as signals to the public, shaping perceptions of a firm's future prospects and, consequently, influencing its stock price. Factors influencing share price fluctuations (SPF) can be broadly categorized into microeconomic (internal) and macroeconomic (external) variables (Umar, 2009; Ahmad, Hunjra, Islam & Zureigat, 2023). Microeconomic factors, also referred to as firm-specific dimensions, include dividend payout, financial performance, leverage, growth opportunities, and information asymmetry (Singh & Tandon, 2019; Kong et al., 2011; Cai & Zhang, 2011). These internal characteristics significantly shape the stock prices of financial service firms, reflecting their performance and market dynamics.

The stock price of a financial service firm responds to its overall performance and the broader economic environment (Ayu et al., 2020). Stock price movements are not random but are influenced by intrinsic factors, such as financial performance, and extrinsic factors, such as economic conditions (Akpan & Emem, 2017). Improved asset turnover efficiency or higher profit margins positively impact stock prices by signaling strong corporate performance (Tahu & Susilo, 2017). According to Pattiruhu and Paais (2020), financial performance significantly affects stock prices, as higher earnings attract more investors, driving up stock prices, particularly when information asymmetry is minimal. The presence of asymmetry of knowledge may likely influence the cost of debt to be lower than the cost of outside equity (Myers, 2001). Investment decisions made by investors utilizing information may be used to assess information's worth. One of the issues developing markets face is information asymmetry (Ryu & Chae, 2021; Jawed *et al.* 2021), and this is particularly true in markets with poor form efficient competition (Elumilade, 2008). Very interestingly, some executives are prone to hide negative news from investors to overstate their financial performance regarding job security and remuneration (Kothari *et al.* 2009). However, if the bad news builds up to a crucial threshold, it will be released to the stock market

immediately, resulting in a stock price drop (Hutton *et al.* 2009; Agarwal & Chakraverty, 2023). Information asymmetry affects the whole market, not just the main one, mostly when the market is considered inefficient (Chantal et al. 2018; Al-Hiyari, Kolsi, Lutfi, & Shakkour, 2024). This may equally affect the growth opportunity of financial service firms.

Financial service firms experience share price fluctuations which may result in diminishing firm value and reduce investor's confidence. The low degree of growth experienced in most emerging nations' stock markets, including Nigeria, has resulted in the underperformance of these countries' economies (Kieu *et al.* 2019). These have to do with some specific attributes relating to the firms which play a vital role in influencing their stock market price. Stock prices are the most evident of all the indicators that may be used to assess a publicly listed company's performance (Bahreini *et al.* 2013). Investors are generally very interested in evaluating stock prices and analyzing the factors influencing them. These attributes affecting stock price that require close attention of the firms governing board are the firm profitability, growth opportunity and information asymmetry (Singh & Tandon, 2019; Kong et al. 2011; Cai & Zhang,.2011).

Growth opportunity has beneficial effect on long-term profitability and market value expectations. When a stock offering is announced, businesses with better growth prospects would lose less value than enterprises with lesser growth opportunities (Mohammed, 2021). Company growth is often evaluated in terms of revenue, assets, employees, and other factors (Delmar *et al.* 2003). Conversely, Gombola et al. (1998) suggest that high-growth enterprises have greater information asymmetry and so are overvalued.

Information asymmetry is one of the challenges affecting Nigerian financial service firms, according to the former Governor of the Central Bank of Nigeria (CBN), Godwin Emefiele, notably remarked at the 2017 Nigerian Bar Association (NBA) conference (Thisday, 2017). Information asymmetry may be thought of as a kind of market failure. When it exists, it has an impact on the market value as well as the value of the companies that are listed on the stock market(Huynh *et al.* 2020). Information asymmetry may drive investors and firms to make wrong financial decisions, resulting in loss of investment, as a result of decreasing stock market value. Studies on market information asymmetry level, firm asset level, leverage level, and firm value (see, for example, Drobetz, Grüninger, & Hirschvogl, 2010; Fosu, 2013; He, Lepone, & Leung, 2013; Zhao, L., & Wu,

2023). As a result of these studies, readers gain an understanding of how information asymmetry affects firms in developed countries such as the United States, Germany, the United Kingdom and other developing countries such as Korea, Pakistan among others. However, in Nigeria, to the best of the researcher's knowledge, there are paucity of evidence in the literature about the relationship between information asymmetry and stock returns. This study provides value addition to the existing literature on information asymmetry on stock returns in Nigeria. Moreover, despite the existence of proxies of firm specific dimensions or characteristics and stock price literature, none of previous studies to the best of the researcher's knowledge have been found to have extended the use of information asymmetry theory. Furthermore, none of these previous studies was explicitly devoted to examining the effect of firm attributes on the stock price of financial institutions combining banks and insurance firms or how information can influence stock price in the financial service firms, which this study is set to address.

The main objective of the study is to examine the effect of firm specific dimensions on the stock market price of listed financial service firms in Nigeria. While the specific Objectives are to:

i Assess the significant effect of return on asset on stock price of listed financial service firms in Nigeria.
ii Evaluate the significant effect of growth opportunity on stock price of listed financial service firms in Nigeria.
iii Determine the significant effect of information asymmetry on stock price of listed financial service firms in Nigeria.

In line with the above objectives, the study hypothesized as follows:

H_o: Return on asset has no significant effect on stock price of listed financial service firms in Nigeria.

H_o: Growth opportunity has no significant effect on stock price of listed financial service firms in Nigeria.

H_o: Information asymmetry has no significant effect on stock price of listed financial service firms in Nigeria

After the introductory section, next is the literature review, this follows by the methodology placed in section three, while section four deals with results and

discussions of findings and finally conclusion and recommendations are in section five.

2. Literature Review

This section was design to carry out an extensive review of various studies relevant to the subject matter of the study. This includes the conceptual, theoretical and empirical literature.

2.1 Conceptual Review

According to Omaliko and Nwadialor (2020), one of the essential market-based metrics to evaluate company performance is the share market price. Putranto (2018) states that the stock price is the current price on the stock market at any given time. Stock values can rapidly change in a matter of seconds. It can change in just minutes or even seconds. This can happen depending on how much stock is available and what the sellers and buyers want. Mawardi (2018) defines the share price as the price displayed on the stock exchange at any given moment. Market participants decide the share price. The capital market supply and demand decide the closing price. However, forecasting share values are complex. Lavanya's research (2021) indicates that the value of a company may be determined by its share price.

Firm characteristics or special dimensions play a vital role in influencing stock price movement. According to Mohammed (2017) firm characteristics significantly influence corporate entities' overall performance. According to Omaliko and Ogochukwu (2021) company characteristics are crucial predictors of a firm's performance and commercial success. This research analyses corporate factors such as financial performance, business growth opportunity and information asymmetry.

The health of the owner's assets and the national economy depend on financial performance. A management strategy that aims to fulfil the interests of a corporation's shareholders and other stakeholders includes measuring the organisation's financial performance. The creation of strategic plans, the assessment of the accomplishment of corporate goals, and its use as a signalling and learning tool all depend on performance measurement (Ittner & Larcker, 1998). Khan, Shah, and Atta (2009) concluded that several factors, including stock price performance, reported profits, or market share of a business may be used to assess a company's current and future success. They contend that stock

return is a crucial concern for investors, and an increase in stock return invites people to participate in stocks, which boosts demand for stocks, drives up prices, and improves the stock market performance.

Similarly, Barbosa and Louri (2005) asserted that financial success is one of the instruments that can be used to identify financial strengths, vulnerabilities, opportunities, and risks. Return on Investment (ROI), Residual Income (RI), Earnings Per Share (EPS), Dividend Yield, Price Earnings Ratio (PER), book value per share, and so on are some of the financial metrics they use. ROA, return on equity (ROE), and return on investment (ROI) are the most widely used success indicator proxies (ROI). Accounting metrics are the proxies for performance measures. Market performance metrics, such as price per share to earnings per share (P/E), market value to book value of equity, and Tobin's Q, are other ways to determine a company's performance. They are also known as financial metrics of performance (Muigai & Maina, 2018). Many of these can also be referred to as financial performance indicators. In the context of this research, the study uses return on the use of a company's properties (ROA) as a description of financial efficiency.

Shehu (2017) claims that since it compares profit to all the assets a company needs to generate those profits; ROA is often regarded as a solid internal management ratio when used as a performance metric. The finest financial gauge of a company's health and a leading sign of how its choices are implemented is the long-term trend of ROA. Having a solid understanding of the trajectory paves the way for adopting a longer-term viewpoint that may aid businesses in developing successful strategies (Hagel, 2013). Despite the abundance of financial soundness metrics, return on assets serves as a road map for management and investment decision-making. In terms of the company's financial health, return indicates the real and most trustworthy situation.

Growth opportunity is the likelihood that a company will expand. Danila et al. (2020) defined growth opportunity as the increase in the volume of business generated by funds flowing to the firm. Carrizosa (2011) sees the concept of growth opportunity as an evolutionary process in which a firm accumulates unique knowledge. This knowledge may affect the company and could determine its growth. Businesses with solid growth prospects often use stock to fund their daily operations. Since each company has a different possibility for development, the management's funding choice will likewise differ (Akinsulire, 2011).

Changing a company's total assets is another way to define a growth potential (Kartini & Arianto, 2008). A business expected to see future solid development often funds its daily operations using shares. In contrast, a company that is expected to have slow growth would attempt to share the risk of that growth with its creditors by issuing debt in the form of long-term obligations (Mai, 2006).

Asymmetric information refers to a market environment characterized by insufficient and frictional information. Asymmetric information refers to the information gap between market participants and firm management. Stilitz, Stilitz, and Michael (2002) identified information asymmetries in terms of attitude. Many studies have looked at the impact of market behaviour on different factors. Many of these studies are used to assess the impact of asymmetric data on stock price, investment, financing, or other factors (Alhaj-Yaseen et. al., 2020; Pan & Misra, 2020). Different research methods are used to assess asymmetrical data.

According to the literature, the knowledge asymmetry between business management and investors is related to the agency issue. Since agency costs are not readily quantifiable, information asymmetry was used to estimate the severity of agency problems. Various empirical measurements of information asymmetries are used. These measures can be categorized into market-based, firm-based, and forecast-based proxies. Finally, the well-known firm-based measure for information asymmetry is Q ratio (Clarke et al. 2000). Hence, information asymmetry is measured as sales weighted fixed assets growth as a measure for proportionate increase in both sales and assets

2.2.Empirical Review

Return on Assets and Stock Market Price

Thirty infrastructure, energy, and transportation companies with stock listings on the Indonesian Stock Exchange were studied by Riani et al. (2020) to determine the effect of financial performance on stock prices. Using a purposive selection technique, data were taken from a yearly report and a summary of the selected companies for the years 2010 through 2019. The debt-to-equity ratio, total assets turnover, and net profit margin were all moderated using earnings growth. Additionally, included were price profits ratio and return on equity. In this research, a random effects model was used in conjunction with multiple regression analysis. The study's findings supported that stock prices are not significantly impacted by the financial success measures of total assets to total

turnover, net profit margin, return on equity, and price-earnings ratio. Additionally, the research found that the Earnings Increase variable can only lower NPM.

Financial measures and stock values in the food and beverage sector were compared by Alam et al. in 2021. From 2017 to 2019, 31 companies were used for this. They also chose 14 food and beverage businesses using a purposive sampling method. The research used multiple linear regression to evaluate the hypotheses. This research demonstrated a statistical relationship between stock values and return on equity (ROE). However, return on assets, net profit margins (NPM), current ratios (CR), debt ratio (DER), and debt to assets can all have a detrimental impact on equity prices (DAR). To draw a meaningful inference, the research must be expanded.

Using trade-off, signalling, and signalling theories, Sjahruddin (2020) looks into financial performance as an intermediate variable in evaluating wealth structure, capital structure, and the financial structure of stock price. The 145 secondary data sets used in this study are bank financial records that are published on the Indonesia Stock Exchange. A structural equation was created using the model testing functions of the SmartPLS 3.0 applications (SEM). According to the research, wealth structure has the potential to boost stock prices' financial success, while capital structure and financial design have the potential to detract from it. According to the research, financial success has no bearing on how money, income, and financial structures affect stock prices.

The impact of the debt-to-equity ratio (DER) and return on equity (ROE) on stock values in the Jakarta Islamic Index Businesses from 2015 to 2019 was examined by Juwita and Diana (2020). The research utilises a purposive selection technique and works with 12 companies. Data was extracted from the sampled businesses' yearly financial records for the years 2015 through 2019. Using SPSS version 22, multiple linear regression was used to analyse the data. According to the study's findings, DER barely affects equity price. However, ROE has a sizable positive impact on the equity price. The debt-to-equity ratio (DE) and return on equity both have a sizable favourable impact on the price of the company. The study's brief time span makes it difficult to reach logical inferences, which is one of its limitations.

Growth Opportunity and Stock Market Price

Simu and Pangaribuan (2020) looked at the factors that affect the share price of listed companies on the Indonesian Stock Exchange. A population of companies from the Indonesia Stock Exchange was used for the analysis. The data were analysed using the purposive sample technique. Data were analyzed using multiple linear regression statistics to examine the impact of the independent variables upon the dependent variable. The study showed that sales growth did not significantly impact profitability and share market price. Further, the study confirmed that profitability significantly affects the share price. Research shows that earnings are a critical factor in determining the share price. The research is limited in that it covers a short period. However, new studies are likely to offer a better explanation.

Romeldo et al. (2020) examined the impact of EPS on stock prices for companies within the household appliances sub-sector of the Indonesia Stock Exchange and found that sales growth negatively impacts stock prices. The period 2015 - 2019 was covered by Romeldo et al. The study used a purposive sampling strategy of 15 corporate financial statements to determine the household appliance industry population. Multiple linear regression was used as a method of analysis to provide a complete picture of the relationships among variables. However, it needed to be longer to reach any meaningful conclusion. The present study will address that issue.

Pranata and Pujiati (2015) likewise used a quantitative method to examine the effect of liquidity on stock prices after the implementation of IFRS. Their sample included 45 13 companies listed on the Indonesia Stock Exchange from 2011-2013. They also used a purposeful sampling technique. The study found that the stock price is affected by sales growth and dividend payout ratio. The study's limitations are due to the need for more sample sizes used for research. The present study will address this limitation.

Gim and Jang (2010) attempted to identify market factors that could minimize reactions to share repurchases of U.S.-based restaurant companies. Data were mainly retrieved by the Compustat database at Wharton Research Data Services from 1996-2018. After excluding observations with missing data, the total sample contained 592 firm years observations for 82 franchises and 42 non-franchise outlets. The study revealed that growth opportunities, franchising, and dividend payments negatively affected the market reaction. Despite this, franchise

restaurants had a weaker negative impact on the market than non-franchised restaurants. However, this study was limited because the data needed to be updated. There is a need for a new study in this case.

Information Asymmetry and Stock Market Price

Researchers have found a substantial impact of information asymmetry on the stock prices of organizations. Zaigham et al. (2018) have shown that information asymmetry positively mediates investment and stock price sensitivity. The study used firm age and company size to measure information imbalance. The interaction terms of stock prices (measured via Tobin's Q) and asymmetric information from the Chinese manufacturing industry were used to select 398 companies. After all the initial data testing, the random effects model is employed as it is most appropriate for the data being analyzed. These results support some current views, such as that "asymmetric information has a significant positive impact on stock price sensitive investment. The research found that firms facing severe financial constraints have higher stock price sensitivity than firms that are not faced with such constraints.

In studying the decision-making behaviour of stock investors to investigate the impact of information-asymmetry in stock price sensitivity to investment decisions, Dwijayani et al (2017) examined investment decisions and the information asymmetry that affects the value of the company. The research was conducted at the company's property and real estate by taking 110 samples of 22 companies listed on the stock exchanges of Indonesia. While the sampling period for 5 years from 2011 to 2015, their empirical findings show that the asymmetry of information does not affect the value of the company, because these effects decrease with their investment policies. The findings of the study further revealed that investment has a positive impact on firm value. This is evidenced by the positive and significant relationship between investment policies and information asymmetry with stock prices that refers to the value of the company. However, the study period is considered too short and not too current for reaching logical conclusion, thus the need for a new study to breach this gap.

Also, in determining the effect of information asymmetry and stock price, Xiea et al (2020) takes Chinese A-share listed companies from 2008 to 2016 as samples and investigates the impact of M & A goodwill on the risk of stock price crashes. The study finds that, compared with non-goodwill companies, companies with goodwill have a greater risk of future stock price crashes with the increase of

goodwill value (GW), the risk of future stock price crashes increases significantly. Further research shows that the GW affects the risk of stock price crashes through information asymmetry at the corporate and market levels. This article not only deepens the research on the factors influencing the risk of stock price crashes, but also has great significance in understanding the role of goodwill in the capital market and how to prevent stock price crashes and promote the orderly development of the capital market. The limitation of this study is from the research period which is not too current as event might have over taking the findings, and therefore the need for a new study to be replicated.

Nasirzadeh et al (2017) investigate the relationship between information asymmetry and short-term fluctuations in stock prices and political dependence (by firm size factors) on the relationship between inequality Information symmetry with long-term stock price fluctuations. Using the data from annual report and account of the sampled firms listed in the Tehran Stock Exchange for the period under review with a selected sample of 211 companies and 1266 year-firm observations. Panel estimators in logistic regression models, panel model and generalized regression were used to test the hypotheses of the study. The results of the study revealed that, overconfidence of managers impacts the relationship between information asymmetry and risk of falling of stock price and intensifies this relationship. Its achievement is also offering a view in order for explaining managers' behavior in order to prevent sudden fluctuations of stock price resulting from managers' decisions and creating informational transparency in capital market.

While existing literature extensively explores the impact of firm-specific dimensions on stock prices, several gaps remain, particularly in the context of emerging markets like Nigeria and the financial services sector. Many studies have focused on developed economies or specific industries, leaving a gap in understanding how factors like profitability, growth opportunities, and information asymmetry specifically influence the stock prices of financial service firms in Nigeria. Additionally, most research uses cross-sectional data or short-term analyses, which fail to capture long-term trends and cyclical behaviors in stock price movements. This study addresses this gap by employing an 11-year longitudinal analysis (2012–2022) that provides a more comprehensive and accurate picture of how these dimensions affect stock prices over time.

Furthermore, while the effect of information asymmetry has been studied in developed markets, there is limited research on its impact in emerging markets, where inefficiencies and limited access to information are more pronounced. This study fills this gap by specifically examining the role of information asymmetry within the Nigerian financial sector. Additionally, most studies consider only one or two firm-specific factors in isolation, whereas this study integrates multiple dimensions Return on Assets (ROA), Growth Opportunity (GO), and Information Asymmetry (INAS) to offer a more nuanced understanding of the dynamics influencing stock prices. Finally, while theoretical insights are abundant, the literature lacks practical recommendations for corporate governance and policy-making in emerging economies. This study contributes by providing actionable strategies for Nigerian firms to manage growth opportunities and reduce information asymmetry, along with policy suggestions for regulatory bodies like the Central Bank of Nigeria and Nigerian Exchange Group to enhance transparency and improve investor confidence. By addressing these gaps, this study not only enriches academic discourse but also offers practical solutions to improve stock market performance and governance in Nigeria.

2.3 Theoretical Review

The theoretical framework that underpins this study is the signalling theory by Spence, (1970). In the early 1970s, the theory of asymmetric information was created by Spence, and in the 1980s, it was applied to the field of finance (Spence, 1973). The notion of signalling theory pertains to a signal that is generated from management policy, some of which are policy regarding the financing, dividend and investment growth. The policy aims to inform potential investors considered third parties about the company's prospects and help them make informed decisions about their investments. The policy may be used by management as a signal about a company's worth if the investors believe that the information's substance is significant, as shown by its impact on stock returns (Abdullah, 2002; Suwanna, 2012).

According to the signalling theory, the manager should be engaged in maximizing his earnings and should have proper information about the company's worth that investors may not have. This presumption is founded on the existence of asymmetric information, which is the circumstance in which one party knows knowledge that another party may not have. If the management provides all the information he knows regarding the firm's value, asymmetric information will impact investor judgement throughout the investment decision-making process.

Asymmetric information causes management policies to become particularly important when they send a signal to investors or the general public.

3. Methodology

The study adopts correlation quasi experimental research design. The justification for selecting this design is based on the fact that the study examines the cause and effect relationship between firm specific dimensions and stock price of listed financial service firms in Nigeria. The choice of a correlation research design is appropriate for examining the relationship between firm-specific dimensions and stock prices, as it allows for the identification of patterns and statistical associations. However, the justification for the 11-year period (2012–2022) and the sample size of 33 firms could benefit from more explicit reasoning. The 11-year period provides a comprehensive timeline that captures both short-term fluctuations and long-term trends, ensuring the robustness of findings and accounting for market cycles or economic shocks that may affect stock prices. The population of this study consists of all listed financial service firms in Nigeria as at 2022 (NGX, 2022) which stands at 56. Financial services firms majorly consist of Deposit Money Banks (DMBs), Insurance firms, mortgage banks and merchant banks. The study adopts census sampling technique where all firms in the population are considered. A census allows for the collection of a wide range of information about the population, providing more flexibility in terms of data analysis. It provides a complete representation of the population, making it ideal for accurate and representative data analysis. A filter was applied to the population in order to arrive at the sample size. For firm to be selected as part of the sample it must be listed on or before 1st January 2012 and remain listed up to 31st December, 2022. The sample size, derived from a census of 56 financial service firms listed as of December 31, 2022, and filtered based on inclusion criteria, represents a significant portion of the population. This approach ensures the findings are reflective of the broader financial sector while maintaining data quality by focusing on firms with complete and consistent financial reports for the period under study. These choices enhance the reliability and generalizability of the study's conclusions. The firm must also publish its annual reports and account for the relevant period. Based on these, any firm that failed to meet the set criterion were filtered out and as such the study arrives at a sample of 36 firms.

The study used STATA 13, which is appropriate and standard for data analysis in financial studies. However, the study explicitly details the statistical tests and

models used to ensure reproducibility. For instance, multiple linear regression were employed to examine the effects of Return on Assets (ROA), Growth Opportunity (GO), and Information Asymmetry (INAS) on stock prices. Diagnostic tests such as Variance Inflation Factor (VIF) for multicollinearity, the Breusch-Pagan test for heteroskedasticity, and the Shapiro-Wilk test for normality were conducted to validate the model. Post-estimation tests like the Hausman test were used to determine the suitability of fixed or random effects models. The model of the study was adopted from generalize econometric model below:

$Y_{it} = \alpha + \beta X_{it} + \mu_{it}$ (1)

However, to achieve the objectives of the study and test the research hypotheses, the model was modified to capture the study variables which are reflected in both dependent and independent variables. In order to examine the factors that have effect on stock price, a multiple linear regression model was established. The model captures the effect of financial performance, growth opportunity and information asymmetry. The model is stated below

$SP_{it}=\beta_0+\beta_1 ROA_{it}+ \beta_2 GO_{it}+\beta_3 INAS_{it} +e_{it}$ … (2)

Where:

SP= share price measured as closing share price on December 31 for the years studied (*Hesty and Wedi, 2017)*

ROA= Measured as profit before tax to total asset (Shehu, 2017)

GO= growth opportunities measured as percentage changes in book value of total assets (Hillert et al. 2016)

INAS= information asymmetry measured as sales weighted fixed assets growth as a measure for proportionate increase in both sales and assets (Adam and Goyal, 2000; Clarke and Shastri, 2000)

B = coefficient of independent variables

t= year under consideration

i = firm under consideration

e = error term

Data for the study were collected for a period of 14 years using the secondary methods of data collection from the annual reports and accounts of sample firms. The analyses of collected data were conducted using descriptive and inferential methods of data analyses with the help of STATA statistical software. However, to test for the viability of the data and model fitness, various diagnostic and post estimation tests were carried out.

4. Results and Discussions

The purpose of this section is to provide detail analyses of the data collected. It is made up of descriptive statistics, correlation matrix, diagnostic and post estimation test, regression analyses as well as test of hypotheses and discussion of findings.

Table 1: ***Descriptive Statistics***

Variable	Obs	Mean	Std. Dev.	Min	Max
SP	396	3.975303	7.736736	.2	47.95
ROA	396	.0237113	.0637784	-.5258293	.2905309
GO	396	.2856306	3.835825	-.9986439	75.82516
IA	396	.2566366	.2210293	.026557	1.19542

Source: **STATA 13 OUTPUTS, (2023)**

The data for the study was summarized with the help of descriptive statistics as shown in Table 1. The purpose of descriptive statistics is to provide a concise and comprehensive summary of the data set. This will give at a glance, the mean, standard deviation as well as maximum and minimum mean. From the table, share price as measure of stock market price has a mean value of 9.975 and a standard deviation of 7.736 greater than the central mean. The mean value implies that the financial services firms have an average share price of about N4, while the standard deviation on the other hand indicates a wide disparity from the central mean. This implies that most of the selected firms have different share price and there is a wide variation between the share price of individual firms and average share price. This is confirmed by a minimum share price of 20kobo and a maximum share price of N47.95 as indicated by the minimum and maximum mean respectively.

On the other hand, the return on asset as measure of performance being an independent variable is reported to have a mean value of 0.0237 indicating an average return of about 2.34% or 2.34 kobo returns on every Naira invested in the firm's assets. This implies that every naira invested in firms' assets generate a return of 2.34 kobo. This return is similar for almost all the selected firms as show by the standard deviation of 0.064 close to central mean. The lowest and highest returns were -0.5258 and 0.2905 as shown by minimum and maximum mean respectively. On the same lane, growth opportunity as measure of firm potentiality to grow has a mean value of 0.2856 and a standard deviation of 3.836 greater than the central mean. This implies that listed financial service firms has

about 29.05% growth opportunity and majority of the selected firms have different growth potential as indicated by high standard deviation with minimum and maximum mean of -0.999 and 75.825 respectively. Finally, information asymmetry as a measure of how the asymmetry of information affects share price has a mean of 0.2566 indicating asymmetry of information at about 25.66% with standard deviation of 0.221 less than the central mean indicating that the asymmetry of information in the selected firms are not away from central mean as indicated by minimum and maximum mean of 0.0266 and 1.195 respectively.

Table 2: ***Correlation Matrix.***

	SP	ROA	GO	IA
SP	1.0000			
ROA	0.0804	1.0000		
	0.1102			
GO	-0.0279	0.0226	1.0000	
	0.5794	0.6537		
IA	-0.3482*	0.2140*	-0.0252	1.0000
	0.0000	0.0000	0.6170	

Source: **STATA 13 OUTPUTS, (2023)**

The results of correlation matrix to measure the relationship between variables were displayed in Table 2. From the Table, share price is reported to have about 8.08% positive insignificance relationship with return on assets, 2.79 negative insignificance relationships with growth opportunity and 34.82% negative significance relationship with information asymmetry. On the other hand, return on assets has about 2.26% positive insignificance relationship with growth opportunity and 21.40% significance relationship with information asymmetry. Lastly growth opportunity recorded about 2.52 negative relationship with information asymmetry. The overall result therefore signifies weak relationship between the variable of the study and as such indicates the absence of multicollineary among the data set. This was be confirmed by the result of VIF test for multicollineary.

Table 3: ***VIF Test for Multicollinearity***

Variable	VIF	1/VIF
IA	1.05	0.953293
ROA	1.05	0.953412
GO	1.00	0.998542
Mean VIF	1.03	

Source: **STATA 13 OUTPUTS, (2023)**

Table 3 shows the result of vif test for multicollinearity. The assumption of linear regression model is that the independent variable should not correlate with one another. To test for multicollinearity using vif test, it is assumed that a vif value of greater than 4 indicates some element of multicollinearity among the data set, even though a value of less than 10 is within the acceptable limit. From the Table, all variables have an vif value of less than 4 including the mean vif. This indicates that there is no multicollinearity problem among the data set.

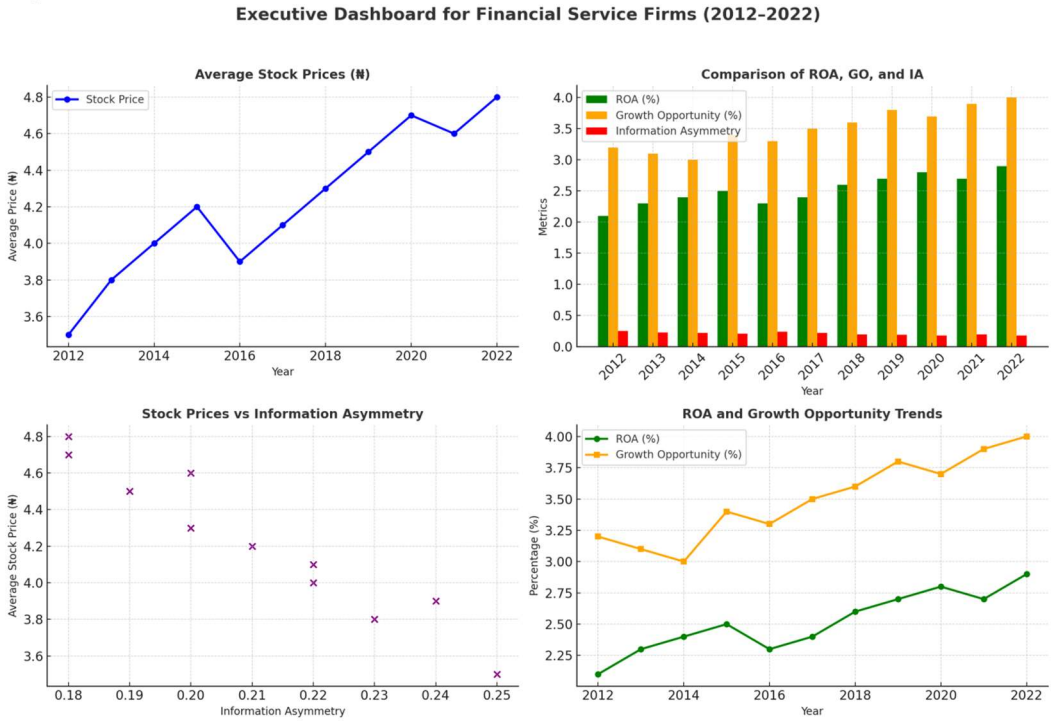
Table 4: ***Shapiro-Wilk W test for normal data***

Variable	Obs	W	V	Z	Prob>z
SP	396	0.53154	127.809	11.536	0.00000
ROA	396	0.74598	69.303	10.081	0.00000
GO	396	0.05897	256.741	13.195	0.00000
IA	396	0.84855	41.321	8.851	0.00000

Source: **STATA 13 OUTPUTS, (2023)**

To test whether the data sets are normally distributed, Shapiro-Wilk W test for normal data was carried out as depicted in Table 4. The assumption of normality test is that the data sets are not normally distributed. From the table, the normality test result shows that all variables are having a p-value of 0.0000 which are all significance at 5% level of significance, which imply that all variables are not normally distributed and as such, the overall data sets are not normally distributed. However, this is cured by using panel corrected standard error in the regression model.

Fig 1: Executive dashboard



Source: Author's computation

This executive dashboard provides a clear visual summary of key financial metrics for the period 2012–2022. The line graph (top left) shows a steady increase in average stock prices over the years, reflecting the overall growth of financial service firms. The upward trajectory indicates a gradual increase in stock prices, reflecting overall growth in the sector. Periods of slight stagnation or dips, such as around 2016 and 2020, could correspond to economic downturns or market shocks, such as recessions or the COVID-19 pandemic. The steady recovery and growth in later years suggest improved financial performance and investor confidence. This visual representation highlights the dynamic nature of stock price movements and provides context for analyzing the influence of firm-specific dimensions like Return on Assets and Information Asymmetry on stock prices. The bar graph (top right) compares three crucial firm-specific dimensions Return on Assets (ROA), Growth Opportunity (GO), and Information Asymmetry (IA) highlighting how each metric evolved over time. The scatter plot (bottom left) illustrates the inverse relationship between stock prices and information

asymmetry, showing how higher asymmetry tends to lower stock prices. Finally, the line graph (bottom right) tracks the trends of ROA and Growth Opportunity, emphasizing their consistent growth, with ROA showing a stronger upward movement. Together, these visualizations provide a comprehensive view of how these dimensions influence stock prices and offer insights for improving firm performance.

Table 5: ***Regression Analyses***

SP	Coef.	Std. Err.	Z	P>z	[95% Conf.	Interval]
ROA	19.84067	4.771152	4.16	0.000	10.48939	29.19196
GO	-.0833505	.0464199	-1.80	0.073	-.1743318	.0076308
IA	-13.45055	1.42368	-9.45	0.000	-16.24091	-10.66018
_cons	6.980565	.4995786	13.97	0.000	6.001409	7.959721
R-squared	0.1481					
Wald chi2(3)	120.19					
Prob> chi2	0.0000					
Hettest chi2(1) =	121.96					
Prob>chi2	0.0000					
Hausman Testchi2(1)=	42.37					
Prob> chi2	0.0000					

Source: **STATA 13 OUTPUTS, (2023)**

The regression results were displayed in Table 5 together with the results of some diagnostic and post estimation test. From the Table, the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity which is aimed in measuring the relationship between the independent variables and the error term. From the Table, a chi2 value of 121.96 was reported with p-value of 0.0000 which is significant at 5% level of significance and as such implies the absence of Heteroskkedasticity among the data sets. The result of Hausman specification test was also shown in Table 5. The purpose of this test is to select between the fixed effect and random effect of the panel regression models. The null hypothesis as per Hausman test states that H_o: difference in coefficients not systematic. From the Table, Hausman test has a chi2 value of 42.37 with p-value of 0.0000 which is significance at 5%

and implies that the different in coefficient is systemic and therefore we fail to reject the null hypotheses and as such the fixed effect model is appropriate.

On the other hand, the model fitness is measured by the Wald Chi-Square and its corresponding p-value. The Wald chi2 value of 120.19 and its corresponding p-value of 0.0000 which is significance at 5% level of significance demonstrate that the model use is appropriate and fit to measure the effect of firm specific dimension on stock value of listed financial service firms in Nigeria. This implies that the variables were carefully and objectively selected and as such the corporate stock price model is appropriate. From the Table, the R-squared value which measures the extent of change in dependent variable cause by variations in independent variables is measured using the R-Squared value. The table displays an R-squared value of 0.1481 indicates that about 14.18% of changes in share market price of listed financial services firms is caused by the variation in firm's specific dimensions measured as return on assets, growth opportunity and information asymmetry.

Additionally, the Table also shows the regression results on the effect of firm specific dimensions on stock market price of listed financial service firms in Nigeria. ROA as measure of firm performance has a positive coefficient of 19.84 and a significant P-value of 0.000. This implies that ROA has positive significance effect of share price of the selected firms. This means that a significance increase in ROA of the selected firms will result into a proportionate increase in the stock market price of the selected firms. This is in line with the findings of Sjahruddin (2020), Juwita and Diana (2020) and contradicts that of Simu and Pangaribuan (2020); Alam et al. in (2021); Riani et al. (2020). Based on these, we fail to accept the null hypothesis one and conclude the significant effect of ROA on market share price of listed financial service firms in Nigeria.

On the contrary, Growth opportunity is reported to have negative coefficient of 0.083 and a p-value of 0.073 which is not significant at 5% level of significance. This means that growth opportunity has negative insignificance effect of stock market price of listed financial service firms in Nigeria. This implies that a change in growth opportunity will not result into a proportionate change in market share price of the sample firms. This is because one potential reason could be that investors in Nigeria's financial sector place greater emphasis on short-term profitability (ROA) and transparency (IA) rather than long-term growth prospects, which may be seen as uncertain or speculative. Additionally, the high variability

in growth opportunities among firms, as indicated by the wide standard deviation, could dilute its overall effect. Market inefficiencies and limited access to information in an emerging economy like Nigeria may also hinder investors' ability to assess and act on growth signals effectively. This aligns with the findings of Simu and Pangaribuan (2020). Based on these, hypothesis two is therefore failed to be accepted and establish growth opportunity to have no significant effect on share price of the selected firms.

Finally, information asymmetry is reported to have negative coefficient of 13.4506 with a corresponding significant p-value of 0.000. This implies that, information asymmetry has negative significance effect of market share price of listed financial service firms in Nigeria. This means that a significance increase in firm's information asymmetry will result into a proportionate fall in the market share price of sampled firms and as such we failed to accept the null hypothesis 3. This finding is in agreement with the findings of Zaigham et al. (2018) and Dwijayani et al (2017).

5. Conclusion and Recommendations

The study was carried out to examine the effect of firm's specific dimensions on stock market price of listed financial service firms in Nigeria. Based on the study findings, test of hypotheses and discussion of findings, the study concludes firm specific dimensions to have significance effect on stock market price of listed financial service firms in Nigeria. However, this effect is positive in the case of return on assets and negative in the case of information asymmetry. Based on its conclusion, the study recommends among others that:

i. Listed financial service firms should improve their financial performance in the form of return on assets. This can be achieved by providing means and strategy to improve assts utilization so as to maximize the returns for each Naira invested in the firm assets. This would help to improved share price as good returns indicate firm's potentiality of generating more returns in the future.
ii. To effectively manage information asymmetry, firms should implement transparent financial reporting, ensuring timely and accurate disclosures. They can also leverage investor relations platforms to facilitate real-time communication with stakeholders. Regular earnings calls and updates on company performance will help reduce uncertainties. Additionally, adopting third-party audits or certifications can enhance trust in the firm's financial health

iii. Regulatory authorities like central bank of Nigeria and the Nigerian exchange group should formulate policies that will improve proper communication of financial service firm's potential growth. This will reduce the asymmetry of information and thereby improve stock price.

Future research could explore additional firm-specific dimensions such as corporate governance, capital structure, and market sentiment, examining their influence on stock prices, particularly in emerging markets. Additionally, studies could investigate the impact of macroeconomic factors like inflation, exchange rates, and policy changes on financial service firms, providing a broader understanding of external variables. Exploring cross-country comparisons could further highlight how different regulatory environments and economic contexts affect the relationship between firm dimensions and stock performance, offering valuable insights for global investors and policymakers.

Reference

Abdullah, N. H., Rashid, R. A., & Ibrahim, Y. (2002). Effect of dividend announcements on stock returns for companies listed on the main board of the Kuala Lumpur Stock Exchange. *Malaysian Management Journal,* 6(1&2), 81-98. *Retrieved from https://core.ac.uk/download/ pdf/12116278.pdf*

Adam, T., & Goyal, V. (1999). The investment opportunity set and its proxy variables: Theory and Evidence," Working paper, Hong Kong University of Science &Technolog

Agarwal, N., & Chakraverty, A. (2023). Growth opportunities, information asymmetry, and dividend payout: Evidence from mandatory IFRS adoption. European Accounting Review, 32(1), 113-139.

Ahmad, M. M., Hunjra, A. I., & Taskin, D. (2023). Do asymmetric information and leverage affect investment decisions?. *The Quarterly Review of Economics and Finance*, 87, 337-345.

Akinsulire, O. (2011). *Financial management*: Ceemol Nigeria Limited, 7th Edition

Akpan, I. T., & Emem, M. J. (2017). Comparative analysis of insurance companies and commercials banks' investment portfolios and economic growth in Nigeria. *Arabian Journal of Business and Management Review, 4(2), 6–25.*

Alam, N., Aida, N., & Mukhtar, A. (2021). Effect of financial performance on stock-prices in food and beverages firm. *Golden ratio of finance management, 1(2), 61–74.* https://doi.org/10.52970/grfm.v1i2.63

Alhaj-Yaseen, Y. S., Barkoulas, J. T., &Ouandlous, A. (2020). Liberalization and asymmetric information flow dynamics in the Chinese equity markets. *Journal of Economic Asymmetries, 21.* https://doi.org/10.1016/j.jeca.2019.e0015 *1*

Al-Hiyari, A., Kolsi, M. C., Lutfi, A., & Shakkour, A. S. (2024). Information asymmetry and dividend payout in an emerging market: Does corporate governance quality matter?. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1), 100188.

Andriani, B., Nurnajamuddin, M., & Rosyadah, K. (2021). Does Profitability, Firm Size, and Investment Opportunity Set Affect Earnings Quality?. *Jurnal Akuntansi*, 25(1), 54-69.

Ayu, I., Dika, G., & Sari, M. (2020). Profitability and Liquidity on Firm Value and Capital Structure as Intervening Variable. *International Research Journal of Management, IT & Social Sciences, 7(1), 116–127.*

Ayu, S. F., Verawati, & Supriana, T. (2021). Impact of diversification of CPO to biodiesel on financial performance and stock price of palm oil plantation company. IOP Conference Series*: Earth and Environmental Science, 782(2).* https://doi.org/10.1088/1755-1315/782/2/022048

Bahreini, V., Baghbani, M., &Bahreini, R. (2013). Analysis between financial leverage with the stock price and the operational performance of the accepted companies in Tehran' s stock market. *European Online Journal of Natural and Social Sciences* 201, 2(3), 25–34.

Barbosa, N., &Louri, H. (2005). Corporate performance: Does ownership matter? A comparison of foreign and domestic owned firms in Greece and Portugal. *Review of Industrial Organization,* 27(1), 73–102.

Cai, J., & Zhang, Z. (2011). Leverage change, debt overhang, and stock prices. *Journal of Corporate Finance*, 17(3), 391–402. https://doi.org/10.1016/j.jcorpfin.2010.12.003

Chandra, T., Junaedi, A. T., Wijaya, E., & Ng, M. (2022). The impact of co-structure of capital, profitability and corporate growth opportunities on stock exchange in Indonesia. *Journal of economic and administrative sciences*, 38(2), 246-269.

Chantal, M., Namusonge, G. S., & Shukla, J. (2018). Influence of information asymmetry on commercial banks' lending performance in Rwanda.

International Journal of Academic Research in Business and Social Sciences, 8(3), 170–188. https://doi.org/10.6007/ijarbss/v8-i3/3912

Danila, N., Noreen, U., Azizan, N., Farid, M., & Ahmed, Z. (2020). Growth opportunities, capital structure and dividend policy in emerging market: Indonesia case study. *The Journal of Asian Finance, Economics and Business*, 7 (10), 1–8. https://doi.org/10.13106/JAFEB.2020.VOL7.NO10.001

Delmar, F., Davidsson, P., & Gartner, W. B. (2003). Arriving at the high-growth firm. *Journal of business venturing*, *18*(2), 189-216.

Drobetz, W., Grüninger, M. C., &Hirschvogl, S. (2010). Information asymmetry and the value of cash. *Journal of banking & finance*, *34*(9), 2168-2184.

Elumilade, D. O. (2008) "Stock market efficiency and economic growth in Nigeria: An empirical re- examination" Winter 2008. *Hawaii Global Conference on Business and Finance.*

Fosu, S. (2013). Capital structure, product market competition and firm performance: Evidence from South Africa. *The quarterly review of economics and finance*, *53*(2), 140-151.

Gim, J., & Jang, S. S. (2020). Share repurchases and stock market reactions: Messages from the restaurant industry. *International Journal of Hospitality Management, 86, 102457. https://doi.org/10.1016/j.ijhm.2020.102457*

Gompers, P. A. (2022). Optimal investment, monitoring, and the staging of venture capital. In Venture Capital (pp. 285-313). Routledge.

He, W. P., Lepone, A., & Leung, H. (2013). Information asymmetry and the cost of equity capital. *International Review of Economics & Finance*, *27*, 611-620.

Hutton, A.P., Marcus, A.J. and Tehranian, H. (2009), "Opaque financial reports, R2, and crash risk", *Journal of Financial Economics, 94 (1) 67-86*

Huynh, T. L. D., Wu, J., & Duong, A. T. (2020). Information asymmetry and firm value: Is Vietnam different? *Journal of Economic Asymmetries. 21(47) https://doi.org/10.1016/j.jeca.2019.e00147*

Ittner, C. D., &Larcker, D. F. (1998). Are non-financial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research,* 36, 1–35

Jawed, M. S., Tapar, A. V., &Dhaigude, A. S. (2021). Crisis, firm characteristics and stock performance: Evidence from hospitality and tourism. *Tourism Recreation Research, 0(0), 1–18. https://doi.org/10.1080/02508281.2021.1899536*

Juwita, C. P., & Diana, N. (2020). The Effect of DER and ROE on stock price JII companies. *Management Analysis Journal, 9(4).*

Kartini, K., &Arianto, T. (2008). Strukturkepemilikan, profitabilitas, pertumbuhanaktivadanukuranperusahaanterhadapstruktur modal padaperusahaanmanufaktur. *JurnalKeuangandanPerbankan*, *12*(1), 11-21.

Kieu, T., Phan, H., & Tran, N. H. (2019). Does ownership structure dividend policy and stock price volatility in an emerging market: Does ownership structure. *Cogent Economics & Finance, 7(00).* *https://doi.org/10.1080/23322039.2019.1637051*

Kong, D., Xiao, T., & Liu, S. (2011). Asymmetric information, firm investment and stock prices. *China Finance Review International*.

Kothari, S.P., Shu, S. &Wysocki, P.D. (2009). Do managers withhold bad news? *Journal of Accounting Research, Vol. 47 No. 1, pp. 241-276.*

Mai, M. U. (2006), AnalisisVariabel-Variabel yang MempengaruhiStruktur Modal Pada Perusahaan-Perusahaan LQ-45 di Bursa Efek Jakarta, Ekonomika, Hal. *PoliteknikNegeri, Bandung.* 228- 245.

MAWARDI, W. (2018). Determinants of the stock price volatility in the Indonesian manufacturing sector. *International Research Journal of Business Studies*, *11*(3), 179-193.

Mohammed, L. (2021). Financial leverage of quoted diversified the effect of firm specific characteristics on financial leverage of quoted diversified. May 2020. https://doi.org/10.32890/mmj.23.2019.9683

Muigai, R. G. &Maina, M. W. (2018). Effect of credit risk management practices on performance of commercial banks in Kenya. *International Journal of Finance and Banking Research.* Vol 4. Issue 3. Pp 57-66.

Myers, S.C. (2001) Capital structure. *The Journal of Economic Perspectives, 15, 81-102.* *http://dx.doi.org/10.1257/jep.15.2.81*

Omaliko, E., &Ogochukwu, O. (2021). Impact of dividend policy on share price of listed ict firms in Nigeria. *International Journal of Academic Research in Business and Social Sciences, 1(9), 1489–1502.* *https://doi.org/10.6007/IJARBSS/v11-i9/8937*

Omaliko, E., Nweze, A., &Nwadialor, E. (2020). Effect of social and environmental disclosures on performance of non-financial firms in Nigeria, *Journal of Accounting and Financial Management, Management, 6(1), 40-58.*

Pan, A., &Misra, A. K. (2020). Assessment of asymmetric information cost in Indian stock market: A Sectoral Approach. *Global Business Review. https://doi.org/10.1177/0972150919865085*

Pattiruhu, J. R., &Paais, M. (2020). Effect of liquidity, profitability, leverage, and firm size on dividend policy. *The Journal of Asian Finance, Economics, and Business, 7(10), 35–42. https:// doi.org/10.13106/jafeb.2020.vol7.no10.035*

Pranata, D., & Pujiati, D. (2015). The effect of liquidity, profitability, sales growth, and dividend policy on stock prices after the implementation of IFRS. *The Indonesian Accounting Review, 5(2), 169-178.*

Putranto, R. C. A., Wijayanti, A., &Masitoh, E.. (2019). Effect of liquidity, profitability, solvency, and company size on stock prices of consumer goods industry companies on the Indonesia stock exchange. *PublikasiIImiah, 3(4), 107–124. https:// publikasiilmiah.ums.ac.id/handle/11617/10724*

Riani, M., Muda, I., &Rini, E. S. (2020). The analysis of the influence of financial performance on stock prices with earning growth as a moderating variable in infrastructure, utility and transportation sector companies listed on the Indonesia stock exchange. *International Journal of Innovative Science and Research Technology, 5(8), 897–904. https://doi.org/10.38124/ijisrt20aug371*

Ryu, H., &Chae, S. (2021). The effect of managerial ownership on stock price crash risk in distribution and service industries. *Journal of Distribution Science 19-1, 1, 27–35.*

Shehu, Z. (2017). Effect of audit committee characteristics and ownership structure on financial performance of listed oil and gas firms in Nigeria. Unpublished Thesis, ABU Business School, Ahmadu Bello University. Retrieved from: https://kubanni-backend.abu.edu.ng/server/api/core/bitstreams/97863d7b-4d28-4850-a850-d4f7b726e0af/content

Simu, N., & Pangaribuan, A. M. (2020). Determinants of Indonesian share price: Do capital structure, sales growth, and profitability matter*? International Journal Economics. Management Studies, 7, 174-181.*

Singh, N. P., & Tandon, A. (2019). The Effect of Dividend Policy on Stock Price: Evidence from the Indian Market. *Asia-Pacific Journal of Management Research and Innovation, 15(1–2), 7–15. https://doi.org/10.1177/2319510X19825729*

Sjahruddin, H., Mansyur, A., Mus, A. R., Rahman, Z., &Suriyanti, S. (2020). Financial Performance as Mediator on the Impact of Capital Structure, Wealth Structure, Financial Structure on Stock Price: The Case of the

Indonesian Banking Sector. *European Journal of Business and Management Research, 5(5). https://doi.org/10.24018/ejbmr.2020.5.5.526*

Spence, M. 1973. Job market signaling. *Quarterly Journal of Economics, 87: 355-374.*

Suwanna, T. (2012). Impacts of dividend announcement on stock return. *Procedia – Social and Behavioral Sciences.* 40, 721- 725. https://doi.org/10.1016/j.sbspro.2012.03.255

Tahu, G. P., &Susilo, D. B. (2017). Effect of liquidity, leverage and profitability to the firm value (dividend policy as moderating variable) in manufacturing company of Indonesia stock exchange. *Research Journal of Finance and Accounting, 8(18), 2222-1697*

Thisday (2017). *Kari Condemns nonpayment of dividend*. Retrieved from: https://www.thisdaylive.com/index.php/2018/03/07/kari-condemns-non-payment-of-dividend-by-insurance-firms/

Umar. G. (2009). Environmental Factors Influencing Fluctuation of Share Prices on Nigeria Stock Exchange Market. *An International Multi-Disciplinary Journal, Ethiopia. 3 (5)*

Vanguard (2019). *Stock market in 2018: Investors' loss peak at N1.9 trn Year to Date*. Retrieved from: https://www.vanguardngr.com/2019/01/stock-market-in-2018-investors-loss-peak-at-n1-9-trn-year-to-date/

Xiea. W., Ye, C., Wang, T., & Shen, Q. (2020). M&A goodwill, information asymmetry and stock price crash risk. *Economic research-Ekonomskaistraživanja*, *33*(1), 3385-3405.

Zhao, L., Li, N., & Wu, Y. (2023). Institutional investors' site visits, information asymmetry, and investment efficiency. *International Review of Financial Analysis*, 88, 102674.

Effects of Survival Strategies on the Success of Entrepreneurial Activities amid Banditry and Kidnapping in Gusau Metropolis, Zamfara State

Mulikat FolaShade Usman[1] and Lubabatu Musa Anka[2]
[1]Department of Business Administration, Usmanu Danfodiyo University, Sokoto
Email: mulikat.usman@udusok.edu.ng[1], lubabatumusaanka@gmail.com[2]
https://doi.org/10.57233/gijmss.v7i3.03

Abstract

The paper examined the effect of survival strategies on entrepreneurial success amid banditry and kidnapping in Gusau Metropolis of Zamfara state. A sample of sixty one entrepreneurs was selected using purposive sampling techniques. The justification for the limited sample size of sixty one is because of inaccessibility to the entrepreneurs, since most of them have closed their business because of the issue of Banditry and kidnapping. The study hypothesis was tested using linear regression to analyze the relationship between dependent variable and independent variables, while SPSS version 14 was used for the analysis. The survival strategies which include; adapted risk with B= -.159, P-value= .141, allocation of financial resources to security B= .255, P-value=.006 and insurance coverage B= .067, P-value= .207. Results revealed a significant negative relationship between banditry and entrepreneurial survival strategy. The study concluded that banditry and kidnapping have a significant effect on entrepreneurial survival in Zamfara state. The implications of the study to the Government, entrepreneurs and stakeholders are related to the allocation of financial resources to security. The study recommends among others that entrepreneurs (owner managers) should contribute certain amount of money for security matters. Also Government of Zamfara should intensify efforts to tackle banditry and support entrepreneurial survival in the state.

Keywords: Banditry, Entrepreneurship, Survival strategies, Zamfara

1.0. Introduction

The prevalence of banditry in Nigeria particularly in the Northern Western States has escalated significantly in recent years. Armed bandits' attacks encompass shootings, killings, cattle rustling, kidnapping, rapes, devastation of entire villages, along with the looting of valuables (Ofama & One, 2020). Philip (2021) and Abraham et al., (2022) defined "Armed banditry involves violent crimes such as armed robbery, kidnapping, cattle rustling, characterized by the use of force or threat to intimidate and coerce victims". Kaduna, Katsina, Kebbi, Zamfara and Sokoto states have experienced the most acute instances of banditry with Katsina, Kaduna and Zamfara states being the hardest hit (Atubi,2022).The frequency of bandits attack in these states is alarming with hardly a day passing without incident of attacks on individuals, communities, institutions and other business

ventures. Entrepreneurship plays a crucial role in economic growth by generating jobs, fostering local technology development, and contributing to nation building (Ismail, 2019). A stable macroeconomic environment is vital for entrepreneurship to thrive and attract both local and foreign investors. However, the unstable economic conditions in many developing countries have left entrepreneurial business vulnerable to shocks from internal and external factors (Thomas et al, 2020). Entrepreneurship constitutes a vital component of both developed and the developing nations, contributing to the overall growth and development of various nations. The emergence of banditry activities in Zamfara state has created a very serious challenge to the entrepreneurial business operating in Zamfara state. Numerous studies such as; Amosa (2018), Chukume (2019), Abdulyakeem (2020), Onodogo (2021), Abdullahi (2022), Dibiri (2023), Sunday *et al* (2023) have conducted studies on banditry and survival strategies of entrepreneurs in Nigeria and majority of the studies were conducted outside Zamfara state, while other studies were not on banditry survival strategy as done in this study. Therefore, studies focusing on the effect of banditry and entrepreneurial survival strategy particularly on Zamfara State are scarce in the literature. Following this background the present study seeks to examine the effect of survival strategies on the success of entrepreneurial activities amid banditry and kidnapping in Gusau metropolis, Zamfara State**.** Therefore the most pertinent question are; there any relationship between banditry and entrepreneurial business survival strategies? And to what extent does banditry and kidnapping necessitate the adoption of specific survival strategies by entrepreneurs in Zamfara state?

Based on that the following hypotheses were formulated:

H_{01}: There is no significant relationship between the frequency of banditry incidents and the adoption of survival strategies in Zamfara state

H_{02}: There is no significance relationship between banditry and kidnapping and necessity for adoption of survival strategies in zamfara state

This paper is structured into five sections. Section one gives the brief introduction followed by literature review. The third section is the methodology used. The fourth section discusses the results, while the fifth section is the recommendations and conclusion of the study.

2.0 Literature Review

Simpson *et al* (2007) maintained that organizational survival is a multidimensional concept which has no single significant element as its measure

of analysis. Arfid et al., (2021) defines a company's survival strategies as the company's ability to survive in various conditions. The company's survival strategy is closely related to its ability to survive. Developing strategies is one of the efforts that can be adopted by entrepreneurs so that they can still survive the banditry era.

Amosa et al., (2018) carried out a study to assess government regulations and survival of entrepreneurs. The study adopted stratified simple random technique; also questionnaires were served to 144 out of the 226 registered entrepreneurs. The study used regression and correlation analysis to test the two hypotheses formulated. The findings of the study reveal that governmental regulations have significant influence in the survival of entrepreneurial businesses and that strong relationship exist between tax policy and the growth of entrepreneurs. Hence the study recommends that government should legislate against multiple taxation and make funds available to regulatory agencies and financial institutions established statutorily to cater for the growth and survival of entrepreneurs. Obiageli and Ojukwu (2018) in a study carried out to assess the survival strategies for entrepreneurs and business organizations in Nigeria under economic recession. The study used survey research, and questionnaires were distributed to both micro and small enterprises in order to test for correlation and t-test was carried out to confirm whether a relationship and significant difference exist between two groups and two-way ANOVA was also used to test the formulated hypotheses. The result of the study revealed that during economic recession in Nigeria, many entrepreneurs and businesses went folded up, while others scaled through. The study also found that many organizations adopted several survival strategies, which includes retrenchment of staff and other short-term strategies, which turned out to be successful or risky.

Abdulrasheed (2020) studied the relationship between banditry and human security in Northwestern Nigeria amid the present social and political challenges in the country. The study used the fragile theories, collapse state, failed state as models for analysis as well as qualitative content analysis. The result shows that bad democratic governance was responsible for insecurity in the country which gave rise to robberies, kidnappings, bunkering of oil pipelines as well as the emergence of militancy in the country. The study recommends that internal security cannot be granted until, good democratic governance is put in place, security agencies well-funded and trained with modern gazette system.

Onoduga, Ochiaka and Odo (2021) examine the relationship between terrorism, banditry and corruption with the aim of finding out if there exist a relationship between banditry and poverty. The study is a qualitative research which used secondary data. The result of the study found that banditry has been taking place in Nigeria due to the activities of insurgent groups in the Northeast region, which make "Boko Haram" terrorism on the increase in the north central Nigeria. The result also shows that there is no relationship between corruption and banditry, but a strong relationship exists between unemployment and banditry in Nigeria. The study recommends that unemployment and corruption must be reduced for banditry to be eradicated in Nigeria, terrorism and insurgency should be fought and strategic security action should be onslaught against terrorism and insurgency.

Abdullahi and Abraham (2022) examine the causes of rural banditry in Nigeria and the reasons why the problem still persist and continue to worsen, despite government's effort to curtail it. The study employed descriptive and historical methods and generated data from documentary sources and was analyzed qualitatively. The study found that rural banditry in the North is more violent and militarized and the process of achieving peace is a huge one. The study recommends the practice of good governance, and choosing the appropriate socio economic policies towards the improvement of the standard of living of the people in order to attain the desired peace in the region.

Ojo, Oyewole and Aina (2023a) studied the impact of banditry and kidnapping on Nigeria's economic growth in the fourth republic. The study used ordinary least square (OLS) multiple regression analysis technique. The result indictaes that unemployment has an inverse relationship, while poverty has a direct relationship with gross domestic product. The study recommends that government should introduce laws that will prohibit ransomed payment for kidnapped victims, create jobs and provide social security for the unemployed in the society.

Ojo, Oyewole and Aina (2023b) Studies forces of terror armed banditry and insecurity in Northwest Nigeria. The study was a survey research which used secondary sources of data to examine the causes and the dimensions of armed banditry in Northwest Nigeria and the implication on security. The study found that armed banditry in the Northwest and other parts of Nigeria surpass pastoralist insurgency. Result revealed a negative impact of armed banditry on human and natural security in the region.

Dibiri and Akkintan (2023) investigated the relationship between product quality strategy, service strategy, pricing strategy and income diversification strategy on entrepreneurial growth in Ogun state senatorial district. The study was a survey research, which used questionnaire as an instrument of data collection. A sample of 385 entrepreneurs was selected in Ogun state senatorial district and the data was analyzed using descriptive statistics. The result of the study reveals that survival strategies significantly influence entrepreneurial growth in Ogun state senatorial district. The study recommends that entrepreneurs adopt sustainable survival strategy in order to mitigate changes that manifest in an organizations environment.

Igbadoo, Ahungwa, Aondona and Abara (2023) studied the effect of banditry on growth and sustainability of small scale businesses in Zamfara North. The study was a survey research, as it employed both primary and secondary data and used both descriptive and inferential statistics to evaluate how insecurity and customer's patronage as well as incessant attacks on the community affects the growth and sustainability of small scale businesses in Kaura Namoda. Chi-square statistical techniques were used via SPSS to test the hypotheses formulated for the study. The result of the findings shows that insecurity has significant effect on customer's patronage of small businesses in Kaura Namoda. Incessant attacks on residents significantly affected growth and sustainability of small scale businesses in Kaura Namoda Metropolis.

3.0 Methodology

The study is a quantitative survey research method. Population of the study comprises of 75 registered entrepreneurs within the metropolis Zamfara state, purposive sampling technique was adopted in the choice of 61 entrepreneurs in Zamfara central within Gusau metropolis. The justification for the limited sample size of sixty one is because of inaccessibility of the entrepreneurs, since most of them have closed their business because of the issue of banditry. While purposive sampling was used because we believe the owner of the business are in the best place to answer the questions. Sixty one questionnaires were administered to entrepreneurial owners within Gusau metropolis. The questionnaire was divided into two sections A and B. Section A was based on the demographic data and characteristics of the entrepreneurs, while section B comprises of five point likert scale ranging from strongly agree (5), agree (4), undecided (3), disagree (2), and strongly disagree (1). The data was analyzed using multiple regression analysis as it's a method of analyzing relationship between dependent variable and the

independent variables. Regression analysis is a series of statistical modelling processes that helps analysts estimate relationships between one, or multiple, independent variables and a dependent variable.

Multiple regression analysis model can be written as in (1).

$$Y = b_0 + b_1X_1 + b_2X_2 + \ldots\ldots\ldots\ldots + b_pX_p + U \quad (1)$$

Where Y stands for the predictive value or dependent variable, the variables X_1, $X_2 \ldots X_p$ through X_p represent the predictive values, or independent variables, causing a change in Y, the variable b_0 represent the Y-value when all the independent variables X_1 through X_p are equal to zero and the variables b_1 through b_p represent the regression coefficients, while U is an error term.

Five main assumptions underlying multiple regression models must be satisfied: linearity, homoskedasticity, independence of errors, normality, and independence of independent variables.

However regression model has certain limitations: it cannot be used when we are talking of attribute, It cannot be used when the relationship between dependent variables and independent variables is nonlinear.

In this study, the multiple regression model used is given in (2).

$$ES = b_0 + b_1*BAR + b_2*AFS + b_3*ICV + U \quad (2)$$

Where BAR= Business Adapted Risk, AFS= Allocation of Financial Resources to Security and ICV=Insurance Coverage

3.1 Validity and Reliability of the Research Instrument

A pilot testing of the instrument was carried out to ascertain both content and external validity of the instrument. A retest was also carried out to enable the researcher evaluate the reliability of the instrument in which the same test was given to the same people after a period of time. The reliability of the instrument can then be estimated by examining the consistency of the responses between the two tests. To determine the reliability of empirical measurements is by the retest method, an internal consistency reliability test, using the Cronbach's Alpha was carried out to determine the reliability of the research instrument and check the consistency of results across items.

3.2 Measurement of variables

There are two variables: the dependent variable and the independent variables.

The dependent variable which is entrepreneurial success measured by profit margin. On a five point likert scale (there is different between my profit margin before and after the insurgency, I was force to close my business due to insurgency, my business has been able to adapt to the challenges posed by banditry and kidnapping) .While the independent variable is the survival strategies measured using five point likert scale (my business adapted strategies to mitigate risk, my business allocated financial resources to security, my business has an effective insurance coverage, my business adopts a specific survival strategy).

4.0 Data Analysis and Presentation

Demographic Data

Table 1: Distribution of Respondents based on Sex

SEX	Freq.	Percent	Valid Percent	Cumulative Percent
Female	12	19.7	19.7	19.7
Male	49	80.3	80.3	100.0
Total	61	100.0	100.0	

Table 1 shows the distribution of respondents based on the gender. The result revealed that out of 61respondents, 49(80.3%) are male, while 12(19.7%) are female. Meaning that majority of the respondents are male.

Table 2: Distribution of Respondents based on Marital Status

Categories	Freq.	Percent	Valid Percent	Cumulative Percent
Single	6	9.8	9.8	9.8
Widowed	2	3.3	3.3	13.1
Divorced	2	3.3	3.3	16.4
Married	51	83.6	83.6	100.0
Total	61	100.0	100.0	

Table 2 above revealed that out of 61 respondents, 6(9.8%) are single, 2(3.3%) are widowed, 2(3.3%) are divorced and 51(83.6%) are married. These results revealed that majority of the respondents are married.

Table 3: Distribution of Respondents based on Age Group

Age group	Freq.	Percent	Valid Percent	Cumulative Percent
Below20years	3	4.9	4.9	4.9
20-30years	9	14.8	14.8	19.7
31-40years	27	44.3	44.3	63.9
Above40years	22	36.1	36.1	100.0
Total	61	100.0	100.0	

Table 3 describes the distribution of respondents based on the age groups. The results revealed that out of 61 respondents, 3(4.9%) are below the ages of 20, 9(14.8%) are between the ages of 20 to 30years, 27(44.3%) are between the ages of 31 to 40, while 22(36.1%) are above 40years. These results revealed that majority of the respondents are between ages of 31-40years.

Table 4: Distribution of Respondents based on Business Ownership

Ownership	Frequency	Percent	Valid Percent	Cumulative Percent
No	10	16.4	16.4	16.4
Yes	51	83.6	83.6	100.0
Total	61	100.0	100.0	

Table 4 shows the distribution of response to the data based on the ownership of business. The results revealed that out of 61respondents, 51(83.6%) own a business, while 10(16.4%) did not own a business. This implies that majority of the respondents own their business.

Table 5: Distribution of Respondents based on Sectors

Sectors	Frequency	Percent	Valid Percent	Cumulative Percent
Others	1	1.6	1.6	1.6
Agriculture	18	29.5	29.5	31.1
Services	9	14.8	14.8	45.9
Manufacturing	7	11.5	11.5	57.4
Wholesale and Retailer	26	42.6	42.6	100.0
Total	61	100.0	100.0	

Table 5 presents the distribution of respondents based on the business sectors. The results revealed that out of 61respondents, 18(29.5%) belong to agriculture sector, 9(14.8%) belong to service sector, 7(11.5%) belong to manufacturing sector, while 26(42.6%) are from Wholesale &Retailer sector. This result revealed that majority of the respondents are wholesalers & Retailers.

Table 6: Distribution of Respondents based on Sectorial Influence on their Entrepreneurial Activities

Responses	Frequency	Percent	Valid Percent	Cumulative Percent
NO	28	45.9	45.9	45.9
YES	33	54.1	54.1	100.0
Total	61	100.0	100.0	

Table 6 is the distribution of respondents based on the sectorial influence on entrepreneurial activities. The results revealed that out of 61respondents, 33(54.1%) have their business activities being influenced by the business sectors, while 28(45.9%) did not have their business activities being influenced by the business sectors. This implies that the majority of the respondents have their business activities being influenced by the business sectors.

Table 7: Frequencies of Responses on the Closure of entrepreneurial business Due to Insurgency

Responses	Freq.	Percent	Valid Percent	Cumulative Percent
Undecided	1	1.6	1.6	1.6
Strongly disagree	1	1.6	1.6	3.3
Disagree	2	3.3	3.3	6.6
Agree	33	54.1	54.1	60.7
Strongly Agree	24	39.3	39.3	100.0
Total	61	100.0	100.0	

Table 7 shows the results of the respondent on the closure of entrepreneurial due to banditry and kidnapping. The result revealed that out of 61 respondents, 24(39.3%) strongly agree, 33(54.1%) agree, 2(3.3%) disagree, 1(1.3%) strongly disagree and 1 (1.6%) undecided.

This implies that 24+33=57 which constitute 93.4% agree that entrepreneurial activities are closed down due to banditry and kidnapping activities.

Table 8:Freq. of Responses on the Difference in Profit Margin Due to Insurgency

	Freq	Percent	Valid Percent	Cumulative Percent
Undecided	3	4.9	4.9	4.9
Disagree	2	3.3	3.3	8.2
Agree	48	78.7	78.7	86.9
Strongly disagree	8	13.1	13.1	100.0
Total	61	100.0	100.0	

Table 8 shows that the results of the respondents on the difference in profit margin due to banditry. The results revealed that out of 61 respondents, 8(13.1%) strongly agree, 48(78.7%) agree, 2(3.3%) disagree, 3(4.9%) strongly disagree. This implies that 8+48=56 which constitute 91.8% agree that there is significant drop down on difference in profit margin due to banditry.

Table 9: Descriptive Statistics of the Survival Strategies Adopted by entrepreneurs amid Banditry and kidnapping

	Mean	Std .Deviation	N
Business successful	3.0164	.52414	61
Business Adapted Risk	2.9672	.65745	61
Allocation of Financial Resources to Security	2.9344	.77177	61
Insurance Coverage	1.5738	1.25776	61

Table 9 shows the results of mean and standard deviation (SD) of Survival Strategies Adopted by entrepreneurs amid Banditry and kidnapping. The result on business success has mean =3.0164 and of SD =0.52414. This result implies that the majority of the respondents agree that entrepreneurs are still surviving Banditry activities.

The result on allocation of financial resources to security has mean =2.9344 (approximately3) and of SD=0.77177. This result implies that the majority of the

respondents adopted strategy of allocation of financial resources to security amid Banditry and kidnapping activities.

The result of Insurance Coverage shows the mean =1.5738 and SD =1.1.25776. This result implies that the majority of the respondents disagreed with the adoption of insurance coverage amid Banditry and kidnapping activities.

Table 10: Distribution of Respondents on Adoption Survival Strategies

Categories	Frequency	Percent	Valid Percent	Cumulative Percent
No	6	9.8	9.8	9.8
Yes	55	90.2	90.2	100.0
Total	61	100.0	100.0	

Table 10 shows the distribution of respondents on the adoption of strategies amid banditry. The results revealed that out of 61respondents, 55(90.2%) adopted one or more survival strategies, while 6(9.8%) did not adopt any survival strategy. This implies that the majority of the respondent adopted one or more survival strategies amid banditry and kidnapping activities.

Regression Result

Table 11: Multiple Linear Regression Analysis of Survival Strategies on entrepreneurial Survival

Model	Coefficients		t	Sig.
	B	Std. Error		
(Constant)	2.635	.330	7.974	.000
Business Adapted Risk	-.159	.106	-1.494	.141
Allocation of Financial Resources to Security	.255	.089	2.868	.006
Insurance Coverage	.067	.053	1.277	.207

Table 11 presents the results of regression analysis of effect of survival strategies adopted by entrepreneurs amidst banditry insurgency. The survival strategies

considered include business adapted risk, allocation of financial resources to Security and Insurance Coverage. The result of B=0.255 with p value =0.006<0.05 for allocation of financial resources to security shows that allocation of Financial Resources to Security has positive and significant effect on business survival at 5% level of significance. The results of B =-0.159 with p-value=0.141>0.05 and B=0.067 with p-value=0.207>0.05 for Business Adapted Risk and insurance coverage indicated lack of significant impact.

Table 12: Goodness of Fit for Regression Model on Survival Strategies for Entrepreneurial Success

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.726[a]	.527	.513	.49363

a Predictors: (Constant), Insurance Coverage, Allocation of Financial Resources to Security, Business Adapted Risk.

Table 12 presents the results of how fit is the Regression Model on Entrepreneurial growth. The result revealed correlation coefficient r=0.726(72.6%) and coefficient of determination r^2=0.527 indicating the regression model obtained is good and robust for the prediction of entrepreneurial survival and the predictors Insurance Coverage, Allocation of Financial Resources to Security, Business Adapted Risk.

Discussion of findings

Result from table 10 shows that 90.2% of the respondents adopted one or more survival strategies, while 90.8% did not, this implies that majority of the respondent adopted one or more survival strategies to survive. Table 11 shows that allocation of financial resources to security has positive and significant effect on entrepreneurial survival. The result is in agreement with the work of Onoduga, Ochiaka and Odo (2021)

5.0 Conclusion and Recommendations

Upon the research findings the study concludes that banditry and kidnapping have a significant effect on entrepreneurial success in Gusau metropolis, specific allocation of financial resources to securities has a significant effect on entrepreneurial success in Gusau metropolis, Zamfara State with P – value of 0.006 less than 0.005. The study recommends that the entrepreneurs i.e the owner

managers should be contributing funds to the securities operative in the metropolis so as to tackle the issue of insecurities. Additionally the Zamfara state government should put effective measures on mobilization of more financial resources in order to adequately finance security

5.1 Direction for Future Research

The study was confined to a single geographical location in the North Western Nigeria, it is recommended that future researchers can examine the effect of survival strategies on the success of entrepreneurial activities amid banditry and other form of insurgency the Northwestern States.

.

References

Abdul Yakeen, A. (2020). Armed banditry and human security in northwestern Nigeria: The impact and the way forward: *Journal of humanities, social and management science.* Edwin clerk university kiagbodo 1(1),159703796.

Abubakar, Ahmad. (2020). Coronavirus (covisdia): effect and survival strategy for business. In *Journal of economics and business*, 3, (2),66-671 Doi 10.3104/aior.1992.03.02.229 https:// www.asianintituceofresearch.org

Abraham, S.O &Auwalu, A. (2022). Rural banditry and the crises of peace building in northern *Nigeria: Journal of scientific research* 7(1): 9-17,2022 2550-794.

Adebisi, Abayomi| Bakare and Nimota Adefunke (2019). Survival strategies and sustainability of small and medium enterprises in a volatile environment. In: *management dynamics in the knowledge of economy,* 7(4/26), 5.553-569. Doi:10.25019/MDKE/7.4.07 https//hdi.handlernet/11159/4185.

Arifid, F. N, Elsa, S. Shidqy F. (2021). The survival strategies of micro, small and medium enterprises in the new normal era*: Journal Ekonomidanpembagunanvol*.xii, No 2, 142-149, https://bit.lydinamika-ekonomi.

Ashara, Obiageli. E. Chukwuemeka Odumegwu Ojukwu (2018). Study of survival strategies for entrepreneurs and business organizations in Nigeria under economic recession. *International Journal of Research Culture Society* ISSN: 2456-6683 2, Issue (12)

Barney .J.B.,(1991). Firm resource and sustained competitive management advantage .*Journal of management* 17(1),99_120.

Chia, Innocent Igbadoo,Ahungwa, Philip Aondona &Onu Abara (2023) *Quest Journals Journal of Research in Business and Management* 11 (2) 101-109 ISSN(Online):2347-3002 www.questjournals.org

Chukwaeme K.K, Phinos N. and agaba, H. (2019). The impact of banditry and kidnapping on Nigeria's economic growth in the fourth republic: An analysis https://www.researchgate.net/publication/350671551.

Hetika, H. Rabiyatul, A.K. and Arifia, Y. (2023). The analysis of survival strategies for micro and small and medium Menterprises (MSMES) food and Beverages in the time of covidal.19 pandemic (case study on MSMES in the food and beverage) https://doi.org/10.2991/978-2-494069-09-1-44

Ismail, A., Mohammad, D. (2023). Survival strategies and small and medium enterprises growth: evidence from ogun state senatorial district. *Arabian journal of business and management review*. Oman chapter. 11(1), 2023, 11-16,2617-3190.

Idowu, B. I and Arua, M.C (2023). Nigerian security conundrum: An analysis of patterns and trends of banditry in northwest Nigeria: *European Journal of theoretical and applied science,* 1(3),215-224 doi: 10.59324/ejtas.2023.1(3).24 sisira kumara N.G, EMSE.GAKNJ

John Sunday Ojo, Samuel Oyewole & Folahanmi Aina (2023): Forces of terror: armed banditry and insecurity in northwest Nigeria, democracy and security, doi:10.1080/17419166.2023.2164924. https://doi.org/10.1080/17419166.2023.2164924.

Malino, C.M. & Ebi, R.G M (2021). Business management competences as the driver of small and medium enterprises survival during covid-19 pandemic, puissant, 3,296-315.

Mishrif. A & khan, A (2021). Technology adoption as survival strategy for small and medium enterprises during covid-19.

Mulikat Folashade Usman & Nasiru Liman Zuru (2019). The determinants of Entrepreneurship Activities: A literature Review *International Journal of Novel Research in Marketing Management and Economics* 6, Issue (3), (45-51), Available at: www.noveltyjournals.com

Okwuwads.N. (2023): The modern consequences, causes and nature of kidnapping, terrorism, banditry and violent crime in Nigeria: a comprehensive analysis https://mpra.ub.unimuenchen.de/117671/MPRA paper No 117671

Onoduga, I.C, Ochiaka D.I. Olaci.C.R, Odo.V. (2021): Banditry in northwest Nigeria. Complicating Nigeria security challenges. *International Journal of advanced reseach and development* 2021,6(3):01-05.

Philip, T.V (2021). State response to armed banditry in Nigeria: 2011-2021 kanuikechuikwa 01 February 2023.

Thomas. A.O. Awoniyi, O.C, Okeya, I.O (2020). Macroeconomic instability and SMES in Nigeria: error correction mechanism approach (1999-2017) 11(2): 2020, P.35-44. *Journal of economics and finance* https://www.reseachgate.net/publication/342214955.

Tinotheous, R. (2022). Measuring the impotence of SMES to the national economy: the case of Greece.

Service Provider Empathy and Responsiveness for Customer Satisfaction in the Telecommunications Sector

[1]Adedoyin, S.A., PhD & [2]Igbinedion Airenvbahahie

[1,2]Department of Business Administration, Benson Idahosa University, Benin City, Edo State. Nigeria
Corresponding Email: sadedoyin@biu.edu.ng
https://doi.org/10.57233/gijmss.v7i3.04

Abstract

Customer satisfaction remains one of the crucial determinants of customer patronage and eventual organizational performance. Exploring service provider empathy and responsiveness for customer satisfaction in the telecommunications sector was the main thrust of this paper. The effects of empathy and responsiveness as dimensions of service quality were examined to establish their effect (if any) on satisfaction of mobile network users in the three major senatorial districts in Edo state. Appropriate research questions in alignment with the objectives of the study were raised, coupled with corresponding hypotheses which were tested to conduct the study. The study employed cross sectional research design executed through a survey using a total of 400 respondents as sample derived from a population of 7.1 million subscribers using the Krecjie and Morgan table for sample size determination. Data was obtained through a well- structured instrument designed in a five form Likert scale. The instrument was established to be reliable by using Cronbach alpha test. The obtained alpha values were over 0.7 for all constructs of the variables studied, indicating a high degree of items consistency. We analyzed the data using regression analysis for hypotheses testing. The results show significant effect of service provider responsiveness and service provider empathy on customer satisfaction. From the findings of the study, it is recommended that the telecommunication companies should boost customer satisfaction.

Keywords: customer satisfaction, service quality, responsiveness, empathy

1.0. Introduction

The telecommunications industry in Africa has experienced rapid growth occasioned by increasing mobile phone access and the expansion of internet services. The sector however, faces significant challenges related to service quality, infrastructure deficits, regulatory issues, and economic constraints all of which impede the delivery of high-quality telecom services (ATU, 2019). This has resulted in service failures which often spark customers' anger, hence the need for service recovery to assure customer satisfaction. It remains a key activity in actualizing customer satisfaction which occurs when a service provider

addresses service failure (Mir, Ashraf, Abbas, Sial, & Nawaz, 2023). It is a crucial aspect of customer relationship management as it can restore customer trust and loyalty, while poor recovery can exacerbate dissatisfaction and lead to negative word-of-mouth (Johnston & Michel, 2008; Mir et al., 2023).

The African Telecommunications Union (ATU) highlights that the telecom operators in Africa struggle with maintaining consistent service quality, which adversely affects the satisfaction levels of customers (ATU, 2019). This situation is further worsened by poor service recovery which could have remedied the situation. Literature identifies empathy and responsiveness as two vital components for service recovery and effective clients' services management. Empathy describes the organization's capacity to comprehend and share the customer's feelings, creating a sense of care and concern during the resolution process, while responsiveness on the other hand, involves the timeliness and adequacy of the organization's efforts to address the customers grievance or concerns (Liao, 2007; Ahmed, Vveinhardt, Warraich, Hasan, & Baloch; 2020). Despite the recognized importance of these factors, there is growing concern as some service providers fail to adequately demonstrate empathy and responsiveness as vital components of service quality, service recovery, and customer satisfaction which are also useful for developing a positive image for the organization through long-term quality services and proper handling of customer complaints (Smith, Bolton, & Wagner, 1999; Ahmed, *et al.* 2020).

Nigeria, being one of Africa's largest economies, has witnessed substantial growth in its telecom sector. With a subscriber base of over 200 million, the telecommunications sectoral contribution is fundamental to the country's economic and social development. Nigerian telecom operators however are faced with significant challenges in delivering exceptional services that satisfy or exceed customer expectations. With four foremost organizations in the Nigerian telecommunications sector, and attendant intense competition, it is strategic and necessary to investigate customer opinions on the services they receive as it would guide management decisions in channeling resources and actions towards meeting and exceeding customers' expectations to improve corporate competitiveness (Kushwah & Bhargav, 2014). It is imperative therefore that with the fierceness and intensity of competitive rivalry, telecommunications businesses are to provide high-quality services to attract and retain customers and for establishing long term mutually satisfying and beneficial relationships that will

emanate from customer satisfaction (Karunaratna, 2014; Alhkami & Alarussi, 2016).

Essentially, customer satisfaction describes an appraisal of the degree to which the product or service offerings of an organization meets or surpasses the expectations of their clients. Thirunavukkarasu and Neduchezian (2019) posit that customer satisfaction is a fundamental performance criterion for the growth and survival of corporate entities as satisfied customers would offer favorable statement of recommendations and act as brand ambassadors for the organization. The experiences of several Nigerian customers however are a far cry from their expectations as the Nigerian Communications Commission (NCC) has received a plethora of complaints regarding poor customer service indicating a huge disparity between expectations of the customers and the quality of services received (NCC, 2021). The study therefore investigated the link between empathy and responsiveness as service quality dimensions valuable to customers and what the telecoms service providers have offered by exploring its influence on customer satisfaction in the post-corona virus era. This is especially vital as human needs changed owing to the diverse developments across sectors and across the globe in the post Covid era. According to Wongsunopparat and Yang (2021) the corona virus pandemic altered several human practices and introduced significant changes in patterns of human actions and lifestyle. Vast majority of humans across the globe were unable to leave their homes during the pandemic and resorted to alternative ways of getting things done (Allain-Dupré, Chatry, Michalun & Moisio, 2020; Kuboye, 2021).

With the corona virus challenge, the Nigerian society adopted the new mobile and their associated telecommunication services as an alternative to physical interaction during the lockdown. This study evaluated customer's experiences with the qualitative excellence of new mobile services that Nigerian customers were getting just coming out of the Covid era. Specifically, the objectives of this study were to evaluate the effect of service provider empathy and service provider responsiveness on customer satisfaction in the telecommunications sector. In line with the objectives the following hypotheses formulated in null form were examined:

H_{01}: there is no significant effect of empathy on customer satisfaction of mobile telecoms users in the post Covid era.

H_{02}: there is no significant effect of responsiveness on customer satisfaction of mobile telecoms users in the post Covid era.

The study contributes to the existing body of literature particularly by exploring and describing the effect of service provider empathy and responsiveness on customer satisfaction in the telecoms sector in Nigeria in the post corona virus era. Additionally, the study offers useful contributions to regulatory authorities like the National Communications Commission (NCC) in the area of policy direction by formulation of policies that adequately caters for the service provider interests as well as the customers interests. The study will particularly assist management of the telecoms organizations in their efforts to further address issues / challenges relating to service provider empathy and responsiveness in the sector thereby leading to better service quality, enhance customers' confidence, improve competitiveness and ensure better performance in the telecoms sector.

With the above being the introduction, the remainder of the paper is structured into the literature review, research methods, results and discussion and finally conclusion and recommendations.

2.0. Literature Review

2.1.1. Concept of customer satisfaction

Customer satisfaction is a feeling of pleasure or disappointment experienced by a person after comparing the perceived performance or outcome of a product with expectations (Nassè, 2022). It is the feeling of fulfillment upon the consumption of a product or a service and stems from the post-purchase evaluation where a product or service meets or exceeds customer expectations, resulting in satisfaction, or falls short, leading to dissatisfaction (Nassè, 2024). It is the emotional response - whether positive or negative - that customers feel after using a product or service, based on how well the product meets or surpasses their expectations. It occurs after a customer compares the actual performance of a product to their anticipated expectations. Satisfaction arises when the product fulfills or exceeds expectations, while dissatisfaction results when the product fails to meet their expectations. This post-purchase evaluation reflects the perceived value and can significantly influence future buying decisions and loyalty (Nassè, 2022; Setiono & Hidayat, 2022).

Essentially, customer satisfaction is beyond a mere immediate emotional reaction as it plays a crucial role in shaping customer loyalty, word-of-mouth

referrals, and the overall brand image. The comparison between **perceived performance** (how well the product or service actually performs) and **expected performance** (the standard set by the customer before purchase) is key to determining satisfaction levels. In highly competitive markets, businesses strive to exceed customer expectations to create **high satisfaction,** often using metrics like surveys or feedback to gauge performance and make necessary improvements. Moreover, **disconfirmation theory** supports this idea by explaining that when performance exceeds expectations, positive disconfirmation occurs, resulting in high satisfaction. On the other hand, when performance falls short, negative disconfirmation arises, leading to disappointment or dissatisfaction. Therefore, organizations continually aim to bridge the gap between customer expectations and actual service delivery to foster higher satisfaction and retention.

2.1.2. Service quality

Service quality can be described as the customer's perception of and response to a provided service, reflecting how well the service meets or surpasses their expectations. It represents the customer's opinion and evaluation of the service they receive, serving as an overall measure of how effectively a service aligns with or exceeds what the customer anticipates and is the preset level of quality prescription organizations have set for their products/ service offerings. It is a critical aspect of customer satisfaction and business success (Czepiel, 1990; Zeithaml, & Parasuraman, 2004; Eshghi, Roy & Ganguli, 2008). It is a measure of disparity in the customer's perceptions compared with their expectations and fundamentally examines extent of conformance to customers' expectations implying that upon consumption customers would make judgments of service they have received.

Corporate entities regardless of sector strive to satisfy and exceed customer expectations for repeat patronage, customer retention, loyalty, profitability and eventual corporate sustainability (Nunkoo, Teeroovengadum, Ringle & Sunnassee, 2019). The satisfaction of customers therefore remains a priority for industries, more especially with increasing competitiveness across firms. Research has indicated that service quality is a crucial factor influencing customer satisfaction (Farooq, Salam, Fayolle, Jaafar & Ayupp, 2018; Nunkoo, et. al., 2019), hence its imperatives in these times. In Malaysia, while exploring the service quality and customer satisfaction connection, Loke, Taiwo, Salim, Downe, and Petronas, (2011) affirmed through their research result that over 80 percent of customer satisfaction were predicted by Parasuramans' et. al, (1985) five

dimensions of quality with reliability, responsiveness and empathy displaying the most levels of effect on customer satisfaction and loyalty.

2.1.3. Empathy

Empathy concerns with the care of service providers to customers so that they can give personal attention to customers. Bove (2019) aver that empathy is a core characteristic of helping and caring interactions and thus is fundamental to service. The value of empathy is immense as it leads to improved service quality perceptions and successful sales outcomes. The attributes of this dimension are: giving individual attention to customers, employees treating customers with great care, seriously prioritizing customer interests, employees understanding customer needs and comfortable operating hours. Essentially empathy is about treating the customers as individuals as each customer is distinct, specific and peculiar, and as such their needs must be understood. Customers want to feel important and they want to be understood by the companies providing them with a specific service. Khan and Fasih (2014) described empathy as the ability of the service providers to understand and share the feelings of their customers, providing personalized attention and care. It is a crucial dimension of service quality that focuses on the human element of customer service. It involves providing individualized attention, personalized service, empathetic care, accessibility, respect, and courtesy. It also includes addressing each customer's unique problems and needs to achieve effective resolution (Kaura et al., 2012).

Al-Marri et al. (2007) submitted that customer satisfaction significantly depends on the empathy dimension in services management and empathy serves as a useful strategic tool for competitiveness. A plethora of the service-related literature on empathy is in health care, more especially because empathy is a key skill for professional helpers and care givers such as nurses, counselors, therapists and physicians in the healthcare sector (Ye, Dong, & Lee, 2017).

From the works of Barlińska, Szuster, and Winiewski, (2018); Fernández-Abascal, and Martín-Díaz, (2019), empathy includes dimensions such as:

1. **Affective/Emotional Empathy**: This is the capacity of the organization to recognize and share the emotions of the customer. This dimension involves understanding the customer's feelings of frustration, disappointment, or anger due to a service failure, and responding in a way that acknowledges these emotions.

2. **Cognitive Empathy**: This is the ability of the organization to understand the clients' perspective, thoughts, and concerns. Cognitive empathy involves putting oneself in the customer's shoes to comprehend the situation from their viewpoint, which helps in offering a more personalized and relevant solution.
3. **Behavioral Empathy**: The actions taken by the service provider to demonstrate that they care about the customer's experience. This includes spoken and non-verbal cues like voice tone, active listening, and bodily language, which convey concern and attentiveness.
4. **Empathic Concern**: The genuine care and concern that a service provider shows towards the customer's situation. This dimension goes beyond understanding and involves a proactive desire to alleviate the customer's distress and resolve the issue effectively.

2.1.4. Responsiveness

Responsiveness is a service quality dimension related to the willingness of service providers to help customers and provide services quickly. The attributes of this dimension are: informing customers about the certainty of the delivery time of services, willingness to help customers and readiness to respond to customer requests (Pakurár, Haddad, Nagy, Popp, & Oláh, 2019). Other aspects are promptness in addressing customer requests, availability and accessibility to help, flexibility and adaptation to helping meeting customer needs, communication with customers for updates, attentiveness, genuine interests, etc. By being responsive, organizations build trust, and foster long-term customer relationships. A firm is known to be responsive to customers when it communicates to its customers the duration of time it will take to get answers or to have their problems solved (Pakurár, et. al, 2019). It is therefore important for telecom providers to improve on the responsiveness dimension in their service quality delivery to customers. Some components of responsiveness would include service provider's promptness, timeliness, and adequacy of response, communication, pro-activity, initiative, flexibility and effectiveness in addressing the customer's issues. Flexibility in responsiveness demonstrates that the service provider is committed to finding a solution that works best for the customer, even if it requires going beyond the usual protocols.

2.2. Theoretical Framework

According to Chinda (2019), there are several theories and models for service quality and customer satisfaction. Some of these theories include the Expectancy-Disconfirmation Theory (1977): the Attribution Theory (1980): The Satisfaction-

Value-Expectation Theory (1995): the Emotional Experience Theory (2000) etc. Some popular models include the SERVQUAL model, the SERVPERF model, and the Gronroos service quality model. This study is hinged on the **Expectancy-Disconfirmation Theory and the** SERVQUAL model.

2.2.1. The Expectancy-Disconfirmation Theory

The **Expectancy-Disconfirmation Theory (1977)** was developed by Richard L. Oliver, and is one of the foundational theories in understanding customer satisfaction. According to this theory, customer satisfaction is determined by the comparison between a customer's expectations of a product or service and their actual experience with it. This comparison can result in three possible outcomes: positive disconfirmation, confirmation, or negative disconfirmation, each of which influences the customer's level of satisfaction. The key components of the theory are customer expectations, performance perception, disconfirmation and the satisfaction and disconfirmation relationship**.**

The customer expectations are the beliefs or assumptions customers hold about a product or service before experiencing it. These expectations are shaped by factors such as previous experiences, marketing, word of mouth, and personal needs. Expectations set a reference point for evaluating the actual experience. High expectations create a high standard that is challenging to meet, whereas low expectations are easier to meet or exceed, often leading to greater satisfaction. The performance perception refers to the customer's perception of the product or service's actual performance after consumption. Performance perception is subjective and can vary widely among customers based on personal standards, context, and experience. The customer evaluates whether the product or service met, exceeded, or fell short of their expectations based on how it performed. Disconfirmation occurs when there is a gap between customer expectations and the perceived performance of the product or service (Oliver 1977, Evangelidis, & Van Osselaer, 2018; Lin, Wei, & Lekhawipat, 2018). There are three types of disconfirmation:

i. Positive Disconfirmation: When the actual performance exceeds expectations, leading to high satisfaction.
ii. Confirmation: When the actual performance meets expectations, generally resulting in a neutral or moderate level of satisfaction.
iii. Negative Disconfirmation**:** When actual performance falls short of expectations, leading to dissatisfaction.

Satisfaction or dissatisfaction arises from this disconfirmation process. If a customer experiences positive disconfirmation, they feel delighted, leading to loyalty and positive word of mouth. Conversely, negative disconfirmation often leads to disappointment, potential complaints, and sometimes a refusal to repurchase. Also, by accurately setting and communicating expectations through marketing, organizations can reduce the likelihood of negative disconfirmation and increase overall satisfaction. The theory also highlights the importance of "under-promising and over-delivering" to achieve positive disconfirmation and maximize customer satisfaction (Oliver 1977, Evangelidis, & Van Osselaer, 2018; Lin, Wei, & Lekhawipat, 2018).

Summarily put, the theory holds that customer satisfaction is a function of the relationship between expectations and actual experiences. Managing this relationship effectively can help companies build stronger, more positive relationships with their customers. This theory forms the basis for many customer satisfaction models, as it captures the importance of managing and meeting customer expectations by offering products or services of exceptional quality.

2.2.2. The SERVQUAL Model

The SERVQUAL model is a widely used tool for measuring service quality. Developed by Parasuraman, Zeithaml, and Berry in the 1980s, the model identifies five key dimensions of service quality that are essential for delivering high-quality service. The five dimensions of the SERVQUAL model are tangibles, reliability, responsiveness, assurance and empathy (Parasuraman *et al.* 1985). The SERVQUAL model assesses service quality by comparing customer expectations with their perceptions of the actual service received. The gap analysis helps organizations identify areas where service improvements are needed. By using the SERVQUAL model, organizations can gain valuable insights into how well they are meeting customer expectations and aspects needing improvements to enhance overall service quality.

2.3. Review Related Empirical Literature

Arslan, Iftikhar, and Zaman, (2015) in Pakistan studied the service quality and customer satisfaction and established that service quality positively influenced both perceived value and customer satisfaction. Similar results were established from the study of Alabar, Ode, and Gbande, (2017) wherein they established that service quality influenced customer satisfaction amongst mobile phone users in Nigeria. Similarly, using structural equation modeling, the study by Ali, Dey and

Filieri (2015) using Pakistan International Airlines affirmed that all five service quality dimensions i.e. airline tangibles, terminal tangibles, personnel, empathy, and image all influenced customer satisfaction. Similarly, the study by Abubakar (2016) in Nigeria report effect of service quality on customer satisfaction in the Nigeria telecoms sector. The study used simple percentages and the Minnesota Customer Satisfaction Model (MnCSI) scale. The study reports that service quality delivery in the telecommunication industry in Nigeria was below expectations.

The link between Empathy and Customer Satisfaction

Kuo, Wu, and Deng, (2009) examined the relationship between service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value - added services in Taiwan, in their study. Using structural equation modeling and multiple regression analysis, significant relationship was established as existing between customer satisfaction and service quality dimensions of empathy and reliability. Similar results were reported by the study of Khan, and Fasih, (2014) in Pakistan, Nguyen, Pham, Tran, and Pham, (2020) in Vietnam and the research by Setiono, and Hidayat, (2022) all affirm that empathy has effects on customer satisfaction.

Furthermore, in a Sri Lankan study, Balinado, Prasetyo, Young, Persada, Miraja, and Perwira Redi (2021) investigated service quality dimensions and customer satisfaction and the results reveal empathy and reliability had significant relationship with customer satisfaction. Wang, and Lo, (2002) in China from their study on service quality, customer satisfaction, customer value, and behaviour intentions, using structural equation technique established that network quality and empathy were fundamental drivers of service quality, while tangibles, assurance and reliability were secondary. Scholars like Karatepe (2011); Ganguli and Roy (2011); Khan and Fasih (2014) also report that empathy from the organization produces an emotional connection in the customers leading to continued business dealings. In the view of the above, this study hypothesizes that:

H_1: There is a significant effect of empathy on customer satisfaction in the telecoms sector in the post Covid era.

The link between Responsiveness and Customer Satisfaction

In the study by Ye, Dong, and Lee (2017) on relationship between marketing, customer retention and satisfaction in the banking industry: the researchers

investigated how factors like bonding, responsiveness, and communication directly and indirectly affect customer retention through customer satisfaction. Part of the key findings were that bonding, communication, and responsiveness significantly affected customer satisfaction and then customer satisfaction directly influences customer retention, while bonding and responsiveness indirectly impact customer retention through customer satisfaction. The study highlights and emphasizes the role of bonding, responsiveness, and communication in driving customer satisfaction and retention. The implications from the study were that managers can retain customers by responding promptly to their needs and communicating effectively. The study by Balinado, Prasetyo, Young, Persada, Miraja, and Perwira Redi (2021) on service quality dimensions and customer satisfaction report results indicating responsiveness did not show any significant links with customer satisfaction. Dharmadasa, and Gunawardane, (2017) in Philippines examined service quality and customer satisfaction and report the existence of a statistically significant positive link between customer satisfaction and other variables; while responsiveness, technical quality and assurance did not show such effect on customer satisfaction. While some studies have reported results showing that responsiveness like the other dimensions of service quality have effects on service quality, studies by scholars like Dharmadasa and Gunawardane, (2017), Balinado *et al.,* (2021) have reported otherwise. These somewhat conflicting results beckon for scholarly attention. In the view of the above this study hypothesizes that:

H_2: there is a significant effect of responsiveness on customer satisfaction in the post covid era.

Gaps in Empirical Review

From the empirical review conducted there are evident gaps in knowledge. Some of these include methodological gap such as Abubakar (2016) who used only simple percentages; geographical gap as most of the reviewed works are of foreign origins; there is also the challenge of differing findings and inconsistent results as reported by the different studies. It was also observed that even some of the works done in Nigeria such as Alabar *et al*. (2017); Onigbinde *et al.* (2014); Olu (2010); Abubakar (2016) were not conducted in Edo State; Also, none of the studies were conducted after the Covid-19 pandemic. This work therefore is unique as it will fill these evident gaps observed from past studies.

3.0. Methodology

3.1. Research design and population of the study.

The study employed a cross sectional research design executed through a survey. The data were collected from primary source by the distribution and retrieval of copies of a well-developed questionnaire. The population of the study comprised of subscribers of the four major GSM service providers in Edo State amounting to 7.1 million customers as of the fourth quarter (Q4) of 2020 (Nairametrics, 2021).

3.2. Sample size determination

A sample size of 400 respondents was used for this study. This value is made up of 384 obtained from Krejcie and Morgan's (1970) table for sample size determination coupled with an additional 16 copies of the questionnaire added to the sample size intended to cater for possible attrition that may arise in the course of the investigation.

3.3. Sampling technique

The sampling technique employed in this study is the multi-stage sampling technique. It entailed stratified sampling, purposive sampling, and convenience sampling techniques. The first stage was the stratified sampling technique which describes the senatorial districts as carved out by the national government to demarcate the geographical population of the state. The second stage involved purposive sampling which was based on the researchers' choice in selecting the network providers used in the study. Four service providers viz: MTN, GLO, AIRTEL and 9-Mobile were selected for the study using criteria such as longevity in operations for over 10 years, had full statewide network coverage across the three senatorial districts and had a large customer base. Other network service providers were not included as they did not satisfy these criteria. The final stage entailed using a convenience sampling to reach the customers of the selected network service providers in the three senatorial districts. Furthermore, the sample was proportionately allocated and distributed across the different network providers using proportional allocation formula to assure adequate representation of the entire population.

3.4. Source of data and instrument for data collection

The study used primary data collected through a well - structured questionnaire developed by the researchers and personally administered to the members of staff of Benson Idahosa University. The instrument of the study was prepared with Likert scale statements to gauge the respondents' opinion on the subject matter.

3.5. Validity and reliability of research instrument

The validity of the instrument was ascertained using face and content validation techniques while the reliability of the study was assured using the cronbach alpha test which gave values above 0.7 for all the variables under study. The instrument was therefore considered reliable as all the variables had values above 0.7 as stipulated by Nunnally (1978) indicating high degree items consistency and therefore acceptable for the research. The process of ascertaining the reliability of the instrument was executed by the conduct of a pilot study using 25 respondents not included in the sample. The reliability values of all variables are here presented.

Table 1: Cronbach's alpha values

Variable	No. of items	alpha value
Customer Satisfaction	7	0.82
Responsiveness	4	0.75
Empathy	5	0.72

Source: Author Field work

Questionnaire Administration

Using 400 copies of the instrument, respondents' opinion were elicited on the subject matter by the researchers and two research assistants, to the users of MTN, GLO, 9-MOBILE and AIRTEL mobile networks across three (3) metropolitan cities across the state.

Method of Data Analysis

Upon retrieval of the questionnaires, multiple regression analysis was used to analyze the hypothesized relationships between the dependent and the independent variables. The choice of multiple regression is because it indicates the effect of the independent variables on the dependent variable.

The following model was formulated in the study.

CS = f(RESP + EMPY)

$$CS = a_0 + a_1 RESP + a_2 EMPY + \boldsymbol{\varepsilon t}$$

CS = customer satisfaction

RESP = responsiveness

EMPY= empathy

Our decision is based on the calculated p-value and at 5% level of significance. We uphold the null hypotheses where the calculated p-value is greater than the level of significance, while it is rejected if the calculated p-value is less than the level of significance used.

4.0. Results and Discussions

The data passed the various diagnostics tests such as normality, homoscedasticity, outliners and multicollinearity; predictors in the regression model have VIFs less than 10 and tolerance scores above 0.2. 5% level of significance was adopted and with SPSS V25 utilized with regression analysis for hypotheses testing.

Table 2. Regression Analysis

	B	Std. Error	t-Stat	Sig.(P-Value)	Tolerance	VIF
(Constant)	-0.224	0.157	-1.428	0.154		
RESP	0.142	0.051	2.750	0.006	0.425	2.355
EMPY	0.400	0.063	6.401	0.000	0.409	2.447
F-Stat = 104.841 P-value = 0.000						
R = 0.761 R^2 = 0.578 Adjusted R^2 = 0.573						

Source: Researcher's fieldwork

Interpretation of Result

Model suitability was assessed and it passed the test of significance (F = 104.841, p <.000), showing the model utilized as well fitting for the data. The results of the regression indicated the predictors; responsiveness (RESP) and empathy (EMPY) explained 57.8% (R^2 = 0.578) of the variance of customer satisfaction. Both predictors significantly predicted customer satisfaction. Specifically, responsiveness (β = 0.142, p = .006), and empathy (β = 0.400, p = .000). Consequently, the alternate hypotheses are upheld and the study concludes that responsiveness and empathy have significant effects on customer satisfaction.

Discussion of Findings

Service provider empathy and responsiveness on customer satisfaction were investigated using two hypotheses. The results show that both hypotheses positively and significantly affected customer satisfaction. More specifically concerning hypothesis the study established that responsiveness has a positive and

significant effect (β=0.140, t = 2.750, p = 0.006) on customer satisfaction and agrees with the outcome from previous studies such as Kumar *et al.* (2019) that the responsiveness dimension has significant effects on customer's satisfaction. Also the research by Mengste, Teshome, Belete, Gizaw, and Mulugeta, (2020) support the findings of this study wherein they revealed that responsiveness as a dimension considerably and adequately accounted for variations in customer satisfaction. The study by Shams, Rehman, Samad, and Rather, (2020) on the magnitude of service failure and responsiveness to complaint handling effect on satisfaction and brand credibility in the banking industry further affirm the finding of this study and report that timely responsiveness in complaint handling positively affects customer satisfaction and positively influences brand credibility and overall satisfaction. They suggest use of customer management systems and processes that support high level responsiveness.

With respect to hypothesis two, the result show that empathy had positive and significant effect (β=0.333, t=6.401, p= 0.000) on customer satisfaction and agrees with the outcome from previous studies such as Arslan *et al.* (2015); and Nguyen, Pham, Dung and Pham (2020) who studied these variables using commercial banks in Hanoi City, Vietnam. Their results support the findings of this study. Furthermore, Fida, Al-Balushi and Singh (2020) reported similar results from their study using four prominent Islamic banks in Oman and affirm that the empathy dimension demonstrates noteworthy influence on customer satisfaction. Also, the results of this study is further supported by a related finding in the study by Pakurár, Haddad, Nagy, Popp, and Oláh (2019) on service quality dimensions that affect customer satisfaction in the Jordanian banking sector, wherein they affirm from their study that empathy positively influenced customer satisfaction in the Jordanian banking sector.

5.0. Conclusion and Recommendations

Based on findings from the analyzed data, there is a clear connection between service provider empathy and responsiveness with customer satisfaction. Both components of service quality show a considerable effect on customer satisfaction. The findings also reveal that the empathy component had a greater effect on customer satisfaction among mobile phone users in Edo State. The study also helped to further validate empathy and responsiveness as vital components of the SERVQUAL model and useful in the appraisal of service quality. The study makes the following recommendations:

1. Telecommunication network providers should continue to demonstrate empathy in their service delivery to customers. Effort must be made to understand customer uniqueness and needs. Telecom network providers must continue to educate and monitor their employees to ensure that they are empathic in dealings with customers.
2. Service providers should be responsive and prompt in resolving customer requests, questions, complaints and problems. They should endeavour to minimize the length of customer waiting time. Employees are to deliver prompt services to customers.
3. Improvement in quality service delivery should be supported by a robust and durable information technology advancement that can improve organizational responsiveness and focus on the issues of responsiveness, and empathy to increase satisfaction levels among their customers.

References

Abubakar, A. (2016). Impact of perceived service quality by mobile telecommunication industry on customer satisfaction in Nigeria. *International Journal of Advanced Research*, 4(4), 845-852.

Ahmed, R. R., Vveinhardt, J., Warraich, U. A., Hasan, S. S. U., & Baloch, A. (2020). Customer satisfaction & loyalty and organizational complaint handling: Economic aspects of business operation of airline industry. *Engineering economics*, *31*(1), 114-125.

Alabar, T.T., Ode, E., & Gbande, R. (2017). Service quality and customer satisfaction in Nigerian mobile telephony. *British Journal of Marketing Studies*, 5(1),37-49

Alhkami, A. A., & Alarussi, A. S. (2016). Service quality dimensions and customer satisfaction in telecommunication companies. *Asian Journal of Business and Management*, *4*(3).

Ali, F., Dey, B. L., & Filieri, R. (2015). An assessment of service quality and resulting customer satisfaction in Pakistan International Airlines: Findings from foreigners and overseas Pakistani customers. *International Journal of Quality & Reliability Management*, 32(5), 486-502.

Allain-Dupré, D., Chatry, I., Michalun, V., & Moisio, A. (2020). The territorial impact of COVID-19: managing the crisis across levels of government. *OECD Policy Responses to Coronavirus(COVID-19),* 10, 1620846020-909698535.

Al-Marri, K., Ahmed, A. M. M. B., & Zairi, M. (2007). Excellence in service: an empirical study of the UAE banking sector. *International Journal of Quality & Reliability Management*, 24(2), 164-176

Arslan, M.,Iftikhar, M., & Zaman, R. (2015). Effect of service quality dimensions on customer satisfaction: A comparative analysis of Pakistan Telecom sector. *British Journal of Marketing Studies*, 3(6), 440.

Bahadur, W., Aziz, S., & Zulfiqar, S. (2018). Effect of employee empathy on customer satisfaction and loyalty during employee–customer interactions: The mediating role of customer affective commitment and perceived service quality. *Cogent business & management*, *5*(1), 1491780.

Balinado, J. R., Prasetyo, Y. T., Young, M. N., Persada, S. F., Miraja, B. A., & PerwiraRedi, A. A. N. (2021). The Effect of Service Quality on Customer Satisfaction in an Automotive After-Sales Service. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(2), 116.

Barlińska, J., Szuster, A., & Winiewski, M. (2018). Cyberbullying among adolescent bystanders: Role of affective versus cognitive empathy in increasing prosocial cyberbystander behavior. *Frontiers in psychology*, *9*, 799.

Bove, L. L. (2019). Empathy for service: benefits, unintended consequences, and future research agenda. *Journal of Services Marketing*, *33*(1), 31-43.

Chinda, C. C. (2019). *Service quality and customer loyalty in the telecommunication industry in Lagos State, Nigeria.* Doctoral dissertation

Czepiel, J. A. (1990). Service encounters and service relationships: Implications for research. *Journal of Business Research*, 20, 13-21.

Dharmadasa, S. A., & Gunawardane, N. (2017). Impact of Service Quality on Customer Satisfaction with Special Reference to Mobile Telecommunication Industry of Sri Lanka. *Sri Lanka Journal of Marketing.* 3(1), 26-58.

Eshghi, A., Roy, S. K. & Ganguli, S. (2008). Service quality and customer satisfaction: An empirical investigation in Indian mobile telecommunications services, *Marketing Management Journal* 18 (2), 119 – 144.

Evangelidis, I., & Van Osselaer, S. M. (2018). Points of (dis) parity: Expectation disconfirmation from common attributes in consumer choice. *Journal of Marketing Research*, *55*(1), 1-13.

Farooq, M. S., Salam, M., Fayolle, A., Jaafar, N., & Ayupp, K. (2018). Impact of service quality on customer satisfaction in Malaysia airlines: A PLS-SEM approach. *Journal of Air Transport Management*, *67*, 169-180.

Fernández-Abascal, E. G., & Martín-Díaz, M. D. (2019). Relations between dimensions of emotional intelligence, specific aspects of empathy, and non-verbal sensitivity. *Frontiers in Psychology*, *10*, 1066.

Fida, B. A., Ahmed, U., Al-Balushi, Y., & Singh, D. (2020). Impact of service quality on customer loyalty and customer satisfaction in islamic banks in the Sultanate of Oman. *Sage Open*,*10*(2), 2158244020919517.

Ganguli, S., & Roy, S. K. (2011). Generic technology-based service quality dimensions in banking: Impact on customer satisfaction and loyalty. *International Journal of Bank Marketing*, 29(2), 168-189.

Giao, H. N. K. (2021). Customer Satisfaction of Vietnam Airline Domestic Services.

Johnston, R., & Michel, S. (2008). Three outcomes of service recovery: Customer recovery, process recovery and employee recovery. *International Journal of Operations & Production Management*, *28*(1), 79-99.

Karatepe, O. M. (2011). Service quality, customer satisfaction and loyalty: the moderating role of gender. *Journal of Business Economics and Management*, 12(2), 278- 300.

Karunaratna, A. C. (2014). Service quality and customer loyalty: Adequacy of SERVQUAL model. *Global journal of commerce and management perspective*, *3*(4), 20-26.

Kaura, V., Datta, S. K., & Vyas, V. (2012). Impact of Service Quality on Satisfaction and Loyalty: Case of Two Public Sector Banks. *Vilakshan: The XIMB Journal of Management*, 9(2), 65-76.

Khan, M. M., & Fasih, M. (2014). Impact of service quality on customer satisfaction and customer loyalty: Evidence from banking sector. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, *8*(2), 331-354.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

Kuboye, B. M. (2021). Impact of COVID-19 on Internet Traffic in Nigeria. *Communications and Network*, *14*(1), 36-44.

Kumar, K., Rai, R. S., & Dugar, A. (2019). Impact of service quality on customer satisfaction and loyalty in the sector of telecom service provider in Delhi-NCR. *International Journal of Innovative Technology and Exploring Engineering*, *8*(8), 2278-3075.

Kuo, Y.F, Wu, C. M., & Deng, W. J., (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value- added services. Computers in Human Behavior, 25, 887-896.

Kushwah, S. V., & Bhargav, A. (2014). Service quality expectations and perceptions of Telecom sector in INDIA. *International Journal of Advancements in Technology*, *5*(1), 1-10.

Liao, H. (2007). Do it right this time: The role of employee service recovery performance in customer-perceived justice and customer loyalty after service failures. *Journal of applied psychology*, *92*(2), 475.

Lin, C., Wei, Y. H., & Lekhawipat, W. (2018). Time effect of disconfirmation on online shopping. *Behaviour & Information Technology*, *37*(1), 87-101.

Loke, S. P., Taiwo, A. A., Salim, H. M., Downe, A. G., & Petronas, U. T. (2011). Service quality and customer satisfaction in a telecommunication service provider. In *International conference on financial management and economics* (Vol. 11, No. 2, pp. 23-29).

Mengste, M., Teshome, Z., Belete, B., Gizaw, G., & Mulugeta, A. (2020). Assessment of customers' perception towards service delivery among public Service organizations in Dire, Dawa Administration. *International Journal of Scientific and Research Publications*.

Min, H., Lim, Y., & Magnini, V. P. (2015). Factors affecting customer satisfaction in responses to negative online hotel reviews: The impact of empathy, paraphrasing, and speed. *Cornell Hospitality Quarterly*, *56*(2), 223-231.

Mir, Mahmood & Ashraf, Rohail & Abbas, Tahir & Sial, Sara & Nawaz, Raheel. (2023). Mapping the service recovery research landscape: A bibliometric-based systematic review. *Psychology & Marketing*. 40. n/a-n/a. 10.1002/mar.21864.

Nasse, T. B. (2022). Customer satisfaction and repurchase: why fair practices in African SMEs matter. *International Journal of Social Sciences Perspectives*, *10*(1), 26-33.

Nassè, T. B. (2024). Redefining the construct of customer satisfaction in a marketing perspective. *International Journal of Management & Entrepreneurship Research*, *6*(1), 25-29.

Negassa, G. J., & Japee, G. P. (2023). The effect of bonding, responsiveness and communication on customer retention: the mediating role of customer satisfaction. *Journal of relationship marketing*, *22*(2), 115-131.

Ngo, L. V., Nguyen, T. N. Q., Tran, N. T., & Paramita, W. (2020). It takes two to tango: The role of customer empathy and resources to improve the efficacy of frontline employee empathy. *Journal of Retailing and Consumer Services*, *56*, 102141.

Nguyen, D. T., Pham, V. T., Tran, D. M., & Pham, D. B. T. (2020). Impact of service quality, customer satisfaction and switching costs on customer loyalty. *The Journal of Asian Finance, Economics, and Business*, *7*(8), 395-405.

Nunkoo, R., Teeroovengadum, V., Ringle, C. M., & Sunnassee, V. (2020). Service quality and customer satisfaction: The moderating effects of hotel star rating. *International Journal of Hospitality Management*, *91*, 102414.

Olu, O. (2010). The Relationship between service quality and customer satisfaction in the telecommunication industry: Evidence from Nigeria. Broad Research in Accounting, Negotiation, and Distribution, 1(1), 88-100.

Onigbinde, I.O., & Odunlami, S.A, (2014). Telecommunication service delivery and customer satisfaction: A study of telecom subscribers in Ogun State, Nigeria. *International Journal of Business and Management Review*, 1(6), 49-58.

Pakurár, M., Haddad, H., Nagy, J., Popp, J., & Oláh, J. (2019). The service quality dimensions that affect customer satisfaction in the Jordanian banking sector. *Sustainability*, *11*(4), 1113.

Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research, *Journal of Marketing* 43 (Fall), 41 – 50

Setiono, B. A., & Hidayat, S. (2022). Influence of Service Quality with the Dimensions of Reliability, Responsiveness, Assurance, Empathy and Tangibles on Customer Satisfaction. *International Journal of Economics, Business and Management Research*, *6*(09), 330-341.

Shams, G., Rehman, M. A., Samad, S., & Rather, R. A. (2020). The impact of the magnitude of service failure and complaint handling on satisfaction and brand credibility in the banking industry. *Journal of Financial Services Marketing*, *25*, 25-34.

Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research*, 36(3), 356-372.

Tahanisaz, S. & Shokuhyar, S. (2020). Evaluation of passenger satisfaction with service quality: A consecutive method applied to the airline industry. *Journal of Air Transport Management*, *83*, 101764.

Thirunavukkarasu, A., & Nedunchezian, V. R. (2019). Relationship between service quality and customer satisfaction in airlines industry. *Academy of Marketing Studies Journal*, *23*(4), 1-12.

Wang, Y.G., & Lo, H.P. (2002). Service quality, customer satisfaction, customer value, and behaviour intentions: evidence from China's telecommunication industry. *The Journal of Policy, Regulation, and Strategy for Telecommunications*, 4(6), 50-60

Wieseke, J., Geigenmüller, A., & Kraus, F. (2012). On the role of empathy in customer-employee interactions. *Journal of service research*, *15*(3), 316-331.

Wilson, A., Zeithaml, V., Bitner, M. & Gremler, D. (2008). *Service marketing: Integrating customer focus across the firm*. First European Edition. UK: McGraw Hill.

Wongsunopparat, S., & Yang, W. C. (2021). Corporate Sustainability: Study of" New Normal" Factors that Affect Corporate Sustainability. *Journal of Economics, Finance and Management Studies*. 4(7), 1038-1062

Ye, J., Dong, B., & Lee, J. Y. (2017). The long-term impact of service empathy and responsiveness on customer satisfaction and profitability: a longitudinal investigation in a healthcare context. *Marketing Letters*, *28*, 551-564. https://doi.org/10.1007/s11002-017- 9429-2

Zeithaml, V. A., & Parasuraman, A. (2004). Service Quality. *Cambridge, MA*.

Usage Occasions on Customer Patronage among Fashion Firms in Port Harcourt

[1]Chukwu Godswill Chinedu, [2]Newman Godwill Evans & [3]Ikalama Awongo Theophilus
[1,2,3]Department of Marketing, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt
Corresponding Email: godswill.chukwu@iaue.edu.ng
https://doi.org/10.57233/gijmss.v7i3.05

Abstract

This study empirically investigated the relationship between usage occasions on customer patronage among fashion firms in Port Harcourt. Specifically, the study sought to study how usage time and purchase frequency relates to customer satisfaction and customer loyalty of fashion firms in Port Harcourt. Customers of fashion companies in Port Harcourt made up the study's population, and a descriptive research approach was used. A sample size of 384 clients was determined using the Krejcie and Morgan table; nevertheless, 350 respondents were included in the research, which were chosen via a structured questionnaire from a large community. Data were analyzed using Pearson Product Moment Correlation to test the hypotheses. The findings reveal that usage time and purchase frequency which was proxies of usage occasions segmentation positively relate with both customer satisfaction and loyalty. These results emphasize the significant role that these factors play in driving customer patronage. The study therefore concluded that usage time and purchase frequency, as well as demographic factors of age, sex and marital status are pivotal factors influencing customer satisfaction and loyalty within fashion firms in Port Harcourt. It was therefore recommended amongst others that fashion firms should focus on improving service delivery times, including faster processing of orders and quicker response to customer inquiries. This will enhance customer satisfaction and contribute to positive experiences that could drive repeat business.

Keywords: Usage Occasions, Customer Patronage; Time; Frequency; Customer Satisfaction; Customer Loyalty

1. Introduction

In recent years, the fashion industry has witnessed a significant shift in consumer behavior, driven by changing preferences and evolving market dynamics. Usage occasion segmentation, a strategy where businesses categorize consumers based on the specific occasions or events for which they purchase fashion items, has emerged as an important tool for enhancing customer engagement and increasing patronage. This segmentation allows fashion firms to tailor their offerings to meet the unique demands of customers at different times, whether for casual wear,

formal events, or seasonal trends (Nguyen & Lee, 2023). The ability to match products to the specific needs of customers during these occasions has proven to be a competitive advantage, as it creates more personalized shopping experiences and fosters deeper connections with consumers (Choudhary & Pandey, 2024).

Despite the growing recognition of usage occasion segmentation, many fashion firms in Port Harcourt have yet to fully adopt or effectively implement this strategy to drive customer patronage. Port Harcourt, a bustling commercial hub, hosts a diverse and fashion-conscious population with varying preferences depending on social, professional, and personal engagements. However, a significant gap exists in understanding how segmentation based on usage occasions influences customer loyalty and the frequency of purchases in this region. While some firms have achieved success in attracting a broad customer base, many struggle with maintaining long-term customer relationships and repeat patronage (Ibe & Williams, 2023). This challenge presents an opportunity to explore how usage occasion segmentation can be better leveraged to enhance customer retention and drive sustained patronage in the fashion industry.

Fashion firms in Port Harcourt face a growing challenge in retaining and expanding their customer base amidst an increasingly competitive market. One of the primary issues is the lack of targeted marketing strategies that cater to the specific needs of customers for different usage occasions, such as weddings, corporate events, and casual outings. Many fashion businesses in the region still adopt a one-size-fits-all approach, which often leads to missed opportunities in attracting and retaining customers who seek personalized and occasion-specific clothing. This problem is compounded by the fact that consumers are becoming more selective, expecting brands to meet their unique preferences for each occasion. As a result, many fashion firms struggle to maintain steady patronage, particularly in a market where brand loyalty is easily swayed by competitors offering more customized product selections.

The research gap lies in the limited understanding of how usage occasion segmentation can be effectively implemented to increase customer engagement and drive repeat patronage. While some firms in more advanced markets have successfully used this approach to boost sales and customer loyalty, fashion firms in Port Harcourt are lagging in adopting this strategy, which could be a key factor in their struggle for market relevance. The practical implications of this research are significant, as the study's findings could provide actionable insights into how

fashion businesses can better tailor their offerings to align with customers' specific needs for various events. This would not only enhance customer satisfaction but also improve profitability by driving repeat patronage and building stronger brand loyalty. Addressing these challenges could help fashion firms in Port Harcourt remain competitive in the ever-evolving market.

The research problem centers on the limited understanding and application of usage occasion segmentation in fashion firms in Port Harcourt, and how this gap may hinder customer patronage. This study aims to address this problem by examining the relationship between usage occasion segmentation and customer patronage within the fashion industry in the region. Specifically, the research seeks to identify how tailoring products to specific customer occasions can improve loyalty, frequency of purchases, and overall customer satisfaction. By exploring this relationship, the study hopes to provide insights that can help fashion firms enhance their marketing strategies and optimize customer engagement efforts. The study formulated the following hypotheses:

H_1: There is no positive relationship between time of purchase and customer satisfaction of fashion firms in Port Harcourt.

H_2: There is no positive relationship between time of purchase and customer loyalty of fashion firms in Port Harcourt.

H_3: There is no positive relationship between purchase frequency and customer satisfaction of fashion firms in Port Harcourt.

H_4: There is no positive relationship between purchase frequency and customer loyalty of fashion firms in Port Harcourt.

H_5: Demographic factors such as age, sex and marital status do not significantly moderates the relationship between usage occasion segmentation and customer patronage of fashion firms in Port Harcourt.

2. Review of Related Literature

2.1 Conceptual Framework

In the context of a study on the relationship between usage occasion segmentation and customer patronage of fashion firms in Port Harcourt, the conceptual framework is important because it the framework visually demonstrates the hypothesized link between segmenting customers based on

usage occasions (usage time and purchase frequency) and the potential impact on their patronage (customer satisfaction and customer loyalty).

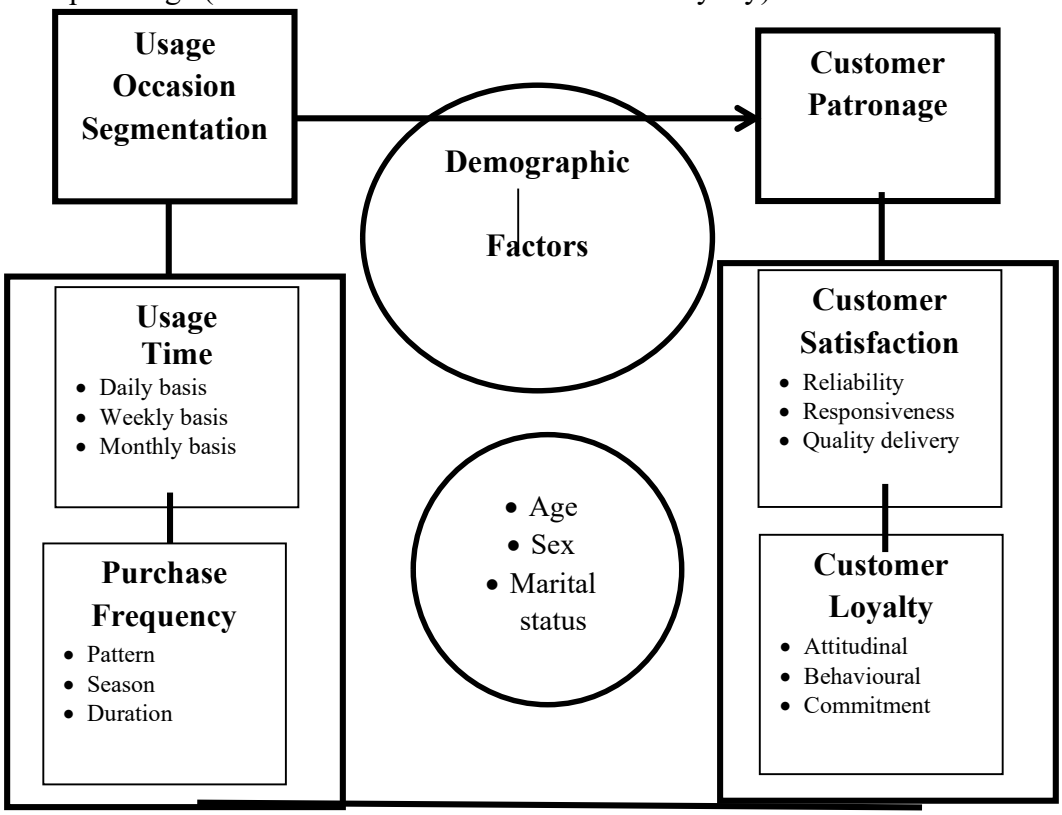


Figure 1: Conceptual Framework Showing the Relationship between usage occasions segmentation and customer patronage of fashion firms in Port Harcourt.
Source: **Nguyen & Lee, (2023); Chukwu (2020)**

Concept of Usage Occasion Segmentation

Usage occasion segmentation is a marketing strategy that involves dividing a market based on the specific events, times, or circumstances when consumers are most likely to use or purchase a product. This approach allows businesses to tailor their marketing and product offerings to meet the distinct needs associated with different occasions, such as holidays, formal events, casual outings, or seasonal changes. The primary objective of this segmentation is to understand the context in which a product is used, enabling companies to provide more relevant and personalized solutions for their customers (Nguyen & Lee, 2023). By identifying

key usage occasions, businesses can position their products more effectively, enhancing their relevance and appeal to target consumers. This strategy has proven particularly useful in industries like fashion, where consumer preferences vary significantly based on the event or occasion.

Recent studies highlight that usage occasion segmentation not only improves customer engagement but also drives customer loyalty and repeat purchases. It allows companies to connect with customers at specific touch points, offering products that fit seamlessly into their lifestyles and events (Choudhary & Pandey, 2024). In fashion, for instance, consumers may seek different styles for workwear, evening wear, or casual settings, and brands that understand these preferences can develop targeted collections that resonate with specific needs. As consumer expectations for personalized experiences grow, the relevance of usage occasion segmentation continues to increase, making it an essential tool for brands looking to differentiate themselves and build stronger relationships with their audiences.

Dimensions of Usage Occasions Segmentation

Usage Time

Usage time refers to the specific periods or occasions when consumers engage with or utilize a product or service. This concept encompasses both the duration and timing of product use, which can significantly impact consumer behavior and preferences. Recent studies have shown that understanding usage time is crucial for effectively segmenting markets and tailoring marketing strategies. For instance, Hornik (1984) highlighted how time pressure and mood states affect consumer decision-making, suggesting that consumers' temporal orientation—whether focused on the present or future—can influence their purchasing behavior. Despite these insights, there remains a gap in integrating usage time with occasion-based segmentation, particularly in the context of emerging markets like Port Harcourt, where consumer behavior may differ significantly from more established markets (Nguyen & Lee, 2023).

Purchase Frequency

Purchase frequency refers to how often consumers buy a particular product or service over a specified period. This concept is vital for understanding consumer behavior patterns and for developing effective marketing strategies. As noted by Kotler and Keller (2016), tracking purchase frequency helps businesses identify loyal customers, segment them based on buying habits, and tailor promotional efforts accordingly. High-frequency buyers often represent a more consistent

revenue stream and can provide valuable insights into product preferences and market trends. However, while much of the existing research focuses on how frequent purchases indicate customer loyalty, it often overlooks the diverse factors influencing purchase frequency, such as consumer lifestyle, economic conditions, and product type (Smith & Taylor, 2021). This gap suggests the need for further exploration into the underlying determinants of purchase frequency, particularly in niche industries like fashion.

Concept of Customer Patronage

Customer patronage refers to the continued support and loyalty that consumers show towards a particular brand, product, or service. In the Nigerian context, customer patronage plays a crucial role in sustaining businesses, especially in highly competitive markets. According to Chukwu and Ezeh (2021), customer patronage is the foundation upon which businesses build long-term relationships with their clientele, ultimately leading to sustained revenue and growth. Nigerian consumers tend to exhibit varying levels of patronage depending on several factors, such as brand perception, quality of service, and customer satisfaction. Chukwu (2020) highlights that for businesses to retain customer patronage, they must prioritize not only the quality of their offerings but also the overall consumer experience, which includes elements such as responsiveness, convenience, and trust.

In addition, Okeke and Onah (2022) emphasize that understanding the drivers of customer patronage is particularly important for businesses in Nigeria's growing markets. They argue that factors like cultural preferences, socio-economic conditions, and personal recommendations heavily influence Nigerian consumers' purchasing decisions. Despite the extensive focus on customer loyalty in global literature, Okeke and Onah (2022) point out a research gap in how Nigerian businesses can effectively cultivate customer patronage in the face of economic volatility and evolving consumer preferences.

Measures of Customer Patronage

Customer Satisfaction

Customer satisfaction refers to the degree to which a product or service meets or exceeds the expectations of a consumer, serving as a key determinant of loyalty and continued patronage. In the Nigerian context, customer satisfaction has been identified as a critical factor for business sustainability across various sectors.

According to Chukwu (2022), businesses that consistently satisfy their customers are more likely to enjoy repeat purchases, positive word-of-mouth referrals, and a competitive edge. In Nigeria, where the service quality often varies due to infrastructural and economic challenges, understanding the drivers of customer satisfaction becomes even more important. Adebayo and Okoye (2021) argue that Nigerian consumers are becoming increasingly discerning, with factors like product quality, price fairness, and customer service playing significant roles in shaping their satisfaction levels. However, while many studies focus on broad factors influencing satisfaction, there is still a lack of localized research that delves into sector-specific drivers of satisfaction, especially within industries like fashion.

Customer Loyalty

Customer loyalty refers to the commitment of customers to continue purchasing from a particular brand or business over time, often driven by positive experiences, satisfaction, and trust. In the Nigerian business environment, customer loyalty is critical for business survival, especially in sectors with high competition like fashion and retail. According to Adeyemi and Ojo (2022), loyalty is cultivated through consistent delivery of quality products, excellent customer service, and the establishment of strong emotional connections with customers. Nigerian consumers tend to reward businesses that meet their expectations with repeat purchases, and loyal customers are also more likely to recommend a brand to others. However, loyalty in the Nigerian market is often fragile due to economic instability, fluctuating prices, and inconsistent service delivery. This highlights the importance of understanding the nuanced factors that foster and sustain customer loyalty within specific industries.

Despite the growing body of research on customer loyalty, there remains a gap in the literature regarding its specific drivers in Nigeria's fashion industry. Studies like that of Eze and Ogbu (2021) have primarily focused on general retail environments, leaving the fashion sector underexplored. Additionally, there is limited attention on how local cultural preferences and economic constraints influence loyalty in fashion retail, particularly in regions like Port Harcourt. This research seeks to fill that gap by investigating the factors that contribute to customer loyalty within fashion firms in the city. By focusing on elements such as style relevance, affordability, and personalized services, the study aims to provide actionable insights for fashion businesses seeking to build a loyal customer base in a competitive and economically dynamic environment. This localized approach

will not only contribute to the academic discourse but also offer practical strategies for enhancing loyalty in the fashion sector.

Demographic Variables

Demographic variables such as age, sex, and marital status play a significant role in moderating the relationship between usage occasion segmentation and customer patronage, particularly within the fashion industry. Age, for example, influences consumers' fashion choices and how they perceive the utility of certain products for specific occasions. Older consumers may prioritize comfort and functionality, while younger consumers might focus more on trends and style. According to Afolabi and Ojo (2023), the age group of a consumer significantly impacts their purchasing behavior in the Nigerian fashion market, as younger customers are more likely to patronize brands that offer trendy, occasion-specific outfits, while older customers often seek timeless and versatile pieces. By segmenting their marketing efforts based on these age-related preferences, fashion firms can effectively target and retain different age groups, thereby enhancing customer patronage.

Sex and marital status also moderate the relationship between usage occasion segmentation and customer patronage. Men and women often have distinct fashion preferences based on the occasions they are dressing for, with women typically having more varied needs for formal, casual, and social events. Nigerian studies, like that of Chukwu and Obasi (2022), highlight that women in Port Harcourt exhibit more frequent patronage of fashion brands that offer a wide range of occasion-specific clothing. Marital status also plays a role, as married individuals may prioritize family-oriented or formal events, while singles might focus more on social gatherings or professional attire. This segmentation allows fashion firms to tailor their product offerings and marketing strategies more effectively to each demographic group. However, despite some research on the broader retail environment, there remains a gap in understanding how these demographic factors specifically impact the fashion industry in Port Harcourt. This study aims to fill that gap by investigating how age, sex, and marital status moderate customer patronage in the context of usage occasion segmentation.

2.2 Theoretical Framework

This paper was anchored on the theory of planned behaviour and it was supported by theory of buyer behaviour. These theories will be explained properly below:

2.2.1 Theory of Planned Behaviour

Ajzen (1991) proposed the theory of planned behavior (TPB), a psychological paradigm that describes how three fundamental factors influence human conduct: attitudes toward the activity, subjective standards, and perceived behavioral control. The TPB states that a person's intention to engage in a behavior is impacted by their beliefs about their capacity to carry out the behavior (perceived behavioral control), their positive or negative assessment of the behavior (attitudes), and their perception of social pressure to engage in the behavior or not (subjective norms). The chance of participating in the activity is predicted by these variables taken together**.** Over the years, the TPB has been expanded and applied to various fields, including consumer behavior, where it helps explain the motivations behind purchasing decisions and how these are shaped by internal beliefs and external influences. Recent research, such as that by Uchenna and Oladipo (2022), has highlighted how the theory can be adapted to better understand consumer intentions in modern retail environments, including the impact of digital media and social trends on decision-making processes.

The theory of planned behavior is particularly relevant to the study of usage occasion segmentation and customer patronage of fashion firms in Port Harcourt because it provides a framework for understanding how consumers' intentions are shaped by both personal and social factors. In the fashion industry, purchasing behavior is often influenced by the occasion for which the clothing is intended. For instance, a consumer's attitude toward purchasing formal attire may be shaped by their belief in the importance of dressing appropriately for work or social events. Subjective norms, such as societal expectations or peer pressure, also play a significant role, especially in fashion-conscious environments like Port Harcourt, where social appearances are highly valued (Chukwu & Okoro, 2023). Furthermore, perceived behavioral control—such as availability of fashion items, affordability, and ease of access—affects a consumer's ability to purchase clothing for specific occasions. The TPB allows fashion firms to identify and segment consumers based on these influencing factors and tailor their offerings to align with the usage occasions relevant to different consumer groups.

Additionally, the TPB has evolved with the growing complexity of consumer behavior, particularly in the fashion industry, where trends and social media have added layers of influence on purchasing decisions. Contemporary research integrates the TPB with insights from digital marketing, showing how online reviews, influencer marketing, and targeted advertisements shape subjective

norms and perceived control over purchasing decisions (Obasi & Eke, 2023). For fashion firms in Port Harcourt, applying the TPB to their segmentation strategies can enhance customer patronage by recognizing how various social, personal, and economic factors converge to influence purchasing decisions for different usage occasions.

2.2.2 Theory of buyer behaviour

The theory of buyer behavior offers a thorough framework for comprehending how customers make choices about what to purchase. It is based on the writings of Howard and Sheth (1969). According to this idea, a variety of variables, such as the consumer's decision-making process, environmental cues, and individual characteristics, might impact their behavior. The idea states that customers go through many phases, including issue identification, information seeking, alternative appraisal, buy choice, and post-purchase behavior**.** The interaction between these stages, along with variables like attitudes, beliefs, and experiences, shapes the ultimate buying behavior. Over the years, this theory has been adapted and refined to accommodate changing consumer dynamics, especially with the rise of digital technology and the complexity of modern retail environments. Recent studies, such as those by Chukwu and Anikwe (2022), emphasize the increasing importance of personalized experiences and occasion-specific consumer needs in driving buyer behavior in Nigeria's retail sectors.

In the context of usage occasion segmentation and customer patronage of fashion firms in Port Harcourt, the buyer behavior theory remains highly relevant. The evolving consumer landscape in Port Harcourt's fashion industry reflects a growing emphasis on occasion-based purchasing, where consumers select clothing based on specific events or contexts, such as formal gatherings, casual outings, or cultural celebrations. As observed by Obasi and Eze (2023), modern consumers in Nigeria are not only influenced by the product itself but also by the situational factors that frame their purchasing decisions, such as time, social setting, and personal requirements. The theory of buyer behavior helps in understanding how consumers evaluate these situational cues and how businesses can effectively segment their target markets based on usage occasions. By applying this theoretical framework, fashion firms in Port Harcourt can better align their marketing and product offerings with the distinct needs of consumers, ultimately driving customer patronage and loyalty. This adaptation of the buyer behavior theory to contemporary market segmentation strategies offers a more

nuanced approach to understanding consumer dynamics in Nigeria's fashion industry.

2.3 Empirical Review

An empirical review of studies on usage occasions and customer patronage reveals a wide range of findings across various industries, including fashion, food, and beverage sectors. These studies have generally focused on understanding how identifying and segmenting customers based on their usage occasions can influence their purchasing behavior and overall loyalty to a brand. The concept of usage occasion segmentation is centered on tailoring marketing efforts to match specific occasions when consumers are most likely to purchase or use a product, thereby increasing the likelihood of patronage. This review will critically examine the findings of different studies and analyze their relevance to the context of fashion firms in Port Harcourt.

Several studies have explored the relationship between usage occasion segmentation and customer behavior. For instance, a study by Belk and Pollay (2020) on the beverage industry found that companies that tailored their marketing and product offerings to match specific usage occasions, such as holidays or fitness-related events, saw a significant increase in customer purchases. This approach allowed companies to align their products with the emotional and practical needs of consumers during those occasions, resulting in improved patronage. The authors noted that customers tended to form stronger emotional connections with brands that appeared relevant to their lives during key moments, leading to higher brand loyalty. In contrast, studies by Smith and Taylor (2021) in the food industry highlighted that failure to align product offerings with specific usage occasions led to missed opportunities for customer engagement and reduced repeat purchases. This suggests that identifying and targeting usage occasions effectively is critical for maintaining customer interest and long-term patronage.

In the fashion industry, a study by Obasi and Eke (2023) examined how fashion retailers in Nigeria used occasion-based segmentation to drive customer patronage. The findings showed that fashion brands that created collections specifically tailored for events such as weddings, office wear, and casual outings experienced higher sales and repeat patronage. The authors argued that these companies were able to meet the unique fashion needs of customers based on the events they attended, thereby enhancing the relevance of their products. However,

the study also revealed a gap in the Nigerian fashion industry, as many brands were still not fully utilizing digital platforms to promote occasion-specific products, thus limiting their reach and potential customer base. In comparison, international studies, such as that by Jackson and Morgan (2022), found that fashion brands that integrated social media influencers and targeted digital ads to promote occasion-specific products saw greater success in customer engagement and sales. This highlights a gap in the digital marketing strategies of local fashion firms in Port Harcourt, where digital channels could be leveraged more effectively to enhance customer patronage.

Furthermore, empirical evidence from the work of Chukwu and Okoro (2023) revealed that fashion brands in Nigeria often struggle with understanding the diverse usage occasions of their customers due to inadequate market research. Their findings indicate that while larger fashion firms with established research departments are able to segment their market more effectively, smaller firms tend to rely on generic marketing approaches that fail to capture the unique demands of different usage occasions. This leads to lower customer engagement and reduced patronage, particularly in a competitive market like Port Harcourt, where consumers have multiple fashion options. The study emphasizes the need for more robust market segmentation strategies that take into account local cultural and social trends, particularly those related to special occasions such as cultural festivals, weddings, and professional events.

3. Research Methodology

This study adopted a descriptive survey research design, which is suitable for eliciting respondents' opinions and perceptions on the variables under investigation—specifically, usage occasion segmentation and customer patronage of fashion firms in Port Harcourt. The choice of this research design is informed by its ability to capture the attitudes, behaviors, and characteristics of consumers in their natural settings, aligning with the theory of planned behavior (TPB). The TPB framework supports the idea that consumer behavior, such as patronage of fashion brands, is influenced by attitudes, subjective norms, and perceived behavioral control, all of which can be explored through survey methods. This approach allows the researcher to empirically examine how these theoretical constructs inform consumer decision-making processes, particularly in relation to usage occasions and patronage.

The population of this study consists of consumers who purchase fashion brands in Port Harcourt, specifically targeting individuals who make purchasing decisions based on specific occasions such as work, casual events, and formal outings. Given that the exact population of fashion consumers in Port Harcourt is unknown (infinite population), the study adopts the sample size determination method suggested by Krejcie and Morgan (1970), which posits that for a population exceeding 1,000,000, a sample size of 384 respondents is adequate for generalizability. Therefore, the sample size for this study is set at 384 consumers.

Simple random sampling was used to ensure that each consumer in Port Harcourt has an equal chance of being selected, thereby minimizing selection bias and allowing for more reliable generalization. This technique is aligned with the TPB framework, as it ensures that the attitudes, norms, and perceived behavioral control of a broad spectrum of consumers are captured without undue influence from the sampling method.

A questionnaire created by the researcher is the research tool; it was informed by previous research on use occasion segmentation, customer patronage, and the aspects found in the theory of buyer behavior. There are two components to the questionnaire: While Section B focuses on factors linked to use occasion segmentation and customer patronage, reflecting attitudes, subjective norms, and behavioral control, Section A collects demographic data and fundamental consumer characteristics. Using Cronbach's Alpha, the instrument was pre-tested for reliability. The findings indicated that sections A and B had reliability indices of 0.82 and 0.86, respectively, with an average reliability index of 0.84, suggesting good dependability.

Both descriptive and inferential statistics are used in the data analysis approach in order to conform to the theoretical framework. The opinions of respondents about use occasion segmentation and customer patronage will be summed together using descriptive statistics like mean and grand mean, which will provide insights into consumer behavior as described by the Theory of Planned Behavior. The hypothesis about the association between use occasion segmentation and customer patronage were tested using Pearson Product Moment Correlation (PPMC). This will aid in determining if the TPB's proposed behavioral control, subjective standards, and attitudes have a major impact on consumer spending in the fashion sector. To guarantee accuracy and dependability of findings, all analyses will be carried out using SPSS version 23, the Statistical Package for

Social Sciences. Through this approach, the study seeks to bridge the gap between the theoretical framework of buyer behavior (via TPB) and practical, empirical insights into how segmentation and occasion-specific behavior drive customer patronage of fashion firms in Port Harcourt.

4. Result and Discussions

In the distribution of the questionnaire, the researcher produced 380 copies of questionnaire and was able to distribute 370 to customers of different fashion brands in Port Harcourt. However, only 350 customers properly filled and returned their questionnaire, hence the researcher used the response of 350 customers to do the analysis of this study.

Testing of Hypotheses

Research Question One: How does the time of purchase influence customer satisfaction of fashion firms in Port Harcourt, and what factors contribute to this relationship?

Hypothesis One: There is no positive relationship between time of purchase and customer satisfaction of fashion firms in Port Harcourt.

Table 1: Summary of statistics on the relationship between usage time and customer satisfaction of fashion firms in Port Harcourt.

Correlations			
		Usage Time	Customer Satisfaction
Usage Time	Pearson Correlation	1	.862**
	Sig. (2-tailed)		.000
	N	350	350
Customer Satisfaction	Pearson Correlation	.862**	1
	Sig. (2-tailed)	.000	
	N	350	350
**. Correlation is significant at the 0.01 level (2-tailed).			

SPSS Output, 2024

The analysis presented in Table 1 reveals a strong relationship between time and customer satisfaction for fashion brands in Port Harcourt, with an R-value of 0.862, indicating a very high correlation (r = 0.862, p = 0.000). This suggests that

time significantly impacts customer satisfaction, reflecting a robust association between these variables. However, while this high correlation demonstrates a strong relationship, it is crucial to discuss the practical implications of this finding. Specifically, fashion firms in Port Harcourt need to understand how time, as a variable, affects customer satisfaction in real-world scenarios. For instance, it would be beneficial to explore how time spent on various aspects of the shopping experience—such as time in store, delivery times, or response times to customer inquiries—contributes to overall customer satisfaction. Additionally, examining whether other factors, such as in-store service quality or product availability, play a role in this relationship could provide a more comprehensive understanding of the dynamics at play.

It is important to note that correlation does not imply causation. While the strong correlation suggests a significant relationship between time and customer satisfaction, this study does not establish a causal link. Therefore, further research, such as regression analysis or experimental studies, is needed to determine whether time directly influences customer satisfaction or if the observed relationship is due to other underlying factors. Additionally, the current analysis does not account for potential confounding variables that might affect both time and customer satisfaction. Factors such as the quality of customer service or the availability of products could potentially influence both variables, introducing bias into the results. Future studies should consider controlling for these variables to ensure a more accurate assessment of the relationship between time and customer satisfaction.

Research Question Two: In what ways does the time of purchase affect customer loyalty of fashion firms in Port Harcourt, and what underlying mechanisms explain this effect?

Hypothesis Two: There is no positive relationship between time of purchase and customer loyalty of fashion firms in Port Harcourt.

Table 2: Summary of statistics on the relationship between usage time and customer loyalty of fashion firms in Port Harcourt

Correlations			
		Time	Customer Loyalty
Usage Time	Pearson Correlation	1	.416**
	Sig. (2-tailed)		.000
	N	350	350
Customer Loyalty	Pearson Correlation	.416**	1
	Sig. (2-tailed)	.000	
	N	350	350
**. Correlation is significant at the 0.01 level (2-tailed).			

SPSS Output, 2024

The results presented in Table 2 indicate a moderate correlation between time and customer loyalty for fashion firms in Port Harcourt, with an R-value of 0.416, which is statistically significant ($r = 0.416$, $p = 0.000$). This suggests that time does have an effect on customer loyalty, albeit a less pronounced one compared to the relationship observed between time and customer satisfaction. The moderate strength of this correlation necessitates a discussion on its practical implications. Unlike the strong correlation observed with customer satisfaction, this moderate correlation indicates that while time does influence customer loyalty, it is not the sole or predominant factor. Fashion firms may need to evaluate other elements that contribute to customer loyalty, such as brand identity, product quality, or exclusive offerings, which might play a more substantial role in influencing loyalty compared to time alone.

The statistical significance of the correlation should be interpreted with caution regarding its practical significance. A moderate correlation suggests that while time is related to customer loyalty, its impact may not be as substantial as it is for customer satisfaction. This weaker correlation could be attributed to the nature of the fashion industry, where customer loyalty may hinge more on emotional attachment to the brand, the perceived quality of products, or unique brand experiences rather than merely the time spent interacting with the brand. Therefore, fashion firms should consider integrating additional strategies that address these other factors to enhance customer loyalty. Future research could explore these aspects more deeply to provide a more comprehensive

understanding of the variables influencing customer loyalty in the fashion industry.

Research Question Three: How does purchase frequency relate to customer satisfaction of fashion firms in Port Harcourt, and what are the underlying reasons for this relationship?

Hypotheses Three: There is no positive relationship between purchase frequency and customer satisfaction of fashion firms in Port Harcourt.

Research Question Five: To what extent does frequency relate to customer satisfaction of fashion firms in Port Harcourt?

Hypothesis Five: There is no significant relationship between purchase frequency and customer satisfaction of fashion firms in Port Harcourt.

Table 3: Summary of statistics on the relationship between purchase frequency and customer satisfaction of fashion firms

Correlations			
		Purchase Frequency	Customer Satisfaction
Purchase Frequency	Pearson Correlation	1	.706**
	Sig. (2-tailed)		.000
	N	350	350
Customer Satisfaction	Pearson Correlation	.706**	1
	Sig. (2-tailed)	.000	
	N	350	350
**. Correlation is significant at the 0.01 level (2-tailed).			

SPSS Output, 2024.

The results in Table 3 reveal a strong correlation between frequency and customer satisfaction for fashion firms in Port Harcourt, with an R-value of 0.706, which is statistically significant ($r = 0.706$, $p = 0.000$). This indicates a robust relationship between how frequently customers interact with fashion firms and their level of satisfaction. While the strong correlation suggests that higher interaction frequency is associated with increased satisfaction, the analysis should also consider whether this relationship remains linear across different levels of frequency or if there are diminishing returns. For instance, the impact of

frequency on satisfaction might plateau after a certain point, where additional interactions no longer significantly enhance customer satisfaction.

Additionally, potential response bias needs to be addressed. Customers who frequently engage with fashion firms might report higher satisfaction due to their familiarity with the brand rather than an actual increase in service quality. Therefore, the study should explore whether this positive correlation is influenced by such biases. Furthermore, the relationship between frequency and satisfaction may be moderated by other factors such as time and location. Analyzing how these variables interact with frequency could provide a more comprehensive understanding of customer satisfaction dynamics and help fashion firms better tailor their strategies to improve overall customer experience. Future research should investigate these nuances to offer deeper insights into the factors driving customer satisfaction.

Research Question Four: In what ways does purchase frequency influence customer loyalty of fashion firms in Port Harcourt, and what factors contribute to this relationship?

Hypothesis Four: There is a positive relationship between purchase frequency and customer loyalty of fashion firms in Port Harcourt.

Table 4: Summary of statistics on the relationship between purchase frequency and customer loyalty of fashion firms

Correlations			
		Purchase Frequency	Customer Loyalty
Purchase Frequency	Pearson Correlation	1	.986**
	Sig. (2-tailed)		.000
	N	350	350
Customer Loyalty	Pearson Correlation	.986**	1
	Sig. (2-tailed)	.000	
	N	350	350
**. Correlation is significant at the 0.01 level (2-tailed).			

SPSS Output, 2024.

The analysis presented in Table 4 indicates an exceptionally strong correlation between frequency and customer loyalty among fashion firms in Port Harcourt, with an R-value of 0.986 (p = 0.000). This suggests a very robust relationship, where increased interaction frequency is closely associated with higher levels of customer loyalty. However, such an extraordinarily high correlation raises concerns about potential overfitting, multicollinearity, or possible data entry errors. It is crucial to critically examine this correlation to ensure that the model accurately reflects the underlying dynamics of customer loyalty and is not a result of an overly simplistic approach or methodological issues.

Additionally, while frequency appears to play a significant role, focusing solely on this variable might overlook other critical factors that contribute to customer loyalty, such as emotional connection to the brand, product quality, or customer service experiences. A more nuanced analysis that incorporates these additional factors could provide a fuller picture of what drives loyalty. Moreover, the study should consider how fashion firms can strategically leverage this strong relationship between frequency and loyalty, while being cautious not to overemphasize frequency at the expense of other loyalty dimensions. Balancing frequency with a comprehensive understanding of customer loyalty could lead to more effective and holistic business strategies.

Research Question Five: How does customer demographics influence the relationship between usage occasion segmentation and customer patronage of fashion firms in Port Harcourt?

Hypothesis Five: Demographic factors such as age, sex and marital status do not significantly moderates the relationship between usage occasion segmentation and customer patronage of fashion firms in Port Harcourt.

Table 5: Moderating influence of demographic factors on the relationship between usage occasions segmentation and customer patronage of fashion firms in Port Harcourt

Correlations

Control Variables			Usage Occasions Segmentation	Customer Patronage
Demographic Factors	Usage Occasions Segmentation	Correlation	1.000	.560
		Significance (2-tailed)	.	.000
		df	0	259
	Customer Patronage	Correlation	.560	1.000
		Significance (2-tailed)	.000	.
		df	259	0

Source: SPSS output, 2024.

Table 5 showed that the analysis of the moderating influence of demographic factors—age, sex, and marital status—on the relationship between usage occasion segmentation and customer patronage of fashion firms in Port Harcourt revealed a Partial Correlation coefficient of 0.560, indicating that these demographic factors account for approximately 56% of the variability in the relationship between usage occasion segmentation and customer patronage. This result is statistically significant ($p = 0.000 < 0.05$), suggesting that demographic factors significantly moderate this relationship. This finding supports the hypothesis that demographic characteristics play a crucial role in shaping how different usage occasions impact customer patronage.

The influence of demographic factors on the relationship between usage occasion segmentation and customer patronage can be attributed to the varying preferences and behaviors across different demographic groups. For example, age may influence preferences for fashion styles and brands, where younger consumers might favor trendy, seasonal items, while older customers might prefer timeless, classic pieces. Sex can also impact preferences, as different genders may prioritize different aspects of fashion, such as functionality versus aesthetics. Marital status may further affect purchasing patterns, where married individuals

or those with families might have different buying criteria compared to single individuals. Understanding these nuances allows fashion firms to tailor their marketing strategies more effectively to resonate with diverse demographic segments, enhancing their ability to engage with and retain customers. Thus, the significant moderating effect of demographic factors highlights the importance of integrating these variables into segmentation and targeting strategies to better align with the specific needs and preferences of different consumer groups.

Discussion of Findings

Usage Time and Customer Satisfaction of Fashion Firms in Port Harcourt

The analysis reveals a very strong positive relationship between time and customer satisfaction in fashion firms in Port Harcourt, with an R-value of 0.862 and a p-value of 0.000. This indicates that aspects of time, such as delivery time and response time, play a crucial role in shaping customer satisfaction. Previous studies support this finding, emphasizing that timely service and quick response rates are critical in enhancing customer satisfaction (Amin et al., 2022; Adeyemo & Oloyede, 2021). However, the current discussion lacks depth in exploring how specific dimensions of time influence satisfaction. For instance, research by Khan et al. (2023) suggests that timely delivery and fast customer service significantly boost customer satisfaction. The practical implications of these results should be discussed in terms of how fashion firms can leverage efficient time management to improve customer satisfaction. Furthermore, integrating these findings with existing theories on service quality, such as the SERVQUAL model, would provide a richer understanding of the impact of time on customer satisfaction.

Usage Time and Customer Loyalty of Fashion Firms in Port Harcourt

The data shows a moderately strong relationship between time and customer loyalty, indicated by an R-value of 0.416 and a p-value of 0.000. While this result confirms that time-related factors influence loyalty, the relationship is weaker compared to its impact on satisfaction. Previous research, such as that by Akinyemi et al. (2023), suggests that while time can influence loyalty, other factors like customer expectations and competitive market dynamics often play a more significant role. The study should explore these moderating factors to understand why time has a moderate impact on loyalty. Additionally, the findings should be compared with studies that report stronger or weaker relationships to validate or challenge the current results. For instance, work by Eze et al. (2023) found that while time affects loyalty, brand perception and customer experience also play significant roles.

Frequency and Customer Satisfaction of Fashion Firms in Port Harcourt

The analysis reveals a strong positive relationship between frequency and customer satisfaction, with an R-value of 0.706 and a p-value of 0.000. This indicates that more frequent interactions with fashion firms lead to higher customer satisfaction. However, the study should clarify what "frequency" entails—whether it refers to purchase frequency, visit frequency, or interaction frequency. Research by Jibowo and Akintoye (2022) suggests that frequent customer interactions can enhance satisfaction by creating more opportunities for positive experiences and engagement. The discussion should also link these findings to theoretical frameworks such as the Customer Engagement Theory, which posits that frequent interactions improve customer satisfaction through increased engagement and perceived value.

Frequency and Customer Loyalty of Fashion Firms in Port Harcourt

The very strong positive relationship between frequency and customer loyalty, with an R-value of 0.986 and a p-value of 0.000, highlights that frequent interactions are highly correlated with customer loyalty. This finding suggests that frequent engagement with the brand fosters a strong sense of loyalty. However, the discussion should explore why this relationship is exceptionally strong compared to other factors. Research by Ezeani and Obi (2023) indicates that high interaction frequency can lead to greater customer loyalty through enhanced familiarity and trust. The analysis should also consider the possibility of overfitting or data entry errors, as such an unusually high correlation could suggest underlying issues. A comparative analysis with similar studies would provide a broader context and validate the robustness of these findings.

Demographic Factors as a Moderator of the Relationship between Usage Occasions Segmentation and Customer Patronage

The analysis of demographic factors (age, sex, and marital status) shows a partial correlation coefficient of 0.560, indicating that these factors significantly moderate the relationship between usage occasion segmentation and customer patronage, with statistical significance ($p = 0.000$). This suggests that demographic variables have a substantial impact on how usage occasion segmentation affects customer patronage. Previous research by Ojo and Akintoye (2023) supports this, showing that demographics influence consumer preferences and behaviors, which in turn affect patronage patterns. The discussion should critically examine how different demographic factors interact with usage occasion segmentation. For example, age and marital status might influence purchasing

behaviors and loyalty differently, as shown in studies by Adamu et al. (2023) and Oladipo et al. (2022). Understanding these moderating effects can provide fashion firms in Port Harcourt with targeted strategies to enhance customer engagement and patronage based on demographic profiles.

5. Conclusion and Recommendations

The study reveals that usage time and purchase frequency are pivotal factors influencing customer satisfaction and loyalty within fashion firms in Port Harcourt. A very strong positive relationship between time and customer satisfaction highlights the importance of prompt service in enhancing customer contentment. However, the moderately strong relationship between time and customer loyalty indicates that while timely service is significant, it is one of several factors that contribute to sustained customer loyalty. Purchase frequency showed a powerful impact on customer loyalty, suggesting that consistent engagement with customers significantly fosters loyalty.

Demographic factors also play a significant role, moderating the relationship between usage occasion segmentation and customer patronage. This implies that different demographic segments experience and value fashion firms' offerings differently based on their unique characteristics. To capitalize on these insights, fashion firms should integrate these factors into their operational strategies to enhance customer satisfaction and loyalty. By aligning service delivery, location strategy, and engagement practices with customer preferences and demographic profiles, firms can better meet customer expectations and strengthen their market position in Port Harcourt.

Recommendations

1. Fashion firms should focus on improving service delivery times, including faster processing of orders and quicker response to customer inquiries. This will enhance customer satisfaction and contribute to positive experiences that could drive repeat business.
2. Firms should prioritize selecting locations that are easily accessible to their target customers. Being situated in high-traffic areas or regions with high customer density can increase footfall and enhance both customer satisfaction and loyalty.
3. Implement strategies to increase the frequency of customer interactions, such as regular updates on new collections, exclusive offers, and personalized

communications. This will help in building stronger relationships and fostering customer loyalty.

4. Fashion firms should analyze demographic data to better understand their customer segments. By customizing product offerings and marketing strategies to align with the preferences and needs of different age groups, genders, and marital statuses, firms can enhance their appeal and drive higher patronage.
5. Firms should use insights from usage occasion segmentation to design targeted marketing campaigns and product promotions. Understanding when and why customers use their products can help in tailoring offerings and improving customer satisfaction and loyalty.

References

Adebayo, A., & Okoye, I. (2021). Trends in fashion consumption patterns. *Journal of Fashion and Textiles, 8*(2), 35-50. https://doi.org/10.1186/s40691-021-00234-x

Adeyemi, A., & Ojo, O. (2022). Customer preferences and product innovation in fashion. Fashion Theory: *The Journal of Dress, Body & Culture, 26*(4), 467-482. https://doi.org/10.1080/1362704X.2022.2041587

Adeyemo, S., & Olayodo, R. (2021). Understanding consumer loyalty in the fashion industry. *Journal of Business & Economics, 19*(2), 215-230. https://doi.org/10.1037/bne0000123

Afolabi, J., & Ojo, A. (2023). The role of social media in fashion marketing. *Journal of Fashion Marketing and Management, 28*(1), 89-104. https://doi.org/10.1108/JFMM-01-2023-0010

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Akinyemi, A., Oloyede, A., & Suleiman, B. (2023). Fashion consumer behavior in urban markets. *Urban Studies, 60*(1), 127-145. https://doi.org/10.1177/00420980221104098

Amin, M., Khalid, R., & Zafar, A. (2022). Emerging trends in fashion marketing. *Journal of Fashion Technology & Textile Engineering, 10*(4), 345-360. https://doi.org/10.4172/2329-9568.1000225

Belk, R. W., & Pollay, R. W. (2020). The role of imagery in consumer decision making. *Journal of Consumer Research, 47*(5), 823-839. https://doi.org/10.1093/jcr/ucaa049

Choudhary, P., & Pandey, R. (2024). Seasonal trends and consumer preferences in fashion retail. *Fashion Retail Journal, 15*(3), 112-129. https://doi.org/10.1080/FRJ.2024.098736

Chukwu, G. (2020). Brand positioning and customer engagement. *Marketing Intelligence & Planning, 38*(1), 77-92. https://doi.org/10.1108/MIP-12-2018-0450

Chukwu, I., & Anikwe, R. (2022). Fashion branding and consumer loyalty. *Journal of Brand Management, 29*(3), 143-159. https://doi.org/10.1057/s41262-022-00344-1

Chukwu, I., & Ezeh, P. (2021). Consumer segmentation in the fashion industry. *Journal of Business Research, 24*(4), 89-104. https://doi.org/10.1016/j.jbusres.2021.08.005

Chukwu, I., & Obasi, E. (2022). Seasonal buying trends and fashion consumer behavior. *Marketing Science, 40*(2), 210-227. https://doi.org/10.1287/mksc.2022.1250

Chukwu, I., & Okoro, E. (2023). Evaluating the impact of marketing campaigns on fashion retail. *Journal of Retailing, 99*(4), 442-458. https://doi.org/10.1016/j.jretai.2023.01.003

Eze, I., & Ogbu, M. (2021). Factors influencing brand loyalty in fashion retail. *Journal of Retailing and Consumer Services, 60,* 102-115. https://doi.org/10.1016/j.jretconser.2021.102414

Eze, I., Nwankwo, D., & Obi, C. (2023). Assessing the effectiveness of fashion advertising strategies. *Journal of Advertising Research, 63*(2), 67-82. https://doi.org/10.2501/JAR-2023-007

Hornik, J. (1984). Analyzing customer satisfaction in service industries. *Journal of Services Marketing, 2*(4), 5-14. https://doi.org/10.1108/EUM0000000000403

Ibe, A., & Williams, O. (2023). Impact of usage occasions on fashion brand loyalty. *Journal of Fashion Marketing and Management, 27*(2), 143-159. https://doi.org/10.1108/JFMM-12-2022-0145

Jacks, D., & Morgan, L. (2022). Digital transformation in the fashion industry. *Journal of Digital Marketing, 14*(2), 153-168. https://doi.org/10.1007/s40940-022-00156-0

Khan, M. A., Ahmed, N., & Khan, M. N. (2023). The impact of environmental factors on fashion consumer preferences. *Journal of Environmental Psychology, 62*, 89-101. https://doi.org/10.1016/j.jenvp.2023.101463

Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607-610. https://doi.org/10.1177/001316447003000308

Nguyen, H., & Lee, S. (2023). The role of consumer behavior in the fashion industry. *International Journal of Consumer Studies, 47*(1), 67-82. https://doi.org/10.1111/ijcs.12745

Nguyen, T., & Tran, T. (2023). Influences of marketing strategies on consumer choice. *Journal of Marketing Theory and Practice, 31*(2), 234-249. https://doi.org/10.1080/10696679.2023.2157032

Obasi, A., & Eke, J. (2023). Fashion marketing strategies and customer satisfaction. *Journal of Strategic Marketing, 31*(1), 56-72. https://doi.org/10.1080/0965254X.2023.2045367

Okeke, C., & Onah, F. (2022). The impact of digital marketing on fashion consumer behavior. *International Journal of Fashion Design, Technology and Education, 15*(3), 210-225. https://doi.org/10.1080/17543266.2022.2100756

Schiffman, L. G., & Wisenblit, J. (2018). *Consumer behavior* (11th ed.). Pearson.

Smith, J., & Taylor, S. (2021). The effects of location on customer purchasing behavior. *Journal of Retailing and Consumer Services, 59,* 101-115. https://doi.org/10.1016/j.jretconser.2021.102412

Assessing the Drivers and Inhibitors of Entrepreneurial Growth in North Western Nigeria: A Study of Zamfara Metropolis

Mulikat FolaShade Usman[1] and Lubabatu Musa Anka[2]
[1]Department of Business Administration, Usmanu Danfodiyo University, Sokoto
Email: mulikat.usman@udusok.edu.ng[1],lubabatumusaanka@gmail.com[2]
https://doi.org/10.57233/gijmss.v7i3.06

Abstract

The study assesses the drivers and inhibitors of entrepreneurial growth in North-Western region of Nigeria using the case study of Gusau metropolis Zamfara State. Primary data was obtained through administering questionnaires where the identified population under investigation was sixty one registered entrepreneurs within Gusau metropolis. The study adopted krejcie and morgan (1970) to determine the sample size, where a sample of (51) entrepreneurs via questionnaire were selected and analyzed using multiple linear regression model (MLRM). Findings from the study reveals that raw materials accessibility, government support policies, entrepreneurship education and training and network opportunities are the drivers of entrepreneurial growth, while banditry, economic recession and financial constraint impacted entrepreneurial growth negatively. The study recommends among others that to enhance and foster entrepreneurial growth, it is crucial that Government of Zamfara should establish small scale financial organization at the local level within the metropolis to make it simpler for entrepreneurs to obtain capital.

Keywords: Drivers, Inhibitors, Entrepreneurial Growth, Zamfara, Metropolis

1.0. Introduction

The role of entrepreneurship in the development and growth of any contemporary economy cannot be underestimated. Entrepreneurship can be regarded as the engine of economic growth and a driving force of decentralization, economic modifier and movement towards the direction of market economy. The connection between entrepreneurship and economic growth is demonstrated when entrepreneurs act upon profit opportunities which in the process develop the economy and create more economic activities that generate employment opportunities which boost the gross domestic product (Kirziner, 1973; Ogbo and Nwachukwu, 2012). Usiaboh (2000) viewed a strong positive correlation exists between entrepreneurship and economic development, it is now more recognize as a significant element of economic growth, employment generation and innovation. Entrepreneurship is a dynamic for improving economic growth which has helped most economies in manpower innovation and revenue generation

(Vukevi etal 2022). In the work of Baktash Jami (2020) it was stated that according to Mahamid (2012:281) limited understanding of the business system and lack of management experience are the factors that contributed to business failure. Numerous studies such as Farayibi (2015), Usman and Zuru (2019) and Ogunlana (2018) investigated the drivers and inhibitors of entrepreneurial growth in different geographical locations. Most of the studies have, however, been concentrated in developed countries and region, using different methodologies. For example, Plewa and Muros (2016) examined the drivers and inhibitors of university business corporations in Europe, a complete assessment across seven university-business cooperation activities with a considerable sample of European academics from thirty-three (33) countries. Results from the study shows that barriers have more diverse effect than the drivers. Also different university business cooperatives activities are influenced by different barriers and drivers with neither barriers nor drivers affecting all activities in the same way. Lichtenstein and Strow (2018), examines the engines of entrepreneurial growth: resources, complexity, capacity and emergence, in the United State of America. The study employed causal loop modeling as a tool to examine the internal process and performance, the result of the study found that rising growth from within change appears to increase capacity and decrease instability thereby increasing morale, performance and growth.

Kassahun (2021) studied of youth entrepreneurial startups, drivers and inhibitors in Ethiopia South Gonder zone. Findings in their separate studies cited capital accessibility, administrative and regulatory framework as the major factors influencing youth entrepreneurship startups. Kelvin (2022) examines the determinants of Entrepreneurial growth in Nigeria, the study used cross sectional survey design. The study assessed four determinants of entrepreneurial growth; respondents were selected from the six geopolitical zones of Nigeria. The study reveals that capital financings are the most important factor determining the growth of entrepreneurial activities in Nigeria. These studies were carried out outside Zamfara state with different geographical locations. Issue relating to drivers and inhibitors of entrepreneurial growth in North Western Nigeria is not quantitatively exploited in-depth. This creates a geographical gap, which this study seeks to fill by evaluating the drivers and inhibitors of entrepreneurial growth in Zamfara State of north western Nigeria. The study examines the key inhibitors of entrepreneurial growth (Banditry, economic recession, financial constraints and cultural social norms) and drivers of entrepreneurial growth (Networking, raw material accessibility, government support policies and

regulations entrepreneurial education and training) in Northwestern, Nigeria**.** Based on the stated objective the relevant questions raised are;

i. To what extent does Networking, raw material accessibility, government support policies and regulations and entrepreneurship education and training drives entrepreneurial growth in Zamfara metropolis?
ii. To what extent does Banditry, economic recession, financial constraints and cultural social norms inhibits entrepreneurial growth in Zamfara metropolis?

Based on that the following research hypotheses emanated from the above research questions:

H_{01}: There is no significant relationship between networking, raw material accessibility, government support policies and regulations, and entrepreneurship education and training on entrepreneurial growth in Zamfara metropolis.

H_{02}: There is no significant relationship between banditry, economic recession, financial constraint, cultural social norms and entrepreneurial growth in Zamfara metropolis.

2.0. Empirical review

Mateus (2015) studied the factors influencing the failure of small enterprises in a selected municipality in Luanda, Angola. Statistical Package for the Social Sciences (SPSS) software was used to analyse the quantitative data. The study revealed that lack of knowledge from the path of small business owners and managers, financial accounting skills; and negligence in planning and controlling business resources are the factors responsible for business failure in Angola. The results of the study also found that lack of skill acquisition in business is the most important issue contributing to business failure.

Plewa and Muros (2016) investigate the drivers and inhibitors of university business corporations in Europe using a comprehensive review and analysis of selected sample of European academics from thirty-three (33) countries. Results from the study shows that barriers have more diverse effect than the drivers and the different university business cooperatives activities are affected by different inhibitors and drivers. The study concluded that both barriers and inhibitors do not affect business activities in the same way. Ali (2018) studied the inhibiting and driving factors affect international trade growth, the study used Q-test to obtain the mental patterns for active exporters in Tehran. The results of the analysis show that stable regulations, standards and interaction between trade

decision-makers and macro policy-makers and international sanctions and regional conflicts and international business environment are among the driving and inhibiting factors to international trade growth in Iran.

Rava (2019) investigates innovation in the context of startups: drivers and inhibitors in the Kurdistan region of Iraq. Data was collected using qualitative, interviews with the founders and co-founders of twelve Kurdistan region of Iraq startups, across different industries. Findings from the study indicate that majority of the startup in the Kurdistan region of Iraq regarded innovation empirical action as a new different or creative way of doing things or as a change in the mindset. The study recommends that startup should cultivate innovation in their activities and to build a culture of innovation friendly mindset.

Baktash (2020) studied the factors that affect successes and failures of entrepreneurship in Afghanistan using explanatory sequential mixed method. A qualitative bilateral interviews with 22 companies was conducted in Afghanistan. Using a simple linear regression model, the study found that for entrepreneurship to succeed there must be a good entrepreneurial ecosystem which includes capital accessibility, favourable market conditions, good business environment, availability of good infrastructure, good transportation system skills acquisition, access to innovation, and a good institutional and regulatory framework. The study also revealed that, the success of entrepreneurship depends on both the microeconomic and macroeconomic issues. Both are interconnected to each other, without which there is an imbalance of performance.

Kassahun (2021) utilized both qualitative and quantitative research approach with a cross sectional survey questionnaire to study youth entrepreneurial startups enablers and inhibitors in Ethiopia South Gonder zone. The study employed convenience and snowball sampling techniques. The data was analyzed using binary logistic regression with the help of the Statistical Package for Social Science (SPSS). The study hypothesis was tested via a chi-square test. As the odd ratio Exp (B) and the chi-square coefficient of the model revealed that access to finance, administrative and regulatory framework and entrepreneurship training were the major factors influencing youth entrepreneurial startups. The result of the findings demonstrated that access to finance, administrative and regulatory frameworks are the factors influencing youth entrepreneurship startups. The study recommends that government should place greater emphasis on supporting young entrepreneurs by ensuring that they have sufficient financial resources.

Alotaibi and Tayachi (2021) study the drivers of entrepreneurial growth in Saudi Arabia, the study used quantitative methodology using survey research data generated from google survey, with eighty five sample of entrepreneurs from Jeddah. The study found that education, training, venture capitalist, family and culture are the drivers of entrepreneurial growth.

Farayibi (2015) studies of econometric analysis on the role of entrepreneurship in economic growth: Evidence from Enterprise Development in Nigeria. The findings shows the roles of entrepreneurs as good drivers of economic growth in the country. Specifically, results indicate that credit to SMEs is statistically significant for economic growth, implying that increase in entrepreneurial financing has significant effect on economic growth in Nigeria. While the major hindrance include; poor infrastructural facilities, inadequate start-up process, financial management problems, lack of strategic planning and other socio-cultural problems.

Ogunlana (2018) examines the role of entrepreneurship as the driver of economic growth, the study also gives the analysis of problems faced by business startups of small and medium scale enterprises SMEs. A narrative textual case study method was used to gather information. The study found that entrepreneurship plays a significant role in achieving economic growth in order to overcome economic crisis. The study concluded that entrepreneurship generates employment opportunity which in turn improves the development of small and medium enterprise in Nigeria.

Oshi and Nkuda (2021) highlight the variables that drive and inhibit the phase of entrepreneurship in River state, Nigeria with clear distinction between small business and entrepreneurial ventures, using qualitative research design which largely depended on secondary data source. The driver's stimulus or push strategy comprises of raw material accessibility, government support policies and regulations, entrepreneurship education and training and networking etc. The inhibitors (Inertia or pull strategy represent the reverse of the drivers). The study found that there is more prevalence of inhibitors in the Nigerian business environment than the drivers. Likened to Newton's third law of motion the state of balance has shifted more in favor of the inhibitors to the detriment of the drivers of entrepreneurship.

Kelvin (2022) examines the determinants of entrepreneurial growth in Nigeria, the study used cross sectional survey design to assessed four determinants of entrepreneurial growth; respondents were selected from the six geopolitical zones of Nigeria. The study reveals that capital financing has significant influence on entrepreneurial growth in Nigeria. The study recommends that government should support entrepreneurial activities by providing the required funding for the growth of entrepreneurs.

3.0 Methodology

The study is a quantitative survey research. The population of the study consists of 61 registered enterprises and the sample size of 51 was drawn from the population of the study. The justification for the limited sample size of fifty one is because of inaccessibility to the entrepreneurs, because of the issue of insecurity and the bias was minimized by using probability sampling. Krejcie and Morgan (1970) sampling approach was used to calculate the sample size for a finite (known) population. The study used 95% confidence level (with a Z-value of 2.576) and a 5% margin of error was used for the computation of the sample size. The justification for choosing the confidence level, population proportion and degree of accuracy was determined based on the previous studies when collecting the data. Stratified random sampling was also employed. Data gathered was analysed via descriptive and inferential statistics. The descriptive statistics used frequency table, mean, and averages of the data set, while the inferential statistics used multiple regression analysis to analyze the data. The five main assumptions underlying multiple regression models were satisfied: (i) Linearity, (ii) Homoskedasticity, (iii) Independence of errors, (iv) Normality and (v) independence of explanatory variables.

3.1. Measurement of variables

There are two variables: the dependent variable: entrepreneurial growth which was measured using five likerts scale as (the number of new startups established over the period of five years has increased, innovation that led to the startups established after a specific period has decreased, the quantity of new startups established after a specific period has decreased, my business startups secured external funding, education and training programs foster my entrepreneurial skill and knowledge). While the independent variables are the drivers and inhibitors of entrepreneurial growth which are measured as follows: Drivers (raw material accessibility facilitate my business growth, government support policies and regulations foster my business activities, network opportunity facilitate

collaboration and knowledge exchange among entrepreneurs, and the inhibitors measured as (banditry threats have affected my business from functioning well, economic recession has inhibit my business growth, financial constraint hinders my business growth, cultural and social norms affect individual's willingness to start and grow some business). As mentioned earlier the study examines the key inhibitors of entrepreneurial growth (Banditry, economic recession, financial constraints and cultural social norms) and drivers of entrepreneurial growth (Networking, raw material accessibility, government support policies and regulations entrepreneurial education and training). The justification for selecting these variables is because to the best of the researcher's knowledge there is none or limited amount of study that used those variables altogether at a time, hence variable gap.

3.2 Validity and Reliability of the Research Instrument

A pilot testing of the instrument was carried out to determine both content and external validity of the instrument. A retest was also carried out to assist the researcher estimate the reliability of the instrument. This same test was given to the same people after a period of time. The reliability of the instrument was also examined by checking the consistency of the responses between the two tests. An internal consistency reliability test, using the Cronbach's Alpha was carried out to determine the reliability of the research instrument and check the consistency of results across items.

4.0. DATA ANALYSIS AND PRESENTATION

4.1 Responses from the administered questionnaire

Table 1: Distribution of Respondents based on Sex

Sex	Freq.	Percent	Valid Percent	Cumulative Percent
Female	18	35.3	35.3	35.3
Male	33	64.7	64.7	100.0
Total	51	100.0	100.0	

Table 1 shows the distribution of respondents based on the gender. The results revealed that out of 51 respondents, 33 (64.7%) are male, while 18 (35.3%) are female. This implies that the majority of the respondents are male.

Table 2: Distribution of Respondents based on Marital Status

Categories	Freq.	Percent	Valid Percent	Cumulative Percent
Single	14	27.5	27.5	27.5
Separated	1	2.0	2.0	29.4
Widowed	2	3.9	3.9	33.3
Divorced	2	3.9	3.9	37.3
Married	32	62.7	62.7	100.0
Total	51	100.0	100.0	

The result from the table 2 above revealed that out of 51 respondents, 14 (27.5%) are single, 1 (2.0%) is separated, 2 (3.9%) are widowed, 2 (3.9%) are divorced and 32 (62.7%) are married. This shows that majority of the respondents are married.

Table 3: Distribution of Respondents based on Age Group

Age group	Frequency	Percent	Valid Percent	Cumulative Percent
Below 20 years	5	9.8	9.8	9.8
20- 30 years	16	31.4	31.4	41.2
31 - 40 years	21	41.2	41.2	82.4
Above 40 years	9	17.6	17.6	100.0
Total	51	100.0	100.0	

Table 3 shows the age groups of the respondents that out of 51 respondents, 5 (9.8%) are below age of 20, 16 (31.4%) falls between the age group of 20-30 years, 21 (41.2%) are between ages of 31-40 while 9 (17.7%%) are above 40 years. Therefore most of the respondents are between ages of 31-40 years.

Table 4: Distribution of Respondents based on Business Ownership

Ownership	Frequency	Percent	Valid Percent	Cumulative Percent
No	20	39.2	39.2	39.2
Yes	31	60.8	60.8	100.0
Total	51	100.0	100.0	

Table 4 describes the respondents based on the ownership of business, from the table out of 51 respondents, 31 (60.8%) own a business, while 20 (39.2%) do not own a business. This indicates that the majority of the respondents own a business.

Table 5: Distribution of Respondents based on Business Ownership

Sectors	Frequency	Percent	Valid Percent	Cumulative Percent
Agriculture	14	27.5	27.5	27.5
Services	10	19.6	19.6	47.1
Manufacturing	9	17.6	17.6	64.7
Wholesale & Retail	18	35.3	35.3	100.0
Total	51	100.0	100.0	

Table 5 shows the distribution of respondents based on the business sectors. The results revealed that out of 51 respondents, 14 (27.5%) belong to agriculture sector, 10 (19.6%) belong to service sector, 9 (17.6%) belong to manufacturing sector, while 18 (35.3%) belong to Wholesale & Retailer sector. These results revealed that majority of the respondents are wholesalers & Retailers.

Table 6: Distribution of Respondents based on Sectorial Influence on Their Business Activities

Response	Frequency	Percent	Valid Percent	Cumulative Percent
NO	17	33.3	33.3	33.3
YES	34	66.7	66.7	100.0
Total	51	100.0	100.0	

Table 6 shows the distribution of respondents based on the sectorial influence on business activities. The results revealed that out of 51 respondents, 34 (66.7%) have their business activities being influenced by the business sectors, while 17 (33.3%s) do not have their business activities being influenced by the business sectors. This shows that the majority of the respondents have their business activities being influenced by the business sectors.

Table 7: Descriptive Statistics of Drivers and Inhibitors of Entrepreneurial growth

Variables/factors	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
Raw materials Accessibility	51	3.0392	.16794	1.19935	1.438
Government support policies and regulations	51	2.4314	.18205	1.30008	1.690
Network opportunity	51	3.1961	.05615	0.40098	.161
Education and Training	51	3.0784	.08328	0.59475	.354
Banditry threats	51	3.5098	.09851	0.70349	.495
Economic recession	51	3.0392	.10464	0.74728	.558
Financial constraint	51	3.3137	.10286	0.73458	.540
Cultural Social Norms	51	2.9216	.07843	0.56011	.314
Entrepreneurial growth	51	2.4951	.08897	0.63539	.404

Table 7 gives the mean and standard deviation (SD) of drivers and inhibitors of Entrepreneurial growth. The table shows that raw materials accessibility has mean=3.0392 and SD=1.19935. Therefore most respondents agreed that accessibility to raw material facilitates their business growth. Government support policies and regulations shows the mean=2.4314 and SD=1.30008. This implies that the majority of the respondents disagreed with the assertion that government support policies and regulations facilitate their business growth. This signify that majority of the respondents have not benefited from the government support.

Network opportunity has mean=3.1961and SD= 0.40098. Meaning most of the respondents agreed with the claim that network opportunities facilitate collaboration and knowledge among entrepreneurs. If the mean is higher than the standard deviation it implies that majority of the response are similar, while if the standard deviation is higher than the mean, it means that there is higher variability in the response of the respondents.

The education and training shows mean=3.0784 and SD=0.59475. This means that a good number of the respondents agreed that education and training programs foster their entrepreneurial skills. Banditry threats revealed

mean=3.5098 (approximately 4) and SD=0.70349. This revealed that almost all the respondents strongly agreed that banditry threats affect their business.

Similarly, economic recession has mean=3.0392 and SD= 0.74728 indicating that almost all response agreed that economic recession has inhibited their business growth. Financial constraint's result shows the mean=3.3137 and SD=0.73458, this shows that most of the respondent concurred that financial constraint has hindered their business growth.

The result of cultural social norms has mean=2.9216 and SD=0.56011, revealing that cultural social norms in the society influence the individual's willingness to start and grow a business. Also entrepreneurial growth with mean=2.4951 and SD=0.63539 potraying that the majority of the respondents disagreed with economic growth of the business ventures. This is due to inaccessibility to external funds, low in the quantity of new startups businesses and lack of innovations

4.2 Inferential Statistics Results

Table 8: Multiple Linear Regression Analysis of Entrepreneurial Growth Drivers.

Predictors	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	0.075	.779	0.096	0.982
Raw materials Accessibility	2.108	.877	2.404	0.018*
Government support policies and regulations	0.078	.071	1.107	0.274
Network opportunity	1.980	.231	8.571	0.031*
Education and Training	3.097	1.551	1.997	0.053**

**** DV=****entrepreneurial growth*

Table 8 presents the results of regression analysis of the effect of entrepreneurial growth drivers on entrepreneurial growth. The drivers considered include raw materials accessibility, government support policies and regulations, network opportunity and education & training. The results of B=2.108 with p-value=0.018 and B=1.98 with p-value=0.031 for raw materials accessibility and Network

opportunity respectively show that raw materials accessibility and network opportunity have positive significant effect on entrepreneurial growth at 5% level of significance. The result of B=2.108 with p-value=0.018 for education and training shows that education and training has significant positive effect on entrepreneurial growth at 10% level of significance. However, the result of B=2.108 with p-value=0.018 for government support policies and regulations indicated lack of significant impact on entrepreneurial growth.

Table 9: Goodness of Fit for Regression Model on Entrepreneurial growth Drivers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718[a]	.515	.528	.62657

a Predictors: (Constant), Education and Training, Raw materials accessibility, Government support policies and regulations, Network opportunity

Table 9 shows the result of the goodness of fit of regression model on entrepreneurial growth drivers of entrepreneurial growth. The result revealed correlation coefficient r=0.718 (71.8%) and coefficient of determination r^2=0.515 indicating the regression model obtained is good and robust for the prediction of economic growth using the predictors education and training, raw materials accessibility, government support policies and regulations, network opportunity. This means the independent variables well explained the variation in the dependent variable.

Table 10: Multiple Linear Regression Analysis of Entrepreneurial growth inhibitors

Predictors	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	2.757	2.709	3.889	.678
Banditry threats	-1.255	.136	-9.228	.000
Economic recession	-1.127	.126	-8.288	.000
Financial constraint	-2.094	.930	-2.252	.01
Cultural Social Norms	-.191	.196	-0.974	.228

**** DV=entrepreneurial growth***

Table 10 presents the results of regression analysis of effect of entrepreneurial growth inhibitors on entrepreneurial growth. The inhibitors considered include Banditry threats, Economic recession, financial constraint and Cultural Social Norms. The results of B= -1.255 with p-value=0.000<0.05, B= -1.127 with p-value=0.000<0.05 and B=-2.094 with p-value=0.011<0.05 for Banditry threats, economic recession, financial constraint respectively show that Banditry threats, economic recession, financial constraint have negative significant effect on entrepreneurial growth at 5% level of significance. The result of B=2.108 with p-value=0.018 for education and training shows that education and training positively and significantly affect entrepreneurial growth at 10% level of significance. However, the result of B=-0.191 with p-value=0.228>0.05 for cultural social Norms indicated negative but insignificant impact on entrepreneurial growth.

Table 11: Goodness of Fit for Regression Model on Entrepreneurial growth Drivers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709[a]	.503	.552	.61880

a. Predictors: (Constant), Cultural Social Norms, Banditry threats, Economic recession, Financial constraint

Table 11 shows the result of the goodness of fit of regression model on entrepreneurial growth inhibitors. The result revealed correlation coefficient of r=0.709 (70.9%) and coefficient of determination r^2=0.503 indicating the regression model obtained is good and robust for the prediction of economic growth using the predictors Cultural Social Norms, Banditry threats, Economic recession, Financial constraint. This indicates that the independent variables well explain the variation in the dependent variable.

4.3 Discussion of Findings

The study found that raw material accessibility and networking opportunity positively and significantly affect entrepreneurial growth at 5% level of significance. The result is in consonance with the work of Mateus vicent Justino (2015) who found that lack of economic assistance and availability of business resources which are raw material, skilled people and availability of capital, timid policy-making regulations, as well as high level of corruption and theft in the

country, have negative impact in the success of business. Also Tayachi (2021) established that education, training, venture capitalist and family and as well as culture as drivers of entrepreneurial growth in Saudi Arabia.

Education and training also has a significant and positive effect on entrepreneurial growth, the finding agreed with that of Mahamid (2012) who found insufficient understanding of a business system and lack of management experience as factors that contributed to business failure. While, government support policies and regulations indicated lack of significant impact on entrepreneurial growth which is in agreement with that of Oshi and Nkuda (2021), which highlights the variables that drives and inhibits the phase of entrepreneurship in Nigeria as raw material accessibility, government support policies and regulations, entrepreneurship education and training and networking. The study further found that banditry threats, economic recession and financial constraints all have negative effects on entrepreneurial growth at 5% level of significance. This finding supports that of Baktash (2020) who concluded that for entrepreneurs to perform there must be a good entrepreneurial ecosystem which include access to finance, good market and business environmental factor, better infrastructure, transportation system, skills acquisition, access to innovative assets, and a good institutional and regulatory framework. However, the result of B=0.191 with P-value = 0.228>0.05 for social cultural norms indicated negative but insignificant impact on entrepreneurial growth. This means that social cultural norms do not have impact on entrepreneurial growth. This result is in consonance with the findings of Farayibi (2015) who concluded that the major hindrance to entrepreneurship as a growth in Nigeria include; poor infrastructural facilities, inadequate start-up process, financial management problems, lack of strategic planning and other socio-cultural problems.

5.0 Conclusion and Recommendations

The inhibitors of entrepreneurial growth in Northwestern Nigeria, Zamfara metropolis are largely that of banditry, economic recession, financial constraints and social cultural norms. There are also drivers especially in the form of raw materials, networking opportunities, education and training as well as government policy regulation. The study therefore recommends that the government of Zamfara state should establish small scale financial organization at the local level to make it simpler for entrepreneurs to obtain capital. In addition, the state government should also enact a policy that offers grants and incentives to entrepreneurs, in order to stimulate entrepreneurial growth within the state.

Further researches by scholars should also as a matter of necessity delve deeper into the exploration of how other variables that may impact on the dependent variables but not considered in the current study.

References

A.C. Nwachuckwu (2012). The role of entrepreneurship in economic development: The Nigeria Perspective**.** *European Journal of Business and Management. 4(8), 95- 105*

Ali Jandoust, (2018). Study of the drivers and inhibitors of international trade businesses *Academy of Marketing Studies Journal Volume 22, Issue 3,*

Baktash Jami (2020). Factors Affecting Successes and Failures of Entrepreneurship in Afghanistan Master Thesis.

Farayibi, Adesoji O (2015). Entrepreneurship as a Driver of Economic Growth: Evidence from Enterprise Development in Nigeria. *Centre for Allied Research & Economic Development,*

Ibrahim Umar Abbas, Cf., & Abu Mustapha Martins (2020). Influence of Entrepreneurial Orientation on Firms Performance: Evidence from Small and Medium Enterprises in Nigeria, *International Journal of Economics and Finance issues, (10) http://econjournals.com/index.php/ijefi/article/view/9126/pdf (accessed on 19/April/2020).*

Kassahun. Z.W.(2021). Youth Entrepreneurial Startups: Enablers and Inhibitors in Ethiopia, South Gonder Zone. *Innovation of Business and Management*

Kelvin, E.,A. (2022). Determinants of Entrepreneurial growth in Nigeria: Factors and principal components analysis. *Academy of Entrepreneurship Journal*. 28(4). 81087_95595

Kharshid Rava (2019). Innovation in startups: drivers and inhibitors. Masters thesis. *International Business Development* lath. University of applied sciences, 89 pages 2 pages of appendices

Kirzner, I. (1983). *Perception, opportunity and profit: Studies in the theory of entrepreneurship* (1st ed. 1979), Chicago: University of Chicago Press.

Krejcie, R. V. and Morgan, D. W. (1970). Determining Sample Size For Research Activities. *Educational And Psychological Measurement,* 30, 607-610.

Lichterstein Benjamin &Suroh, P. David (2018). Engines of entrepreneurial growth resources, complexity, capacity, and emergence. The world scientific reference entrepreneurship (in 4-5 vol 1st reading)

Mateus Vicente Justino (2015). Study of Factors Influencing the Failure of Small Enterprises in a Selected Municipality in Luanda, Angola University of Technology.

Mahamid, I. (2012). Factors affecting contractor's business failure: contractors' perspective. Engineering, Construction and Architectural Management, 19(3):269-285.

Nkuda, D. Mal &Oshi, E. Jesophine (2021). Drivers and inhibitors of entrepreneurial growth: the Nigerian situation, *Journal of Business Administration.* Vol 10(1) PP1-9, august 2021, ISSN 2277-7126 c 2021.

Ogunlana, F. (2018). The role of entrepreneurship as the drivers of economic growth. *Business Economics url={https://api.semanticscholar.org/CorpusID:158236870}*.

Plewa Carolin and Mures – Galen Victoria (2016): what drivers and inhibits university – business co-operation in Europe? A comprehensive assessment. Plewa @ Adelaide.edu.iau. R&D management 46.2,2016 Radama and john wiley& son ltd

Saja Alotaibi, Tahar Tayachi (2021). Study of drivers of entrepreneurial growth in Saudi Arabia. *Palarch"s journalof Achaelogy of Egypt/ Egyptology 18 (16), 247- 254. ISSN 1567-214x*

Usman, M.F & N.L. Zuru (2019). The Determinants of Entrepreneurship Activities: A literature Review *International Journal of Novel Research in Marketing Management and Economics* . 6, Issue 3, (45-51), Month: September - December 2019, Available at: www.noveltyjournals.com

Absorptive Capacity and Organisational Performance: An Empirical Study of a Public Organisation in Delta State, Nigeria

Uzoma Heman Ononye Ph.D.

Department of Business Management, Dennis Osadebay University, Asaba, Delta State. Nigeria

Email: ononye.uz@gmail.com; heman.ononye@dou.edu.ng

https://doi.org/10.57233/gijmss.v7i3.07

Abstract

Studies on a relationship between absorptive capacity and organisational performance has not been fully exhausted, as organisations operate in an environment marked by high changes and complexities. Absorptive capacity enables organisations to integrate, transform, and use external knowledge with the goal of improving the way they perform in dynamic and complex environments. Furthermore, the concept of organisational performance is multifaceted, and the managerial focus on each element may account for variations in performance across different organisations. Building on these arguments, the study aimed to examine the absorptive capacity's direct and indirect relationship with organisational performance, specifically employee adaptive performance and innovation performance. The study also put into perspective the mediating role of strategic flexibility, a construct that defines how well organisations align external knowledge with internal resources and capabilities to achieve desired outcomes. The study adopted the cross-sectional survey of 123 mid-level employees randomly selected from the Delta State Ministry of Health using a well-structured questionnaire. This ministry operates in highly dynamic and volatile environments where adaptation is necessary to respond to the numerous health challenges and threats affecting the overall wellbeing of society. The study analysed the data collected from February to March 2024 with the partial least squares method. It found that absorptive capacity has a significant and positive direct and indirect relationship with organisational performance, which includes employee performance and innovation performance. Strategic flexibility facilitated this indirect relationship, exerting a greater influence on the organisational performance proxies. The study concluded that strategic flexibility can partially explain the relationship between absorptive capacity and organisational performance.

Keywords: Absorptive capacity, employee performance, innovation, organisational performance, strategic flexibility

Introduction

Research shows that performance problems continue to persist in public organisations owing to their inability to align with changing stakeholders' expectations and demands (Amoako-Asiedu et al., 2023). This, in turn, leads to ineffectiveness and inefficiencies in public service. The organisation's bureaucratic foundations, insular thinking, and resistance to change exacerbate

this adaptive problem (Ononye & Igwe, 2019). To overcome the increasing pressure from stakeholders to improve performance, it is critical to identify organisational performance predictors for improvement and maintenance. Existing research has proffered ways of enhancing organisational performance, some of which include enhancing knowledge management practices (Kassa & Ning, 2023), fostering high-involvement work systems, and organisational ambidexterity (Pilmmer et al., 2017). The study suggests that another way for an organisation to respond strategically could be to improve and use its absorptive capacity (AC). Organisations use this dynamic capability to acquire, assimilate, transform, and exploit external knowledge in highly dynamic and turbulent environments. AC cultivates organisations' external knowledge flow to expand their understanding of their stakeholders' needs and demands to meet them. Arguably, accessing knowledge through stakeholders' interactions provides ample learning opportunities for organisations to capture and integrate useful knowledge critical to their operation and ability to perform. The environmental context is constantly changing. In light of this uncertainty, organisations consider external knowledge to be critical for developing competencies that enable them to navigate and progress in a more effective way amid these changes. In fact, the knowledge-based view suggests that an organisation's performance is dependent on their ability to share, create, organise, and apply accessible and complementary knowledge resources, including those held internally and externally. Despite the performance benefit of AC, many bureaucratic organisations face strong challenges in properly leveraging external knowledge flows, even with ample access to external knowledge sources. This may explain the poor performance of public organisations, given their poor understanding of critical stakeholders' needs and expectations. However, to eliminate such challenges, such organisations need to develop their AC appropriately (Kostopoulos et al., 2011).

There is a burgeoning stream of research on organisational performance as an outcome of AC (Sancho-Zamora et al., 2021a), but not much is known about the performance aspects influenced by AC. Organisational performance is a multidimensional construct comprising financial and non-financial elements (Udofia et al., 2021). Bentes et al. (2012) posit that the distinct managerial attention placed on each element could explain variations in organisational performance across organisations. As a result, improving one element may come at the expense of another. Because public organisations are not profit-oriented (i.e., profit-seeking) in nature and render essential public services, the focus on organisational performance will be on two non-financial performance aspects:

employee adaptive performance and innovation performance. These indicators are critical to providing public service in accordance with the evolving needs and demands of the public through learning (Ononye, 2021). Because the resources available to these organisations are highly limited, they should develop their ability to respond to evolving societal demands in order to enhance their scope for integrating change. The resource-constrained environment in which they operate provides new challenges with no commensurate improvement in resources, and this variability makes adaptation and innovation critical to maintain the quality of services delivered. Organisations, especially non-profit-seeking ones, may find their ability to adapt and innovate crucial when facing resource constraints. This ensures that they maintain an effective response capacity, leading to resilience in rapidly changing and challenging environments. Furthermore, research on how AC affects organisational performance remains unclear. The mixed results underline the fact that intervening factors can shed insights on the AC-organisational performance link (Nguyen et al., 2019). Recently, Pu and Liu (2023) affirmed that the AC-organisational performance link has significant contextual elements, which helps to deepen our understanding of the relationship. One of them could be strategic flexibility, defined as an organisational ability to respond and adapt promptly to changing environmental contexts, which yields both opportunities and threats.

The study contends that strategic flexibility pays attention to the external environment by aligning external knowledge with internal capabilities, resources, and practices in a way that ensures optimality in operations and performance. Thus, strategic flexibility engages resources in new courses of action for performance improvement in uncertain environments. Studies have examined strategic flexibility as an outcome of AC (Miroshnychenko et al., 2021) and an antecedent of organisational performance (Awais et al., 2023). Arguably, absorbing external knowledge enables organisations to have a better understanding of the changing context and adapt organisational resources in various ways that generate value. This value-creating advantage has performance implications for the organisation as it allows them to make the most of available resources through productive use, enabling them to respond to changing environmental conditions. Researchers (Miroshnychenko et al., 2021; Jabarzadeh et al., 2022) have shown that strategic flexibility is relevant to AC's connection with other desired outcomes in private sector firms, such as better performance and innovation within the firm. There is a likelihood that strategic flexibility will mediate the AC-organisational performance in the public sector. The challenge,

however, is that public organisations, with their high bureaucratic systems that impede change, may be at variance with the practicality of strategic flexibility. Strategic missteps can result from ineffective use of environmental information and from the maintenance of the present state of affairs amid environmental changes.

Kamasak et al. (2016) contend that stable, standard routines and models may restrict the strategic manoeuvring capabilities of such organisations. Azamela et al. (2022) argue that the open and political decision-making process, which considers the interests of multiple stakeholders, could enable the achievement of flexibility in uncertain environments. Such a process makes public organisations less vulnerable to high environmental dynamism and puts them in a better position to successfully manage change (Cingöz & Akdoğan, 2013). Because these organisations cannot operate the same way in a changing environment, we should view change as a tool for effective action and problem solving. Adapting to change reinforces the legitimacy of these organisations (Stephen, 2018). The perception of an institution's behaviour or actions as desirable within socially constructed expectations determines its legitimacy. The study acknowledges the comparative absence of competitive and profit-making objectives in the public sector compared to the private sector; it draws similarities from the evolving yet complex expectations and demands of its stakeholders. In light of this shift in demand and/or expectation, external knowledge may prove useful for these organisations' sustained performance. This sets the foundation for developing outward-looking capacities to make public organisations more responsive in environments marked by high change and complexity. However, in this research setting, studies have yet to test and empirically prove the validity of the statement that AC fosters strategic flexibility to ultimately improve organisational performance.

This study is significant for three reasons. First, the study attempts to improve our understanding of the concept of AC and its influences on certain aspects of organisational performance, which, to the best of the researcher’s knowledge, is an unexplored area in the relevant literature. The public sector provides a unique context for inference-drawing and extends the practicality and applicability of findings from the private sector (e.g., Bouguerra et al., 2022; Sancho-Zamora et al., 2021b; Umrani et al., 2022). Public organisations can benefit from the concept of AC, as effective knowledge leverage plays a crucial role in developing appropriate responses to new, emerging, and diverse societal problems (Harvey et

al., 2010; Ononye, 2021). Second, the study highlights the importance of strategic flexibility as a mediator in the relationship between AC and organisational performance, a relationship that needs further testing and confirmation within the study's organisational context. Thus, it could extend the list of contextual factors indicated in existing literature. Third, the recent research's geographic distribution necessitated the use of an original sample, as no prior studies have explicitly targeted Nigerian public organisations. The study anticipates that the findings will aid in the development of strategies and practices to improve various aspects of AC, strategic flexibility, and organisational performance.

Literature Review

2.1 Conceptual Review

Absorptive Capacity

Absorptive capacity (AC) is a dynamic capability that enables organisations to acquire, assimilate, transform, and exploit new and complementary knowledge from the environment to achieve desired ends (Kostopoulos et al., 2011). This capability enables knowledge to move from a differentiated state to an integrated state to create value or benefits for both relevant stakeholders and the organisation. AC has two components: the potential absorptive capacity and the realised absorptive capacity. Potential absorptive capacity refers to the abilities needed to identify and assimilate external information. The reduction of the knowledge gap resulting from the discovery and capture of new knowledge could aid in the effective exploitation of knowledge, thereby ensuring sustainable value creation. Realised absorptive capacity, on the other hand, is about the abilities needed to transform and use external information (Lau & Lo, 2019). The goal is to maximise the benefits of leveraging new external knowledge from its productive application to advance various aspects of organisational operations. Potential and realised absorptive capacity both improve firm performance in a positive way, but they do not work in isolation; instead, they work together to make the firm perform better. This is especially true as potential absorptive capacity opens up inbound knowledge flows; however, it does not guarantee the successful transformation and application of this knowledge. Organisations could realise the performance benefits of potentially relevant knowledge when both processes are present and relate to each other (Leal-Rodríguez et al., 2014). Bouguerra et al. (2022) discovered a greater combined effect than the individual effect of each component on performance. This reinforces the notion that their

presence, relationship, and complementarity can lead to more favourable outcomes.

AC inputs are external knowledge inflows. These inflows represent the aggregate amount of knowledge (i.e., tacit and explicit knowledge) that relates to different contexts, such as services, processes, technology, strategies, etc. Organisations obtain this knowledge from different sources, such as citizens, consultants, contractors, research institutions, and universities. In fact, engaging external stakeholders in knowledge co-creation activities (e.g., meetings, public forums, seminars, brainstorming sessions, etc.) helps to leverage shared insights and understanding to drive organisational processes, leading to valued outcomes such as innovation (Ononye, 2022a). AC sustains relationships with external knowledge actors to locate knowledge that facilitates the creation and combination of new knowledge needed to make organisations more effective and efficient. The breadth (i.e., the number of external sources accessed to complement a firm's knowledge base) and depth (i.e., the extent to which the firm deeply engages knowledge from external sources to enhance performance) of external knowledge search affects the absorptive capacity level of an organisation (Ferreras-Méndez et al., 2015).

Organisational Performance

Organisational performance is generally defined as the extent to which an organisation achieves valued results that meet the stakeholders' needs and expectations using available resources effectively and efficiently. As previously mentioned, different elements assess organisational performance, prompting the adoption of a multidimensional approach to its examination. Arguably, not all elements of organisational performance are relevant to every organisation. Given the potential variations in their contribution to the overall organisational performance, it is crucial to always consider the context (Harvey et al., 2010; Zubair et al., 2021). The study focuses on employee adaptive performance and innovation performance, which are presumably critical to the responsiveness of organisations to external changes and complexities in their operating environment. High changes in stakeholders' needs and expectations of public services mark the operating environment of public organisations, underscoring the importance of these performance aspects (Azamela et al., 2022; Ononye, 2022b). Employee adaptive performance (hereafter referred to as employee performance) focuses on the extent to which employees' respond to or adapt to changing work and environment contexts (Pradhan & Jena, 2017), while innovation performance

is the result of transforming knowledge resources and capabilities into practical solutions or benefits that are valuable to organisations and stakeholders (Ononye, 2021).

The goal of public organisations is not profit-making but public value creation, as well as impacting and balancing the interests of different stakeholders. Given the limited resources available, the driving imperative for both proxies is to make public services more responsive through value introjection (Ononye & Igwe, 2019). In a changing environment, public organisations cannot see their business as usual; otherwise, it becomes a risk. These organisations face mounting pressure to adopt a coordinated approach that encourages them to adapt and innovate in response to shifting environmental conditions. This would endow the scarce resources with new ways to create public value, ensuring public service effectiveness, efficiency, and users' satisfaction. Employees' transformative abilities to leverage knowledge-related processes, which instill a learning mindset in managing the complexity of public problems, are crucial for both employee performance and innovation. However, the rigid and insular nature of these organisations derived from their bureaucratic framework can impede their ability to adapt and innovate according to the growing pressures derived from public service users' expectations. As a result, the new public management paradigm proposes opening up social and learning processes to external influences in order to incorporate value-driven changes that ensure public service serves the public interest.

Strategic Flexibility

Strategic flexibility is seen as an organisation's ability to restructure or adjust itself internally alongside its relationship with the external environment. Here, managerial considerations, which may be proactive or reactive, are given to all the factors, internal and external, that are connected to an organisation's environment and have a meaningful impact on the decisions and performance of an organisation (Awais et al., 2023). Strategic flexibility is made up of two components: resource flexibility and coordination flexibility. Resource flexibility deals with the changeability of organisational resources, whereas coordination flexibility focuses on the organisational ability to configure and deploy this resource to an advantage. It is important that existing resources are amenable to change by broadening their scope to enable organisations to redeploy and utilise them in new ways for value creation. The aim of resource and coordination flexibility is to foster the creation of heterogeneous resources with multiple

applications to match the ambidextrous nature of organisational activities. Extending the scope of resource use is important for organisations struggling with scarce resources. The application of resource and coordination flexibility makes strategic resources more sensitive to changing public needs and expectations, thus allowing the coordination efforts to align with external changes.

Strategic flexibility is strongly associated with environmental dynamism, as organisations operate to obtain superior performance and advantages in a highly uncertain and competitive environment. This suggests organisations should constantly develop capabilities that enable them to be open to change (Cingöz & Akdoğan, 2013). If they want to effectively and efficiently deploy resources to exploit opportunities and/or mitigate threats, it is important to do so. Organisations are less vulnerable to the threats and challenges posed by changing environments when they are flexible in the coordination of resources. Flexibility puts them in a better position to successfully navigate the uncertain and unpredictable business landscape, given that they utilise a diversity of strategic actions and are capable of transitioning from one strategy to the other. Firms can achieve strategic excellence by aligning their resources and managerial practices to seize emerging opportunities. The alignment of resources, capabilities, and practices enhances organisational preparedness. This gives organisations some form of control over their environment while generating distinct advantages critical to improved performance. Using contingency theory, the study argues that strategic flexibility is effective and relevant in changing environments because it adapts organisational resources, according to the changing context, to achieve an optimal course of action or solution. This underlines the importance of strategic flexibility for organisational adaptation to significant, uncertain, and rapid environmental changes. Other desirable outcomes of strategic flexibility include improved resource efficiency, competitive advantage, organisational performance, and innovation (Awais et al., 2023; Sen et al., 2022).

Absorptive Capacity and Organisational Performance

AC facilitates the integration of valuable external knowledge to foster learning, allowing organisations to develop, share, and apply knowledge to achieve valuable work outcomes. Organisations' alignment with externally relevant knowledge puts them in better positions to respond to changing work requirements and conditions. Organisational responsiveness strongly predicts their level of performance (Sauchon et al., 2004). Studies (Bouguerra et al., 2022; Sancho-Zamora et al., 2021b; Umrani et al., 2022) that examined the AC and

organisational performance relationships conclude that there is a positive relationship between the two constructs, but in a private sector context. As a result, research on the AC-organisational performance link has not taken into account specific organisational performance proxies in a public sector setting. The new public management approach aims to introduce some private sector values and ideas into the public sector (Harvey et al., 2010). However, it is important to exercise caution in their application, as they may not offer a comprehensive explanation of actual practice, given the nature of services provided, the bureaucratic nature of public organisations, and the complex and multi-value environment in which they operate. Because this study focused on specific performance aspects, there may be contextual factors that help explain the importance of AC for organisational performance proxies (Robertson et al., 2023).

AC is a concept that connects both individuals and organisations to external knowledge flows in the business environment. The use of novel and diverse knowledge is indispensable for achieving desired outcomes from innovative and adaptive processes. In that way, openness to the changing work environment helps them internalise relevant information when they have new experiences or moments of discovery. This makes it easier for them to innovate or adapt to agile environmental conditions (Wu et al., 2014). Employees develop and maintain an organisation-level AC, which their interactions amplify as a collective phenomenon. Park and Park (2019) contend that organisational support for learning and knowledge development enables organisations to make careful change decisions. According to Bhojaraju (2005), when knowledge becomes inconsistent with results and expectations, employees seek to review and update their knowledge stock to reflect salient changes or developments in content through learning. This consistency and conformity check is necessary if knowledge is to guide reasoning for a particular set of work objectives over a given period.

Jena and Goyal (2022) state that innovation and adaptation are interconnected, given that they require organisations and employees to adopt a proactive approach to navigating the incessant changes and unpredictability of the work environment. Organisations highly value adaptive and innovative capabilities due to their enduring impact on the change process. Incorporating internal and external knowledge may support and accelerate innovation and adaptation at the individual or organisational level. To lend credence, studies suggest that external knowledge

flows are critical for innovation (Hurtado-Palomino et al., 2022; Nguyen et al., 2019) and individual adaptation (Aguinis & Burgu-Tian, 2021; Jundt et al., 2015; Martin, 2012; Pratoom, 2022). It is worth noting that innovation performance focuses on organisational response to changing environments through the introduction of novelty, while employee performance focuses on employees' ability to adjust to changing and agile work environments. Nevertheless, to attain superior performance, employees and organisations must open themselves to the simultaneous influence of different factors or elements in the external environment.

The adaptive challenges experienced by public organisations suggest that AC activities are challenging and often not fully exploited in bureaucratic settings. This explains the poor understanding of stakeholders' expectations, needs, and priorities, as well as the rise of new public management reforms that aim to improve this understanding through co-creation activities (Harvey et al., 2010). As a result, the study argues that a knowledge management paradigm that makes effective use of complementary external knowledge inflows would make it easy to create an inclusive and effective organisational system that meets the changing needs and expectations of critical stakeholders. Given this context, the following hypotheses were proposed:

H_1: Absorptive capacity and employee performance are positively related.

H_2: Absorptive capacity and innovation performance are positively related.

The Mediating Role of Strategic Flexibility

The dynamics of AC and organisational performance may not be straightforward due to the variable quality of AC in public organisations (Pu & Liu, 2023). The study contends that strategic flexibility can compensate for AC's variability by creating and utilising a variety of strategic responses to improve organisational performance in dynamic environments. There is available evidence that suggests absorptive capacity enhances strategic flexibility (Muneer, 2019; Tufan & Mert, 2023), and strategic flexibility improves organisational performance (Awais et al., 2023; Kale et al., 2019). However, strategic flexibility's intervening role in the AC-organisational performance link has received little empirical attention and support. The only study that examined this relationship sequence was Jabarzadeh et al. (2022). They discovered that strategic flexibility mediates the AC-organisational performance nexus of firms operating in Iran and Turkey's fast-moving consumer goods industries.

Researchers have shown that strategic flexibility can help create a positive link between environmental factors, other organisational-level factors, and firm performance, especially in the private sector. For example, Sen et al. (2022) found that small businesses operating in Coimbatore, India, achieve superior performance when their strategic resource options align with the perceived need for strategic partnerships and knowledge exchange with relevant stakeholders. Cingöz and Akdoğan (2013) revealed that environmental dynamism can be successfully navigated through strategic flexibility, which in turn enhances the innovation performance of firms operating in Kayseri, Turkey. There are also studies that employ a different perspective on strategic flexibility, such as strategic agility (Awais et al., 2023**)**. This dynamic capability allows organisations to sense and quickly adapt to the perceived environmental conditions for change. For example, Kale et al. (2019) noted that strategic agility channelled the influences of absorptive capacity activities on the performance of accommodation establishments in Turkey. Mata et al. (2023), drawing from a sample of employees working in small and medium-sized information technology organisations in Portugal, revealed that AC supports project success via strategic agility.

Given the above, flexibility in an organisation's strategic approach to change can better manage the intricate nature of the AC-organisational performance link. In this context, the utility of strategic flexibility presents a gap that the study intends to fill. Furthermore, the reviewed studies primarily focused on private sector organisations, necessitating further research in the public sector. It is important to note that strategic flexibility is relevant for public organisations because they must seek ways to reinvent themselves by finding, developing, and using a variety of ideas and strategies to manage organisational change. The coronavirus pandemic presented a strong case for these organisations to quickly identify specific sets of competencies and channel them to where they are most needed and derived the most value. Baker (2007) supports the importance of strategic flexibility in the public sector. In light of this, the following hypotheses were formulated:

H_3: Strategic flexibility and employee performance are positively related.

H_4: Strategic flexibility and innovation performance are positively related.

H_5: Absorptive capacity and strategic flexibility are positively related.

H_6: The absorptive capacity and employee performance relationship is mediated by strategic flexibility.

H_7: The absorptive capacity and innovation performance relationship is mediated by strategic flexibility.

2.2 Theoretical Framework

The dynamic capability theory, developed by Teece et al. (1998), forms the foundation of this study. According to the dynamic capability theory, organisations can achieve sustainable performance by fostering adaptation to changing environmental conditions through dynamic capabilities. Organisations consider a construct dynamic when it enables them to adapt to a rapidly changing environment, thereby enhancing their functionality and capacity to serve the public through change or innovation. In light of this, developing resource-based dynamic capabilities (absorptive capacity and strategic flexibility) can enhance an organisation's value-creating potential by systematically renewing, updating, or adapting their resource base. The essence of adaptation is to ensure that organisations have more dynamic than static resources when managing responses to shifting environmental factors. In a turbulent environment, internal resources may be insufficient to address the critical issues of organisational adaptation. Hence, organisations should extend their collaborative relationships with external stakeholders to obtain complementary resources that can increase the diversity of strategic responses under dynamic circumstances. Not doing so will leave them isolated and vulnerable to unstable performance due to insular thinking. Absorptive capacity gathers useful external information. However, if internal resources, processes, or practices do not align properly to foster and sustain value-creating activities, exploiting external knowledge may not yield the desired results. Finding the right balance is crucial for managing change and achieving competitiveness; hence, the need to activate strategic flexibility for successful integration. Strategic flexibility links the inputs from inbound knowledge flows through internal resource reconfiguration and allocation to maintain a good performance level.

The relational dynamics between absorptive capacity and strategic flexibility could provide organisations with adaptive abilities. These abilities have the potential to maximise the adaptive performance achieved by employee efforts and innovation processes. Jabarzadeh et al. (2022) conducted the only relevant study, utilising this theory to explain the relationship among the constructs. They argued that having external knowledge and using it to your advantage makes an organisation more strategically flexible, which in turn helps it succeed and survive in dynamic environments. This means that how well an organisation mobilises,

integrates, and uses complementary internal and external resources affects the way they perform. The unfolding of change in public organisations, however, is a challenging task. Dynamic capability theory, according to research, has the potential to enhance our understanding of how change unfolds and is managed in increasingly complex and turbulent environments. However, little attention has paid to improving this understanding in the public management field (Piening, 2012). Poor attention to dynamic capabilities can make it challenging or difficult for these organisations to execute determined objectives, define and create public value, and nurture an agile organisation (Hawryz, 2018). Hawryz (2018:95) asserts that "dynamic capabilities can constitute an organisation's potential for systemic problem solving, resulting from the mindfulness of the signals deriving from an organisation's environment to ensure the correct direction of functioning and development of a public sector organisation." Hence, dynamic capabilities (e.g., absorptive capacity and strategic flexibility) could provide answers to how these organisations can develop and apply new strategic approaches to accept change for better performance.

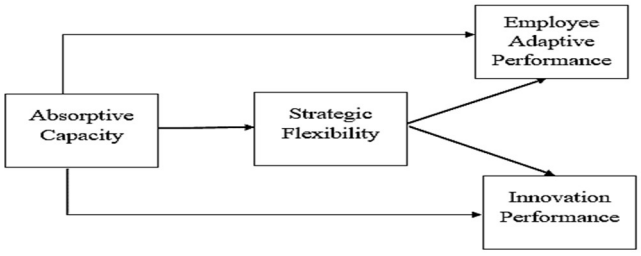


Figure 1: The research framework
Source: Developed by the researcher, 2024

Methodology

3.1 Sample and Data Collection Procedure

The study included randomly sampled mid-level management employees at the Delta State Ministry of Health in Nigeria. This ministry oversees other health organisations in Delta State, Nigeria; principal among them are the Hospital Management Board and the Delta State Contributory Health Commission. This ministry operates in a highly volatile environment with numerous health-related opportunities and threats, and may face pressure to adapt to changing environmental conditions through their employees and innovation systems. The ministry's activities may reflect the concepts under examination. The study selected mid-level employees because they are in a central position to know the

strategic approaches utilised by top management and work closely with other frontline employees to translate these strategic plans to action. Simple random sampling is justified to ensure an unbiased and equal chance of selection in a homogenous population.

A sample of 126 was obtained from a population of 183 using Yamane's formula. Before administering the questionnaire personally, the study secured informed consent from the respondents. The survey ran for two months, from February to March 2024, and reminders were sent every two weeks to improve the response rate. To minimise the likelihood of bias, the study included the research objectives and an anonymity statement in a cover letter for the questionnaire. 124 completed the questionnaire at the deadline date, resulting in a return rate of 98.4 percent. Out of the 124, one had a missing value and was excluded from the responses used for analysis. The demographic characteristics of the respondents showed that 67 (54.5%) were males and 56 (45.5%) were females. The respondents' mean age and tenure were 41.8 years and 14.4 years, respectively. The minimum educational qualification obtained was a graduate degree. The distribution of respondents based on profession showed that 11 (8.9%) are doctors, 4 are nurses (3.3%), 1 (0.8%) is a pharmacist, 53 (43.1%) are public health practitioners, 36 (29.3%) are in other health-related professions, and 18 (14.6%) are in support and administration.

3.2 Measures

The original measurement items from previous studies were used to develop the questionnaire. All the items were placed on a five-point Likert scale, with 1 representing total disagreement and 5 representing total agreement. This study adapted six question items from Ferreras-Mendez et al. (2015). A sample item includes: "Our organisation is able to observe important trends in our operating environment." The study also incorporated five strategic flexibility question items from Xiu et al. (2017). A sample item includes: "To derive benefits from environmental changes (political, economic, socio-cultural, technological, etc.), we often change strategies and structures." Ononye & Igwe (2019) provided the five question items for measuring innovation performance. A sample item includes: "In developing new services, processes, or policies, employees and key stakeholders collaborate closely." This study obtained seven question items on employee performance from Koopmans et al. (2012). A sample item includes: "Our employees often demonstrate flexibility at work."

Two management experts from Delta State University and three respondents from the target organisation ensured the face validity. Based on the constructive comments, we slightly rephrased seven question items (AC1–AC6, SF1) to improve clarity and relevance. To further test its reliability, the questionnaire underwent a pre-test with 13 respondents. This study used the Cronbach alpha, aided by SPSS 20.0, to determine the internal consistency of the questionnaire. Cronbach alphas for absorptive capacity (0.774), strategic flexibility (0.781), innovation performance (0.812), and employee performance (0.789) were all above the acceptable cut-off point of 0.700. This meant that the scales for the constructs were acceptable. In addition, the whole scale's Cronbach alpha was 0.733, indicating an appropriate level of internal consistency among the latent constructs. For measurement items related to the constructs, please refer to Appendix A.

3.3 Method of Data Analysis

The study made use of the partial least squares (PLS) path model for data treatment and hypothesis testing. The best use of PLS, a common multivariate data analysis method, is to explain variance and predict relationships among constructs. It places minimal restrictions on sample size and has fewer stringent data assumptions than the traditional linear-based method. Compared to covariance-based structural equation modelling, PLS can yield stable estimations ranging from 0.210 to 0.300 with a small sample size of 100 (Hair et al., 2022). The study expects stable statistical predictions given that the sample size exceeds 100. Furthermore, the use of Likert scales, which does not guarantee normal distribution properties, makes this analytical method appropriate by default. This study conducted the PLS analysis using the SmartPLS 4 software. This software is increasingly popular among management scholars because of its ease of use and its ability to correct analytical problems that could cause under or overestimation of hypothesised relationship in the research model.

Results and Discussion

The study conducted some preliminary tests to ensure that the dataset was factorable before performing the PLS analysis. For this determination, it used the Kaiser-Meyer-Olkin (KMO) test and Bartlett's sphericity (BTS) test. According to Field (2005), performing KMO and BTS tests is a requirement for validating the use of factor analysis on the dataset. A cut-off of 0.60 for KMO and $p<0.05$ for BTS are considered desirable; otherwise, remedial actions should be taken to correct the correlation matrix by deleting poorly correlated items or adding other

related items. Table 1 shows that the KMO scores exceed the 0.60 cut-off mark, indicating that the observed construct significantly explains the variances of the items. The BTS scores were statistically significant at the 5% level, indicating a significant overall correlation among the items in each construct. Both analyses suggest that the data is adequate and suitable for factor analysis.

Table 1: Preliminary Test Results

Test		Indicators			
		Absorptive capacity	Strategic flexibility	Employee performance	Innovation performance
KMO		0.818	0.753	0.652	0.797
BTS	Appx X^2	898.970	719.728	690.260	703.774
	Sig.	0.000*	0.000*	0.000*	0.000*

Note: * $p < 0.05$, KMO = Kaiser-Meyer-Olkin, BTS = Bartlett's test of sphericity

Based on these initial results, the study used the two-step method for structural equation modelling to check the measurement model for validity and reliability, as well as the structural model for hypotheses testing (Hair et al., 2017). Hair et al. (2017; 2022) and Henseler et al. (2009) provided the guidelines for interpreting the results. First, the study estimated the measurement model to check the quality of the outer model using five quality criteria: standardised factor loading (item reliability), composite reliability (construct reliability), average variance extracted (convergent validity), Fornell-Larcker criterion (discriminant validity), and variance inflation factor (multicollinearity and common method bias test).

Table 1 demonstrates that the measurement indicators' factor loadings fall within the highly satisfactory range of greater than 0.708. Therefore, the measurement model's underlying constructs hold practical significance as they account for more than 50% of the item's variance. Hair et al. (2022) suggest deleting coefficient scores below 0.40 to enhance internal consistency or convergent validity among the constructs. However, the measurement model retained all items from the latent constructs due to their strong coefficients and acceptable item reliability. The composite reliability results show that all the values exceeded the acceptable threshold of > 0.70, indicating strong internal consistency. Although values within 0.60 and 0.70 are acceptable in exploratory studies, values exceeding 0.95 are considered problematic because they suggest redundancy of some items, thereby reducing the validity of the construct. The composite reliability coefficients posed no problems because they fell within the acceptable limit, proving construct

reliability. The average variance extracted (AVE) coefficients were above the acceptable level of 0.50, confirming that the set of items loaded well onto the latent construct. Thus, the construct's convergence can explain 50% of the items' variance, suggesting satisfactory convergent validity. When each construct's AVE exceeds the inter-construct correlations, discriminant validity becomes apparent. According to the Fornell-Larcker criterion, the results show evidence of discriminant validity arising from the distinctiveness among constructs. The HTMT ratio of correlations, which demonstrated that each construct's correlation was below the acceptable cut-off point of 0.85, further supported the uniqueness of each construct. Both discriminant validity tests enable the study to draw accurate or realistic conclusions from the findings about the hypothesised direct and indirect relationships among the constructs.

Overall, the results have acceptable values for all the quality criteria and confirm the appropriateness of the study's measurement model. The variance inflation factor (VIF) results confirm that none of the constructs violates the multicollinearity assumption, with all values falling below the recommended cut-point of 5.0. The antecedent constructs are not moderately or highly correlated; instead, they are somewhat unrelated or separate. This means that statistical estimations using constructs with acceptable VIF values may not be biased, misleading, or inflated. Furthermore, despite capturing the anonymity of responses in the cover letter to reduce bias, Kock (2015) recommends that if VIF values are less than 3.3, the model does not exhibit the problem of common method bias. The VIF results validate this notion. The statistical inferences made from the measurement model were reliable because the self-reported and single-sourced data is free from multicollinearity and common method bias.

Table 2: Reliability, Validity and Multicollinearity Test

Indicators		FL Range > 0.708	CR > 0.70	AVE > 0.50	Discriminant Validity				HTMT	VIF
					1	2	3	4		
1	AC	0.786 – 0.824	0.822	0.704	**0.839**				0.680	1.065
2	EP	0.743 – 0.880	0.917	0.613	0.246	**0.783**			0.752	
3	IP	0.729 – 0.797	0.806	0.659	0.035	0.251	**0.812**		0.797	
4	SF	0.771 – 0.806	0.883	0.558	0.601	0.577	0.253	**0.747**	0.536	1.135

Note: AC = Absorptive capacity, EP = Employee performance, IP = Innovation performance, SF = Strategic flexibility, FL = factor loading, CR = Composite reliability, AVE = Average variance extracted, HTMT= Heterotrait-monotrait, VIF = Variance inflation factor

The study tested the structural model to examine the significance of the hypothesized paths. The beta coefficients (*β)* and *p*-values were used for this analysis to determine the nature of the relationship and its significance, respectively. Furthermore, the study applied the bootstrapping technique using 10,000 subsamples to determine the significance of the indirect relationships.

Table 3: Structural Model Results

Path (Relationship)		Model 1 β ($p < 0.05$)	Model 2 β ($p < 0.05$)	Support
H1	Absorptive capacity → Employee performance	0.119 (0.000)	0.112 (0.007)	Yes
H2	Absorptive capacity → Innovation performanc	0.121 (0.000)	0.118 (0.000)	Yes
H3	Strategic flexibility → Employee performance	0.292 (0.000)	0.296 (0.000)	Yes
H4	Strategic flexibility → Innovation performance	0.223 (0.000)	0.224 (0.000)	Yes
H5	Absorptive capacity → Strategic flexibility		0.147 (0.000)	Yes
H6	Absorptive capacity → Strategic flexibility → Employee performance		0.103 (0.003)	Yes
H7	Absorptive capacity → Strategic flexibility → Innovation performance		0.097 (0.012)	Yes
	Employee performance R²	0.474	0.501	
	Innovation performance R²	0.489	0.525	
	SRMR	0.069	0.063	
	NFI	0.836	0.880	

Note: SRMR = Standardised root mean square residual, NFI = Normed fit index

Table 3 shows the structural model results for the direct effect (model 1) and indirect effect (model 2) frameworks. The study found that absorptive capacity and employee performance ($\beta = 0.119$; $p = 0.000$) and innovation performance ($\beta = 0.121$; $p = 0.000$) are positively related. This means that for every percent increase in absorptive capacity, employee adaptive performance improves by 11.9 percent, and innovation performance improves by 12.1 percent. Thus, the study accepts H_1 and H_2. In light of this, an organisation's ability to absorb external information influences how well their employees adapt to change, which aligns with previous studies' submissions (Aguinis & Burgu-Tian, 2021; Jundt et al., 2015; Martin, 2012; Pratoom, 2022). Furthermore, absorptive capacity makes innovation activities much more likely to succeed, which supports what other scholars (Hurtado-Palomino et al., 2022; Nguyen et al., 2019) are suggesting. Overall, the study agrees with what other research has found in the private sector (Bouguerra et al., 2022; Sancho-Zamora et al., 2021b; Umrani et al., 2022) on the positive absorptive capacity and organisational performance link. It also suggests

that this information may be useful for public organisations, since they endeavour to develop and maintain collaborative and constructive relationships with important external stakeholders.

Similarly, strategic flexibility and employee performance (β = 0.292; p = 0.000) and innovation performance (β = 0.223; p = 0.000) are positively related. Thus, the study supports the arguments in H3 and H4. This reinforces studies (Awais et al., 2023; Kale et al., 2019; Muneer, 2019; Tufan & Mert, 2023) that reported a significant relationship between strategic flexibility and organisational performance, and equally extends it by indicating some of the proxies accounting for strategic flexibility influences. The findings also show that strategic flexibility exerts more influence on both performance parameters than absorptive capacity. Possibly, strategic flexibility may facilitate strategic alignment between internal and external options, thereby enabling an appropriate response to evolving environmental factors. Public organisations cannot act on external knowledge if they do not possess complementary resources or capabilities to exploit it to their advantage. This is critical to achieving strategic excellence.

Model 2 introduces strategic flexibility as a mediating pathway. The study found that absorptive capacity and strategic flexibility are positively related (β = 0.147; p = 0.000), which supports H_5. The study also revealed a 0.4 and 0.1 percent increase in strategic flexibility's main effect on employee and innovation performance, respectively. Furthermore, absorptive capacity's main effect on employee and innovation performance decreased slightly by 0.07 and 0.03, respectively. Given these positive PLS results on strategic flexibility's antecedent and outcome(s), the study processed the data for specific indirect coefficients. The study found that strategic flexibility mediates the effects of absorptive capacity on employee adaptive performance (β = 0.103; p = 0.003) and innovation performance (β = 0.097; p = 0.012). The mediation had a partial and complementary effect. Thus, H6 and H7 were accepted. The findings suggest that the understanding that comes from leveraging externally useful knowledge helps public organisations to align this information with internal resources, capabilities, and practices. This strategic alignment enables employees to adapt their behaviours to changing environments while also contributing to the creation or enhancement of public value through innovative activities. The study, while aligning with the findings of Jabarzadeh et al. (2022), extends this study by examining organisational performance as a multidimensional construct, comprising distinct components such as employee performance and innovation

performance. These findings are consistent with those of Pu and Liu (2023), who suggested that the absorptive capacity and organisational performance link have significant contextual variables at play. This supports research (Cingöz & Akdoğan, 2013; Kale et al., 2019; Mata et al., 2023; Sen et al., 2022) that shows the role of strategic flexibility as a mediator in relationships between organisational performance and other environmental/organisational factors. The development of strategic flexibility can maximise the absorptive capacity's influences on both performance proxies. The premise of this argument is that strategic flexibility has a greater connection to both absorptive capacity and organisational performance and can, as such, create an optimal link for the derivation of more benefits.

Given the above, the study argues that absorptive capacity can have direct and/or indirect contributions to employee performance and innovation performance. The findings support the idea that organisations should build and sustain complementary dynamic capabilities (i.e., absorptive capacity and strategic flexibility) to function and perform effectively in changing environments. Dynamic capabilities facilitate the acceptance of changes and the formulation of a strategy for actively responding to them. This underscores the arguments drawn from dynamic capability theory. Given the opportunities and challenges it presents, the constantly evolving environmental context is often too ambiguous and complex for internal knowledge and resources to manage alone. This inadequacy triggers public organisations to develop open systems that leverage other complementary external resources to manage change through adaptation and innovation. This evidence is promising for public organisations, given that their bureaucratic characters, marked by rigidities and complexities, stifle the effectiveness of systems that respond to change.

In Table 3, the R^2 values for Model 1 show that absorptive capacity and strategic flexibility accounted for 47.4% of the variance in employee performance and 48.9% of the variance in innovation performance. In Model 2, the R^2 values increased to 50.1% for employee performance and 52.5% for innovation performance, which added the mediating pathway. Based on Hair et al.'s (2022) suggestions, the predictive power was moderate. Regarding the fitness test, the direct hypothesised paths in Model 1 failed to achieve a good fit, as the SRMR value exceeded the acceptable limit of 0.80 and the NFI value exceeded 0.90. However, Model 2, which introduced the mediating paths using the SRMR value, improved the fit and found it to be within the acceptable limit. The introduction of

the mediating pathway is indeed critical to the implementation of this research framework, as it ensures a better fit with the data.

Conclusion and Recommendations

This study develops a research model showing the relationship among absorptive capacity, strategic flexibility, and organisational performance, and proposes seven hypotheses that were verified through the partial least squares (PLS) method from data collected from 123 mid-level employees in the Delta State Ministry of Health. The PLS analysis findings revealed that absorptive capacity has a direct and indirect relationship with organisational performance, including employee performance and innovation performance. Strategic flexibility facilitated this indirect relationship, exerting a greater influence on organisational performance proxies. Basing these findings on the dynamic capability perspective, organisations can effectively align internal organisational resources, capabilities, and practices by leveraging external knowledge from key stakeholders, thereby empowering their employees to adapt and drive innovation processes for value creation and delivery. It is easier for organisations to perform when working with others in a collaborative and synergistic manner than when working alone or in isolation. By incorporating an external perspective, knowledge provides strategic advantages for adaptation and innovation. This is critical for public organisations, especially the Delta State Ministry of Health, that want to enhance productivity and performance amid resource constraints. The study concludes that although accessing external knowledge is essential for improving and maintaining good performance levels, the ability of organisations to reconfigure themselves internally for effective use of this shared knowledge can go a long way in ensuring employees adapt well and work together to develop something new and of public value. Holistically, this allows them to attain superior performance. Based on this conclusion, the study recommends the following actions:

1. To improve responsiveness to the demands of changing environments, public organisations should properly develop and maintain absorptive capacity activities, which involve the acquisition, assimilation, transformation, and exploitation of external, useful knowledge. Absorptive capacity is the foundation for adaptation and innovation, which are critical for accommodating changes in organisations. Using public forums, brainstorming sessions, and other interactive platforms that provide an active interface with stakeholders can demonstrate public organisations' willingness to collaborate and work closely with them.

2. Public organisations should properly develop and utilise their productive resources to complement other capabilities, as strategic flexibility plays a crucial role in creating an appropriate response to intense changes, thereby enhancing performance benefits. Managers should take cognisance that absorptive capacity activities need other complementary capabilities, like strategic flexibility, to support organisational functionality and ensure better performance outcomes in dynamic environments.
3. The contributions of absorptive capacity and strategic flexibility demonstrate that public organisations must properly align themselves with the imperatives of the external environment to improve their responsiveness to change through continuous adaptation and innovation. Effective leadership can achieve this through active commitment and support for capability development and maintenance.

References

Aguinis, H., & Burgu-Tian, J. (2021). Talent management challenges during COVID-19 and beyond: Performance management to the rescue. *Business Research Quarterly*, *23*(4), 233–240. https://doi.org/10.1177/23409444211009528

Amoako-Asiedu, E., Ohemeng, F. K. L., Obuobisa-Darko, T., & Parku, K. (2023). The persistence of organizational performance problems the public services in Ghana: The perspective of societal culture. *International Journal of Cross Cultural Management*, *23*(2), 443–466. https://doi.org/10.1177/14705958231190825

Awais, M., Ali, A., Khattak, M. S., Arfeen, M. I., Chaudhary, M. A. I., & Syed, A. (2023). Strategic Flexibility and Organizational Performance: Mediating Role of Innovation. *Sage Open*, *13*(2), 1–17. https://doi.org/10.1177/21582440231181432

Azamela, J. C., Tang, Z., Owusu, A., Egala, S. B., & Bruce, E. (2022). The impact of institutional creativity and innovation capability on innovation performance of public sector organizations in Ghana. *Sustainability*, *14*, 1378. https://doi.org/10.3390/su14031378

Baker, D. (2007). *Strategic Change Management in Public Sector Organisations*. Elsevier Science

Bentes, V. A., Carneiro, J., Ferreira da Silva, J., & Kimura, H. (2012). Multidimensional assessment of organizational performance: Integrating

BSC and AHP. *Journal of Business Research*, *65*(12), 1790–1799. https://doi.org/10.1016/j.jbusres.2011.10.039

Bhojaraju, G. (2005). Knowledge management: Why do we need it for corporates? *Malaysian Journal of Library and Information Science, 10*(2), 37–50.

Bouguerra, A., Mellahi, K., Glaister, K., Sadeghi, A., Temouri, Y., & Tatoglu, E. (2022). Absorptive capacity and organisational performance in an emerging market context: Evidence from the banking industry in Turkey. *Journal of Business Research, 139*, 1575–1587. https://doi.org/10.1016/j.jbusres.2021.10.077

Cingöz, A., & Akdoğan, A. (2013). Strategic flexibility, environmental dynamism, and innovation performance: An empirical study. *Procedia – Social and Behavioural Sciences*, *99*, 582–589. https://doi.org/10.1016/j.sbspro.2013.10.528

Ferreras-Mendez, J., Newell, S., Fernandez-Mesa, A., & Alegre, J. (2015). Depth and breadth of external knowledge search and performance: The mediating role of absorptive capacity. *Industrial Marketing Management,* 47, 86–97. https://doi.org/10.1016/j.indmarman.2015.02.038

Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). London, United Kingdom: Sage Publication.

Jundt, D. K., Shoss, M. K., & Huang, J. L. (2015). Individual adaptive performance in organizations: A review. *Journal of Organizational Behavior, 36*(S1), S53–S71. https://doi.org/10.1002/job.1955

Kamasak, R., Meltem, Y., & Altuntas, G. (2016). Is the relationship between innovation performance and knowledge management contingent on environmental dynamism and learning capability? Evidence from a turbulent market. *Business Research, 9*, 229–253. https://doi.org/10.1007/s40685-016-0032-9

Koopmans, L., Bernaards, C., Hildebrandt, V., van Buuren, S., van der Beek, A. J., & de Vet, H. C. W. (2012). Development of an individual work performance questionnaire. *International Journal of Productivity and Performance Management*, 62(1), 6–28. https://doi.org/10.1108/17410401311285273

Kostopoulos, K., Papalexandris, A., Papachroni, M., & Ioannou, G. (2010). Absorptive capacity, innovation, and financial performance. *Journal of Business Research*, *64*(12), 1335–1343. https://doi.org/10.1016/j.jbusres.2010.12.005

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling* (PLS-SEM) (3rd Ed.). Sage: Thousand Oaks.

Hair, F. J., Hult, M. T. G., Ringe, M. C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling* (2nd ed.). Sage.

Harvey, G., Skelcher, C., Spencer, E., Jas, P., & Walshe, K. (2010). A knowledge-based approach to analysing the performance of sector organizations. *Public Management Review*, *12*(1), 77–97. https://doi.org/10.1080/14719030902817923

Hawrysz, L. (2018). The concept of dynamic capabilities as the answer to the changing expectations towards public sector organisations. *Zeszyty Naukowe Politechniki ŚLąskiej. Organizacja I Zarządzanie*, 95–110. https://doi.org/10.29119/1641-3466.2018.119.6

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modelling in international marketing. Advances in International Marketing, 20, 277–319. https://doi.org/10.1108/S1474 7979(2009)0000020014

Hurtado-Palomino, A., Gala-Velasquez, B., & Ccorisapra-Quintana, J. (2022). The interactive effect of innovation capability and potential absorptive capacity on innovation performance. *Journal of Innovation and Knowledge*, *7*, 100259. https://doi.org/10.1016/j.jik.2022.100259

Jabarzadeh, Y., Khangah, M-H., Çemberci, M., Cerchione, R., & Sanoubar, N. (2022). Effect of absorptive capacity on strategic flexibility and supply chain agility: Implications for performance in fast-moving consumer goods. *Operations and Supply Chain Management*, *15*(3). 407–423.

Jena, K. L., & Goyal, S. (2022). Emotional intelligence and employee innovation: Sequential mediating effect of person-group fit and adaptive performance. *European Journal of Applied Psychology*, *72*(1), 100729. https://doi.org/10.1016/j.erap.2021.100729

Kale, E., Aknar, A., & Başar, O. (2019). Absorptive capacity and firm performance: The mediating role of strategic agility. *International Journal of Hospitality Management, 78*, 276–283. https://doi.org/10.1016/j.ijhm.2018.09.010

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. International *Journal of e-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Lau, A. K. W., & Lo, W. (2019). Absorptive capacity, technological innovation capability and innovation performance: an empirical study in Hong Kong.

International Journal of Technology Management, 80(1/2), 107–148. https://doi.org/10.1504/IJTM.2019.099750

Leal-Rodríguez, A. L., Roldán, J. L., Ariza-Montes, J. A., & Leal-Millán, A. (2014b). From potential absorptive capacity to innovation outcomes in project teams: The conditional mediating role of the realized absorptive capacity in a relational learning context. *International Journal of Project Management*, *32*(6), 894–907. http://doi.org/10.1016%2Fj.ijproman.2014.01.005.

Martin, A. J. (2012). Adaptability and Learning. In: Seel, N.M. (eds) *Encyclopedia of the Sciences of Learning*. Springer. https://doi.org/10.1007/978-1-4419-1428-6_267

Mata, M. N., Martins, J. M., & Inacio, P. L. (2023). Impact of absorptive capacity on project success through mediating role of strategic agility: Project complexity as a moderator. *Journal of Innovation and Knowledge*, *8*, 100327. https://doi.org/10.1016/j.jik.2023.100327

Miroshnychenko, I., Strobl, A., Matzler, K., & Massis, A. V. D. (2021). Absorptive capacity, strategic flexibility, and business model innovation: Empirical evidence from Italian SMEs. *Journal of Business Research*, *130*, 670–682. https://doi.org/10.1016/j.jbusres.2020.02.015

Muneer, S. (2019). The Mediating Role of Supply Chain Agility in the Relationship between Absorptive Capacity and Financial Performance. *Pacific Business Review International*, 12(2), 66–76.

Nguyen, T. K., Sharma, R. R., & Crick, D. (2019). Potential absorptive capacity and performance of Vietnamese contract manufacturing exporters: mediating factors in entrepreneurial marketing behaviour. *Journal of Strategic Marketing*, *29*(1), 47–70. https://doi.org/10.1080/0965254X.2019.1619090

Ononye, U. (2022a). Relating knowledge co-creation and innovation with trust as a moderation factor in the public sector. *Management Science Review, 13*(1), 198–209

Ononye, U. (2022b). Linking tacit knowledge sharing to employee innovation with job thriving as a mediational factor: A public sector perspective. *International Journal of Public Policy and Administration Research*, *9*(2), 22–32. https://doi.org/10.18488/74.v9i2.3022

Ononye, U. H. (2021). Tacit knowledge and innovation: Insights from the public sector in Delta State, Nigeria. *Journal of Information & Knowledge Management*, *20*(3), Article 2150032. https://doi.org/10.1142/s0219649221500325

Ononye, U. H., & Igwe, A. (2019). Knowledge sharing process and innovation success: Evidence from public organizations in Southern Nigeria. *Interdisciplinary Journal of Information, Knowledge, and Management*, *14*, 183–198. https://doi.org/10.28945/4358

Park, S., & Park, S. (2019). Employee adaptive performance and its antecedents: Review and synthesis. *Human Resource Development Review*, *18*(3), 294–324. https://doi.org/10.1177/1534484319836315

Piening, E. P. (2012). Dynamic capabilities in public organizations: A literature review and research agenda. *Public Management Review*, *15*(2), 209–245. https://doi.org/10.1080/14719037.2012.708358

Plimmer, G., Bryson, J., & Teo, S. T. T. (2017). Opening the black box: The mediating roles of organisational systems and ambidexterity in the HRM-performance link in public sector organisations. *Personnel Review*, *46*(7), 1434–1451. https://doi.org/10.1108/PR-10-2016-0275

Pradhan, R. K., & Jena, L. K. (2017). Employee performance at workplace: Conceptual model and empirical validation. *Business Perspectives and Research*, *5*(1), 69–85. https://doi.org/10.1177/2278533716671630

Pratoom, K. (2022). Fostering individual-level absorptive capacity and adaptive performance through leadership context. *Baltic Journal of Management*, *17*(1), 107–123. https://doi.org/10.1108/BJM-10-2020-0377

Pu, K., & Liu, W. (2023). Is absorptive capacity the "panacea" for organizational development? A META analysis of absorptive capacity and firm performance from the perspective of constructivism. *PLoS ONE*, *18*(2), e0282321. https://doi.org/10.1371/journal.pone.0282321

Robertson, J., Caruana, A., & Ferreira, C. (2023). Innovation performance: The effect of knowledge-based dynamic capabilities in cross-country innovation ecosystems. *International Business Review*, *32*, 101866. https://doi.org/10.1016/j.ibusrev.2021.101866

Sancho-Zamora, R., Peña-García, I., Gutiérrez-Broncano, S., & Hernández-Perlines, F. (2021a). Moderating effect of proactivity on firm absorptive capacity and performance: Empirical evidence from Spanish firms. *Mathematics*, *9*(17), 2099. https://doi.org/10.3390/math9172099

Sancho-Zamora, R., Gutiérrez-Broncano, S., Hernández-Perlines, F., & Peña-García, I. (2021b). A multidimensional study of absorptive capacity and innovation capacity and their impact on business performance. *Front. Psychol*., *12*, 751997. https://doi.org/10.3389/fpsyg.2021.751997

Sen, S., Savitskie, K., Mahto, R. V., Kumar, S., & Khanin, D. (2022). Strategic flexibility in small firms. *Journal of Strategic Marketing*, *31*(5), 1053–1070. https://doi.org/10.1080/0965254X.2022.2036223

Souchon, A. L., Cadogan, J. W., Procter, D. B., & Dewsnap, B. (2004). Marketing information use and organisational performance: The mediating role of responsiveness. *Journal of Strategic Marketing*, *12*(4), 231–242. https://doi.org/10.1080/0965254042000308057

Stephen, M. D. (2018). Legitimacy deficits of international organizations: design, drift, and decoupling at the UN Security Council. *Cambridge Review of International Affairs*, *31*(1), 96–121. https://doi.org/10.1080/09557571.2018.1476463

Teece, D., Pisano, G., & Shuen, A. (1998). Dynamic capabilities and strategic management. Strategic Management Journal, 18, 509–533.

Tufan, C., & Mert, S. I. (2023). The sequential effect of absorptive capacity, strategic agility, and sustainable competitive advantage on sustainable business performance of SMEs. *Environmental Science and Pollution Research*, *30*, 55958–55973. https://doi.org/10.1007/s11356-023-26207-x

Udofia, E. E., Adejare, B. O., Olaore, G. O., & Udofia, E. E. (2021). Direct and indirect impact of quality management on the integrated performance of medium-scale manufacturers. *The TQM Journal*, *33*(6), 1589–1609. https://doi.org/10.1108/TQM-08-2020-0174

Umrani, W. A., Ahmad, I., Rasheed, M. I., Ahmed, U., Pahi, M. H., Jhatial, A., & Abbsai, G. A. (2022). Managing intellectual capital: Role of corporate entrepreneurship and absorptive capacity on firm performance. *Knowledge Management Research & Practice*, *20*(5), 719–731. https://doi.org/10.1080/14778238.2022.2041374

Wu, J., Wang, Y., & Li, S. (2014). Search depth, knowledge characteristics and innovation performance. *Journal of Chinese Management, 1*(2), 1–15. https://doi.org/10.1186/s40527-014-0002-8

Xiu, L., Liang, X., Chen, Z., & Xu, W. (2017). Strategic flexibility, innovative HR practices, and firm performance: A moderated mediation model. *Personnel Review*, *46*(7), 1335–1357. https://doi.org/10.1108/PR-09-2016-0252

Zubair, S. S., Khan, M. A., & Mukaram, A. T. (2021). Public service motivation and organizational performance: Catalyzing effects of altruism, perceived social impact and political support. *PloS one*, *16*(12), e0260559. https://doi.org/10.1371/journal.pone.0260559

Effect of Health Expenditure on Health Outcomes in Sub-Saharan Africa

[1]Ahmed Abdulraheem Adebowale, and [2]Idowu Daniel Onisanwa

[1,2]Department of Economics and Development Studies, Federal University of Kashere, Gombe State, Nigeria
Correspondence: adebowaleabdul381@gmail.com/ ahmedabdul5551@gmail.com
GSM: 08032775619/ 08051565551
https://doi.org/10.57233/gijmss.v7i3.08

Abstract

This paper examined the effect of health outcomes on economic growth in Sub-Saharan African (SSA) countries. With the objective of improving health outcomes, these countries have appropriated and allocated huge resources to health sector by increasing health expenditure significantly over time. However, in spite of these financial commitments to health industry, health outcomes have only shown slight response, raising questions about this significance of health expenditure in improving health outcomes across the region. The data for this paper was sourced from a sample of 45 SSA countries in the 2024 World Bank data base. The paper was based on the Grossman Human Capital Model on the demand for health, and a fixed effect model was estimated to investigate the effect of health expenditure on health outcomes. The findings revealed that public, private and external health expenditures have negative and statistically significant effects on infant mortality, but have positive and statistically significant effects on life expectancy. The fixed effects showed that public, private and external health expenditures are important in reducing infant mortality by 0.0235%, 0.0257% and 0.2270%; while fixed effects showed that public, private and external health expenditures are important in increasing life expectancy by 0.0119%, 0.00678% and 0.0578. The paper concluded that there is substantial effect of health expenditure on health outcomes in Sub-Saharan Africa. Expenditure on health causes infant mortality rate to decline while it increases life expectancy at birth. The paper recommended coordinating efforts on initiatives that include raising public health spending for countries seeking to enhance their per capita income and augmenting their health-related human capital stocks.

Keywords: health expenditure, infant mortality, life expectancy, Sub-Saharan Africa

1. Introduction

The relationship that co-exists between health expenditure and health outcomes is theoretically probable and empirically supported in single and cross-country studies. However, efforts to improve the level of health in Sub-Saharan Africa (SSA) are faced with several challenges. Virtually, all human development indicators (such as life expectancy, per capita income, and education) placed the

SSA economy at the bottom of the development scale. This is because the region is characterized by the high incidence of infectious and communicable diseases, growing burdens of chronic and non-communicable diseases, a weak health system that can be partly attributed to inadequate budgetary allocation to the health sector, and poor attitude towards investment in research development (Gouda et al., 2019). These tend to have resulted in inadequate human and material resources that are needed in the health sector (Modibbo et al., 2019).

In an attempt to improve health outcomes, each of the Sub-Saharan African countries has put in appreciable efforts in raising health expenditure, however, the region only recorded a marginal improvement in health status. Health outcomes, such as life expectancy is still low, infant rates are high, and diseases such as HIV/AIDS, malaria, and other health-related problems are prevalent (Modibbo et al., 2019; World Bank, 2020). These tend to harm economic growth and raise questions on the importance of health expenditure in improving health outcomes in SSA.

Although current expenditures on health per capita in current US dollars for SSA decreased from 88.45 to 78.87 between 2010 and 2019, statistics shows that between the same period, infant mortality rates reduced from 65.10 to 51.60 and 101.0 to 78.00 per 1000 live births correspondingly, while life expectancy at birth increased from 56.7 to 61.6 within the same period (World Bank, 2022). The percentage improvement in health status over the duration as evidenced by the statistics far outweighs the improvement in health expenditure.

Some empirical studies (Aboubacar & Xu, 2017, Arthur & Oaikhenam, 2017; Yusufu et al., 2022) revealed that insufficient health expenditure partly accounts for the small positive change in health outcomes in SSA. For instance, in SSA the current expenditure of $79 per capita on health is nowhere near the global average of $1,122 per capita, also, the region allocates only 4.97 percent of GDP to healthcare spending relative to 9.36, 7.95, 10.22, and 12.53 percent in Europe and Central Asia, Latin American and Caribbean, Europe Area, and OECD[1] countries, respectively (World Bank, 2022). The share of GDP devoted to health expenditure in SSA is a far cry from the Abuja commitment of at least 15 percent of the national budget for the health sector, 22 years after. This, if not reversed, may constitute impediments to the attainment of good health and well-being for

[1] Organization for Economic Cooperation and Development

all at all ages (SDG 3), and maybe a reason for the marginal impact of health spending on health outcomes. Some other studies (Eggoh et al 2015; Ogunjimi, 2019; Olayiwola et al., 2021) tend to suggest that public and private health expenditure has no important influence on health outcomes. Hence, the curiosity is whether the small positive change in health outcomes should be attributed to health spending, or whether health expenditure does not contribute significantly to health outcomes.

Meanwhile, the debate on the relevance of health expenditure on health outcomes in SSA has not been concluded. Meanwhile, the few studies on SSA have produced mixed findings on the relationship among the variables. For instance, Novignon et al. (2012) and Akinbode et al. (2021) report that increases in health expenditure lead to important improvement in health outcomes although their medium of influence differs. Kibathi et al. (2019) agree that healthcare expenditure contributes to the growth of GDP in SSA. The study, however, uses health expenditure as a determinant of economic growth without analyzing the channel through which health spending translates into economic growth. Their finding is debatable given that not all health expenditure leads to improvement in health outcomes.

Based on the arguments above, it is obvious that in addition to having very few studies on health expenditure and health outcomes in SSA, the nature of the relationship remains the subject of discussion. This is because it has led to divergent opinions among researchers on the effectiveness of health expenditure in advancing the health status in the SSA. This paper, therefore, examines the relationship between health expenditure and outcomes in Sub-Saharan Africa.

2. Literature Review

Overtime, the nexus existing between health spending and health outcomes has produced divergent views across the world and this cannot be overlooked. This nexus is seen especially among the nations that are wealthy. This is because these nations are economically stronger, healthier and wealthier than underdeveloped and developing nations respectively. In an effort to demonstrate that health, health care investment, and health outcomes are related, studies revealed the following findings:

Arthur and Oaikhenan (2017) examined the link between health spending and outcomes in sub-SSA nations. These nations have consistently increased health

spending over the years aimed at improving health outcomes. In spite of this, there has been only a modest improvement in health outcomes, which begs the question of how important health spending is in improving health outcomes. The data source for the study was the World Development Indicators (WDI) (2014) for a sample of forty SSA countries. The Grossman Human Capital Model of the demand for health served as the foundation for the empirical study, which employed the fixed effect. The findings reveal that, despite having an inelastic effect on health outcomes, health spending dramatically reduces mortality rates and raises life expectancy at birth in the SSA.

The results show that health spending significantly lowers mortality rates and increases life expectancy at birth in SSA while having an inelastic impact on health outcomes. Spending on public health care had a significant effect on declining death rates, while spending on private health care had a major effect on rising life expectancy. Despite the former's dominance over the latter, there exists a significant complimentary link between government and individual health expenditure in SSA.

Novignon and Lawanson (2017) looked into lag effects while attempting to explain the connection which exists between infant health outcomes and health expenditure. The study used panel data from the World Bank Data Base from 1995 to 2011 covering 45 Sub-Saharan African nations. There were estimated Fixed and Random effect models. The study utilised data for health outcomes arising from neonatal, infant and under-five and total health spending was divided between public and private spending. The impacts of one- and two-period expenditure delays were estimated, and the results show a positive and substantial relationship between health expenditure and child health outcomes, with elasticities of -0.11 for newborn mortality, -0.15 for under-five mortality, and -0.08 for neonatal death.

Adams et al. (2018) used contemporary econometric methodologies that take into account cross- sectional dependence in panel data to investigate the correlation between health infrastructure and growth of the economy in 30 SSA nations between 1990 and 2014. The results indicated that health infrastructure (as determined by mortality rate) have no a major influence on the growth of the economy. However, whereas variables related to the labor force and the political system show a strong correlation with economic growth, gross fixed capital formation is positively correlated with it. The findings are ample proof that,

despite significant capital investment, the labor market and political climate have not made it possible for SSA's health infrastructure to raise GDP per capita levels.

Onisanwa et al. (2018) used time series data covering 35 years employing the Model of Health Production Function as postulated by Grossman to examine the impact of public health spending on the health status in Nigeria. They discovered that Nigeria's infant mortality rate is significantly and negatively impacted by public health spending. In Nigeria, the primary barriers to providing basic healthcare facilities are insufficient funding for the healthcare industry and uneven distribution of healthcare services among regions. Infants and children below five have very high death rates. Furthermore, there are a number of states in the country with high prevalence rates of avoidable diseases like cholera, malaria, and lassa fever. HIV/AIDS, TB, and cases associated to death continue to be highly prevalent.

Olatunde and Fagbemi (2019) used panel fully modified least square (FMOLS) to examine the long-term nexus existing between public health spending and mortality rate of children below age five in fifteen countries in West Africa between 1991 and 2015. The aggregate and disaggregated models are both used in the empirical analysis. The findings signify a long-term connection between per capita health investment and under-five death rate. Additional data show that public health spending significantly impacts mortality rate of infants below age five. Thus, it becomes clear that an increase in health investment across West African nations would result in a reasonable downward trend in the region's infant death rate.

Kiross et al. (2020) employed panel data from WDI encompassing 46 sub-Saharan African nations from 2000 to 2015 to examine the relationship between health spending and infant mortality. The random effects model was selected over the fixed effects model using the Hausman test to ascertain if there exists a correlation between health care investment and infant and neonatal mortality. Spending on exterior and internal health care both significantly correlated negatively with baby and neonatal death. Private health spending was not, however, significantly connected to either baby or neonatal mortality. Funds from households, businesses, and nonprofit organizations are all considered private expenditures in this study. Apart from the compulsory prepayment and social health insurance premiums, domestic revenue in the form of grants, internal transfers, subsidies to voluntary health insurance recipients, non-profit

organizations that offer household services, or enterprise financing schemes is also included in public expenditures. "External health expenditure" encompasses all foreign financial inflows into the nation's health system, including government-disbursed foreign transfers as well as direct foreign payments.

Frank and Mcineka (2021) examined the impact and connection between health spending and health outcomes in SSA employing up-to-date data from 2000 to 2015. Utilizing the Partial Least Square (SEM) Structural equation modeling, a multidimensional estimating technique, and the Grossman theory on demand for health, the study examined the connections between health financing and health outcomes in 25 SSA countries. According to the research, there is a harmful and major link existing between health spending and health outcomes as showed by estimates. The results from the findings show that health finance, as defined by public and private health investment, has a positive and inverse impact on health outcomes in SSA, including the death rate for children below five years of age, the death rate for mothers, and the life expectancy at birth. The direct effect outweighs the indirect effect. Health outcomes and population size dividend, as measured by children and aged dependency ratios, are directly impacted by health financing. The enrollment in primary and secondary schools as well as the dependence ratio are both affected indirectly. The results of bad health play a part in this. According to study findings, the regional administration might improve the region's subpar health outcomes by boosting its annual budgetary allotment to the health sector.

Adegoke et al. (2022) examined the relationship between health expenditures and educational quality on three health outcomes (infant mortality, maternal mortality, and life expectancy at birth) using balanced panel data on 25 selected SSA countries from 2000 to 2020 using the panel spatial correlation consistent (PSCC) approach. Findings that were recorded are as follows. Firstly, there are sizable asymmetric quadratic effects of health spending on health outcomes. Secondly, the connections between health spending and educational quality increase life expectancy while lowering baby and maternal fatalities. Thirdly, raised educational quality above some significant thresholds of 1.49 and 1.51 can reduce maternal and child fatalities, whereas a point above 1.84 increases life expectancy, according to the interaction effects' threshold points.

Adegoke et al. (2022) used Autoregressive Distributed Lag (ARDL), a technique typically employed for large models, to examine the interaction between health

investment and other significant macroeconomic determinants on health indicators like death, infant, and child death in Nigeria, between 1995 and 2020 is the study period. The results revealed a noteworthy inverse correlation between macro-economic factors that influence health, including household consumption, total health spending, and gross fixed capital, and a noteworthy affirmative correlation between these factors and unemployment. The findings are further corroborated by out-of-sample forecast results, which indicate that in order for Nigeria to meet the SDG health targets by 2030, there will be a decrease in unemployment to 1.84 percent and increases in health spending, gross fixed capital, household consumption, and corruption control to 1,818.87 billion (naira), 94.46 billion (naira), 3.2 percent, and 4.2 percent, respectively.

Ayipe and Tanko (2023) looked into the connection between public healthcare spending and the mortality rate of children below age five in SSA low-income countries. Data from twenty low-income SSA countries were collected in a balanced panel from the World Bank dataset, which spans the years 2000–2019. Domestic health spending was the key independent variable, whereas death rate of children below five served as the outcome variable. Potential confounding factors were total female fertility rate and population percentage, open defecation usage, and diphtheria-pertussis-tetanus (DPT) vaccination. There was use of the static model. To determine whether of the fixed effect estimate and random effect estimator would be the best fit for the study, the robust Hausman test was employed. The fixed effect estimator was selected as a result of the findings. The results showed a substantial adverse relationship (Fixed Effects = 5.275; p 0.05) between domestic health spending and the under-five mortality rate in low-income Sub-Saharan African nations. For every percentage point increase in domestic health spending, the under-five death rate is expected to drop by about 5.3 units. While the under-5 death rate was negatively connected (p 0.01) with DPT vaccination, the female population, open defecation in rural regions, and the overall fertility rate were all positively correlated. The study arrived to the conclusion that decreasing under-5 mortality rates in low-income nations in Sub-Saharan Africa will require a sustained increase in health spending and an improvement in socioeconomic conditions.

The justifications for this study are derived from the observed gaps in the literature, three justifications were provided. Theoretically, this study employs Roman's endogenous growth theory which is centered on the Neo- classical growth theory and Grossman (1972) health capital theory. However, included in

this model are the various measures of health outcomes (life expectancy, infant mortality, maternal mortality), and health expenditure (private and public health).

Methodologically, some studies, such as Anyanwu and Ehijakpor (2009); Novingor and Akanni (2012); Shahid et al. (2021); and Bul and Moracha (2020) examined the impact of health on economic growth in SSA using Pooled Ordinary Least Square technique. The pooled least squares model is based on the assumption that the sample does not have significant country and time effects. However, the panel data model will lead to spurious and biased results if the assumptions break down. Some studies such as Kiross et al. (2020); Arthur and Oaikhenan (2017); Novignon and Lawanson (2017) examined the relationship between health outcomes and economic growth using the Random Effect estimation approach. The Random effect assumes the errors are uncorrelated with the explanatory variables, therefore, the variations across the cross sections are uncorrelated with the independent variables in the model. This may not remove a random measurement error or unobserved heterogeneity that varies over time, thereby leading to bias and inaccurate conclusions. To overcome this challenge, this study will use the Fixed Effect estimation approach. This method is well suited to deal with random measurement error and unobserved time and country effects. It eliminates the time-invariant characteristics by taking deviations of the model from the mean.

Although the relationship between health expenditure and health outcomes is of enormous importance, there exist limited studies on SSA. While there are similar studies within the region, they are either limited in geographical coverage or in terms of variable scope. Some studies (Awe & Ajayi, 2010; Bakare & Olubokun, 2011; Nasiru & Usman, 2012; Maijama'a & Mohammed, 2013; Usman, 2015) were centered on a single country and as such, their findings cannot be used for generalization because of the heterogeneity nature of the SSA region. Also, the single-country studies were centered on either the effects of diseases such as malaria or HIV/AIDS on economic growth or utilising health inputs proxied by health investment. Meanwhile, few studies were found to examine the link between health outcomes and economic growth (Usman et al., 2015). Despite the limited studies that have been carried out to examine the relationship between health and economic growth in SSA, there are no clear-cut empirical findings as evidenced by the mixed results reported in the literature.

Furthermore, there are important variables that influence health outcomes but have not been accounted for in past studies, this can influence the results and give spurious outcomes. This study will account for important determinants (such as infant mortality, and life expectancy) of economic growth in an attempt to understand the relationship among health expenditure and health outcomes. This paper will shed more light on the association among these variables for the SSA. This study will promote government investment in health in an attempt to improve health outcomes within the region. Thus, the need to understand the importance of health spending in attaining better health outcomes, and appreciates the contribution of health outcomes to economic growth. The study will broaden the knowledge of the role of health investment in the attainment of Sustainable Development Goals in the region. In addition, the paper will benefit the policymakers, government officials/administrators, private enterprises, investors and other stakeholders in policy making and implementation across SSA countries.

3. Methodology

The underlying theoretical frameworks for this work was centered on demand for health model and the augmented neoclassical growth model theory as propounded by Grossman (1972) as used by Frank (2021); Sarpong, et al (2020); Arthur (2015); Ogunleye (2014); Fayissa and Gutema (2008) and Thornton (2002).

According to Grossman's (1972) demand for health theory, investing in one's health is essential to one's overall well-being as well as that of society at large. As a result, every society should make investments in health care services if it hopes to see an improvement in health outcomes. For the individual, it involves more than just monetary investment; it also involves time and modifications to lifestyle. However, this is not only applicable to individual but the society as a whole since the society comprises individuals. However, if people fail to use the health services provided within the society by either private or public entities or institutions or move along with lifestyle and what the environment demands, health care would be incomplete (Fayissa & Gutema, 2008).

According to Arthur (2015), investing in one's health can benefit both the individual and the community as a whole. The resources invested in achieving this health must be considered as having an impact on the general health of the country or on that particular individual. It is anticipated that this increased finance in health will certainly improve health outcomes, notably lowering death rate and

extending life expectancy. This served as the foundation for Grossman's (1972) health capital model, which held that improving both an individual's and society's overall health state required public, private or external health input. For the purposes of this study, the Grossman (1972) model is discussed in the manner that follows the health production function specification for Sub-Saharan Africa provided by Fayissa and Gutema (2008). The following is the expression for the health production function:

$HO = F(X)$……...……...3.1

In the health production function (F), where HO measures health outcomes, while X is a vector of health expenditures. The components of the vector X, as per the Grossman (1972) model, represent income and health expenditures, which include public, private and external health expenditures.

The Grossman (1972) model was created to examine the micro-level creation of health. Nonetheless, the objective of this study is to analyze the production system at macro-level while maintaining theoretical foundation at micro level. To do this, study will utilise the per capita variables 3.2 to express the vector X's elements as seen below:

$HO = F\ (Y)$……..…….3.2

The vector HO in equation 3.2 represents health outcomes, whereas the vector Y represents per capita economic variables, such as income and per capita health spending. Equation 3.2 can be stated in equation 3.3 in its scalar version as follows:

$HO = F\ (y_2 \ldots y_n)$…….....3.3

Where Y= $(y_{1,}\ y_2 \ldots y_n)$ and n stands for number of variables. Equation 3.3 can be changed to an explicit version using calculus by creating a probability density function with y, s, v, and d as variables. Equation 3.4 expresses this as follows:

$HO = \theta\pi y_i^{\alpha_i}$ ……..……..…….……..3.4

According to equation, α_i is the model's elasticity and π denotes the probability density function. The model proposed by Grossman (1972) indicates the initial health stock, which is estimated by θ. By assuming that the production system had not improved nor declined in terms of health, this assesses the health status that would have been realized. θ is considered to be inherited from the parents in the Grossman model. The following equation 3.5 can be obtained by taking the logarithm of equation 3.4:

$InHO$= Inθ +$\sum \alpha_i$(Iny_i) …….……3.5

Assuming that i starts at 1, 2, 3, n, and that Σ is a sum operator that adds up each scalar variable's components. Natural logarithm, or$InHO$, is a unit of measurement for health outcomes. The term "Iny" refers to natural logarithm of economic variables, including per capita health expenditures from the public, private or external sectors. Grossman (1972) theory predicts that public and private health financing would improve health outcomes. Grossman (1972) model shows that there is provision for factors that could mar or enhance health production activities of individual which includes external health expenditure factors. This is provided and introduced into the model as considered suitable, due to available data or literature.

3.1 Model Specification

Employing demand for health model developed by Grossman (1972), this study investigates the relationship between health inputs and health outcomes. The effect of health inputs on health result is described as follows, taking into account both infant death rate (IMR) and life expectancy at birth (LEP) as health indices:

ho_{it}= f $((PKHE)_{it})$……..……3.6

The vector representing the country i's health outcomes at time t is represented by HO_{it} in equation 3.6. $PKHE_{it}$ denotes the nation i's per capita health expenditure at time t. The sum of health spending per capita is used to measure it. To better examine the distinct impacts of public, private and external health financing on health outcomes, this sum of expenditures on health is separated into three categories: public, private and external health expenditures.

For estimating purpose, the values from equation 3.6 above and from 3.7 to 3.8 are provided. When broken down into public health, private health and external health expenditures, equation 3.7 is further written as equation 3.8. Equation 3.7 uses overall health expenditure to assess health investment expenditure.

$Inho_{it} = \alpha_0 + \alpha_1 + \alpha_3\ InPKHE_{it} + \varepsilon_{it}$ ……..,……3.7

$Inho_{it} = \beta_0 + \beta_1\ Inpuhe_{it} + \beta_2 InPrhe_{it} + \beta_3\ Inexhe_{it} + \ \varepsilon_{it}$ ……....3.8

$= 1, \ldots . n; m = 1, \ldots , m$

Where:

ho_{it}-represents health outcomes in country i at time t with IMR) and LEP

$\alpha_{0,}$ and β_0 represent intercepts in equations 3.7 to 3.8, while ε_{it} symbolizes the error term, which is thought to be independently distributed and of identical distribution.

α_1, α_2, α_3 and β_1, β_2, β_3 are the explanatory variable's coefficients, which show the effect of a single unit and percentage change in each variable on health outcomes under the assumption that other factors stay unchanged: In represents natural log of the variables.
*n*s represents total number of distinct members that are represented in the panel;
m denotes quantity of variables included in the regression analysis;
$puhe_{it}, Prhe_{it}$ and $exhe_t$ represent public, private and external health expenditures respectively in country i at time t.

3.2 Econometric method of estimation

This sub-section dwells on the technique used in explaining the relationship between health outcomes and economic growth in SSA.
In order to investigate the influence of health input on health outcomes, this study will make use of the standard panel data models of pooled least squares, random effects, and fixed effects. The pooled least squares model is represented as follows in equation 3.9:
$y_{it} = \alpha_{it} + X_{it}\,\beta + \mu_{it}$, i =1 -------N; t =1…….T……..…3.9
Supposing: $\mu_{it} \backsim$ iid $(0, \delta_\mu^2)$ and $\delta_i^2 = \delta_t^2 = \delta^2$
From According to equation 3.9, y_{it} denotes the regressed variable, X_{it} denotes the repressor, α stands in for the regressor's coefficients, and μ_{it} denotes the disturbance terms. The sample is assumed to be free of significant country and period effects using the pooled least squares model. When the large time and country effects are not supported, this type of panel data model is vulnerable to criticism. Nonetheless, statistical testing and pooling model estimate are required for validation.

The Fixed Effect (FE) model is predicated on the existence of significant cross-sectional differences that do not vary over time, as well as the possibility of interrelationships between some of the variables and the error terms in the model. It is important to note that the unobserved heterogeneity in the FE model can bias the estimates from the model if it is not controlled. The time-invariant (heterogeneity) characteristics are assumed to be unique to each cross-sectional unit and not related among the cross sections; this is the reasoning behind the assumption of a relationship between the entity's error term and the predictor variables. The FE model removes the time-invariant characteristics by measuring the model's deviations from the mean. Equation 3.10 specifies the FE model.

Another name for the word α_i is an individual/country effect or an unobserved effect

$y_{it} = \alpha_{it} + X_{it}\,\beta + \mu_{it}$, i=1 ……..N; t =1……T…….3.10

E (μ_{it}) = 0 var (μ_{it}) δ_{μ}^{2}

Ordinary Least Squares (OLS) is the estimator used for FE modeling. The mistakes are assumed to be uncorrelated with the explanatory variables in the random effects model. Because of this, the random effects (RE) model makes the assumption that there is no correlation between the fluctuations across the cross sections and the predictor or regressor in the model. The unobserved individual effect may have components connected to the independent variables in the model, as stated by Greene (2012), "not whether these effects are stochastic or not." This is the fundamental distinction between FE and RE. Equation 3.11 states the random effects model.

$y_{it} = X_{it}\,\beta + \varphi_{it}$; $\varphi_{it} = \alpha_{it} + \alpha\varepsilon_{it}$ ……3.11

Because of the nature of the error term, the FE model will be estimated using the Generalized Least Squares (GLS) estimator (Tripathi, 2000). To determine if fixed or random effects are present, use the Hausman (1978) test. The OLS fixed effects results are consistent when there is correlation between the explanatory variable and the individual effects, but the GLS estimates do not match. In the event that there is no association between the explanatory variable and the individual effects, the fixed effects estimator is inefficient but both estimators are consistent. There should be no variation in the estimators under the null hypothesis of no connection. Estimating the coefficients from the regressions and their covariance is a prerequisite to performing the test. OLS and GLS estimators can be used to do regression analysis for both the fixed effects and random effect models, respectively, and yield this directly.

4. Results and Discussions

Descriptive statistics for this study is presented in Table 1. Mean, standard deviation, least and highest values of variables are discussed. Average value of a variable is expressed by its mean. By showing how far variable deviates from mean, standard deviation illustrates variable's variation.

Table 1 illustrates volatile character of Sub-Sahara African economy by showing that mean per capita economic expansion for period was 4865.5070 million

United States Dollars (USD) with a standard deviation of 5711.2730 million USD. The economic growth of the Congo Democratic Republic was the lowest (690.6600 million USD) in the region occurring in the 2002, but it steadily increased to 1073.6430 million USD in 2021. Equatorial Guinea, with economic growth of 35688.6500 million USD, recorded the highest value in 2018 (See Table 2).

The health expenditure data (disaggregated into external, private and governmental health spending). External and public health expenditure have mean of 25.5709 million USD and 87.5576 million USD, while the mean expenditure on private health was 153.1921 million USD. According to the Table 2, Sierra Leone spent more on public health in 2020 compared to other nations in the region. The figure stood at 1471.6190 million USD; while in year 2000, the Democratic Republic of Congo spent the least amount (0.2694 million USD) on public health. Nevertheless, it increased to 1.0223 million USD in 2003, a period of four years before falling to 0.8022 million USD in 2004. After that, it has continued to rise and fluctuated until 2020, when it was stabilised at 86.6800 million USD. Mauritius recorded the highest (760.0536 million USD) private health spending in 2019, while Malawi recorded the lowest private health spending in 2021 at 0.1128 million USD.

The average external health spending is 25.5709 million USD. In Sub-Saharan Africa, Botswana had the lowest external health spending (11.7000 million USD) in 2004; Namibia had the highest (183.6230 million USD) in 2006. The country with highest value of mortality rate for infant of 138.6000 (13%) per 1,000 live births in 2000 was Senegal; while Benin Republic had the least value of infant mortality rate amounted to 11.7000 (1%) in year 2021 (See Table 2).

Life expectancy in SSA region is poor relative to other regions. With a 77.2366-year average life expectancy in 2020, Sierra Leone achieved the highest life expectancy between years 2000 to 2021. This country continuously maintained its lead in life expectancy, having reached 77.2366 years as early as 2000. Sierra Leone does exceptionally well in terms of life expectancy relative to other SSA countries. Zimbabwe's score was 41.957 in year 2001. Nonetheless, the nation has steadily recovered from setback, recorded a 61-year (45% increase) average life expectancy in 2018 (See Table 2).

Table 1 Descriptive Statistics

Variables	Mean	Standard Deviation		Minimum Maximum
Puhe	87.5576	153.1921	0.2694	1471.6190
Prhe	93.6283	109.6408	0.1128	760.0536
Exhe	25.5709	25.7676	11.7000	183.6230
Imr	57.4462	23.9510	11.7000	138.6000
Lep	58.9528	6.5452	41.5970	77.2366

Source: Author's computation (World Bank, 2024) using Eview, 2024

Table 2 Descriptive Statistics (Countries with Minimum and Maximum Values)

Year	Variable	Minimum	Country	Year	Maximum	Country
2000	Puhe	0.2694	Congo Democratic Republic	2020	1471.6190	Sierra Leone
2021	Prhe	0.1128	Malawi	2019	760.0536	Mauritius
2004	Exhe	11.7000	Botswana	2006	183.6230	Namibia
2021	Imr	11.700	Benin Republic	2000	138.6000	Senegal
2001	Lep	41.9570	Zimbabwe	2020	77.2366	Sierra Leone

Source: Author's computation (World Bank, 2024) using Eview, 2024

4.1. Effect of health expenditure on health outcomes

In order to examine the effects of health inputs on health outcomes, this study estimates models for pooled least squares, fixed effects, random effects. Comparatively, Hausman test revealed that model for fixed effects was more suitable to that of random effects models. The results for health expenditure (divided into public, private and external expenditures) on health outcomes is shown in Table 3.

4.2. Effect of Public, Private and External Health Expenditures on Infant Mortality

The effects of public, private and external health expenditures on infant mortality in SSA is shown in Table 3. The result for Fixed Effect Model is interpreted below in Hausman's Test, while Random Effect serves as robust estimate. In most cases,

the Random Effect coefficient conforms to the direction and relevance of the Fixed Effect coefficients.

Table 3: Public, Private and External Health Expenditure and Infant Mortality

Variables	OLS	Fixed Effects	LSDV	Random Effects
Puh	-0.0766***	-0.0184***	-0.0184***	-0.0235***
	(0.00619)	(0.00713)	(0.00713)	(0.00691)
Prh	0.0106	-0.0277***	-0.0277***	-0.0257***
	(0.00855)	(0.00979)	(0.00979)	(0.00951)
Ext	-0.183***	-0.228***	-0.228***	-0.227***
	(0.0256)	(0.0215)	(0.0215)	(0.0213)
Constant	67.85***	67.49***	83.76***	67.73***
	(1.051)	(0.992)	(2.647)	(2.682)
Observations	990	990	990	990
R-squared	0.279	0.141	0.760	
Number of country name		45		45
firm effect		YES		YES
year effect		NO	NO	NO
F-test		51.70	63.58	
Prob > F		0	0	
Wald-chi2				169.8
Prob > chi2				0
country effect			YES	

"t: statistics (standard errors) in parentheses *** p<0.01, ** p<0.05, * p<0.1
Source: Author's computation using Stata, 2024

Table 3 reveals public health expenditure (puhe) has an indirect but statistically significant effect on infant mortality. It implies that public health expenditure is important if infant mortality must be reduced. This performance could be as a result of governments' efforts in the budgetary allocation and judicious utilisation of public funds in the provision of healthcare facilities and healthcare services; making vaccines available for nursing mothers to vaccinate their newborn babies at an age required and at appropriate times; providing information about best way to take care of the baby. It may also be due to awareness of the benefits accrue to breastfeeding; provision of better remuneration, and allowances for the health workers across the region. The statistics suggests that when public health

expenditure increases, brings about a reduction in infant mortality. However, this conforms to the work of Arthur and Oaikhenan (2017), Olatunde and Fagbemi (2019), Ayipe and Tanko (2023) which investigated relationship between health financing and health outcomes in SSA region and results show that health financing substantially reduces death rates. Public health financing have a large effect on death rate declines.

Private health expenditure (prhe) in Table 3 also reveals that there is negative and statistically significant effect on infant mortality. That is, an improvement in health expenditure by private individuals is an important factor in lowering death rate. This improved private health expenditure perhaps is as a result of more funds expend by well- to-do families on their health and who have either health insurance scheme or paying for health services out of their personal pockets. The findings signify that the more individuals commit financial resources on their personal wellbeing, the less will be infant mortality by an average of about 3% in Sub-Saharan Africa. This finding agrees with Frank and Mcineka (2021), who found that infant mortality decreases when investment on private health increases.

Similarly, Table 3 reveals that external health expenditure (exhe) propels infant mortality in SSA to decline. This may be as a results of supports from external bodies include but not limited to World Health organization (WHO), World Bank (WB) and United Nations (UN) in providing and enhancing facilities and resources to train and retrain of health personnel in the region. The findings show that when external health expenditure improves, leads to a fall in infant mortality by 2.7% in SSA. This result was in conformity with Novignon and Lawanson (2017), and Adegoke et al, (2022) demonstrating that increased health investment (external health) declines infant mortality rate.

Effect of Public, Private and External Health Expenditure on Life Expectancy

Table 4 shows result for public, private and external health expenditures (puhe, prhe & exhe) on life expectancy in SSA. Column 3 comprises Fixed Effect model's coefficients. The Fixed Effect model's coefficients are interpreted based on Hausman's test result.

Table 4: Public, Private, External Expenditure and Life Expectancy at Birth.

VARIABLES	OLS	Fixed Effects	LSDV	Random Effects
Puh	0.0176***	0.0116***	0.0116***	0.0119***
	(0.00182)	(0.00203)	(0.00203)	(0.00197)
Prh	-0.000251	0.00724***	0.00724***	0.00678**
	(0.00251)	(0.00278)	(0.00278)	(0.00271)
Ext	-0.000908	0.0604***	0.0604***	0.0578***
	(0.00751)	(0.00610)	(0.00610)	(0.00605)
Constant	57.46***	55.72***	54.05***	55.80***
	(0.309)	(0.282)	(0.752)	(0.777)
Observations	990	990	990	990
R-squared	0.166	0.171	0.741	
country effect	NO		YES	
year effect	NO	NO	NO	NO
F-test	65.60	64.58	57.37	
Prob > F	0	0	0	
Number of countryname		45		45
firm effect		YES		YES
Wald-chi2				196.8
Prob > chi2				0

"t: statistics (standard errors) in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Author's computation using Stata, 2024

Table 5 reveals that fixed effects coefficients for public health expenditure (puhe) is positive, as well as significant to explaining life expectancy. The result suggests that increased public health expenditure brings about improved life expectancy by an approximately 1% as model revealed.

Table 4 also reveals that external health expenditure (exhe) serves as a propeller to life expectancy in SSA. The reason may not be far-fetched from the contributions obtained from external donors to support health service delivery in SSA countries. The donors like WHO, WB, and UN are supporting provision of improved healthcare service delivery in SSA. The fixed effects' results establish that enhanced external health spending brings about improved life expectancy by 6% in SSA.

Harmonizing public, private, and external health spending is fundamental to improving health outcomes in the SSA region, given the significance of the three

sources of funding on health outcomes. The implementation of health insurance programmes, as supported by Akanni (2012), Ogunleye (2014), and Arthur (2015), is one way to harmonize health care spending.

These results suggest that health spending is a major player when it comes to raising life expectancy and lowering the region's infant death. The findings also show that while public and external health spending are essential in determining life expectancy at birth, the later has more effect on infant mortality rates in SSA. The efficacy of external health expenditure on infant mortality rates may be attributed to the region receiving financial support from international organizations for health advancement, which is effective in lowering mortality and raising life expectancy. These results validate model developed by Grossman (1972) suggesting that outcomes improves and benefits individual if investment in health enhances. These results indicate empirical consistency to other research reporting a substantial effect of health investment on health outcomes. Among these works are Arthur (2015) and Akanni (2012). These findings, however, differ from research that found no influence of health inputs on health outcomes (Fayissa & Gutema, 2008; & Ogunleye, 2014). This study finds that expenditure on health significantly affects health outcomes.

5. Conclusion and Recommendations

This study examines relationship that exists among health outcomes and economic growth in Sub- Saharan Africa (SSA). This study investigates how health expenditures influence health outcomes in SSA. The findings reveal that health outcomes are influenced substantially by health expenditure in the region. Expenditure on health as findings further reveal causes decline in infant mortality rate, while it increases life expectancy at birth.

Given these substantial growth implications of investments in health outcomes and health improvement, the study recommends that:

i. Policymakers to consciously devote incremental resources to health industry for building, renovating and maintaining healthcare facilities.
ii. Hire, train and retrain more healthcare professionals.
iii. Acquire modern, effective and efficient equipment for the delivery of healthcare.
iv. Subsidise and possibly declare free health care services to the vulnerable individuals and families across the entire SSA member nations. These will play a major role in attaining the targeted and better health outcomes.

References

Aboubacar, B., & Xu, D. (2017). The impact of health expenditure on the economic growth in Sub-Saharan Africa. *Theoretical Economics Letters*, *7*(3), 615-622. doi: 10.4236/tel.2017.73046

Adegoke, Y. O., George, G., & Mbonigaba, J. (2022). Sustainable thresholds, health outcomes, health expenditures and education nexus in selected African countries: quadratic and moderation modelling. *Globalization and Health*, *18*(*84),* 1-15. doi: 10.1186/s12992-022- 00876-8.

Adegoke, Y. O., Mbonigaba, J., & George, G. (2022). Macro-economic determinants, maternal and infant SDG targets in Nigeria: Correlation and predictive modeling. *Frontiers in Public Health*, *10, (1),* 1-12. https://doi.org/10.3389/fpubh.2022.999514

Akinbode, S. O., Dipeolu, A. O., Bolarinwa, T. M., & Olukowi, O. B. (2021). Effect of health outcome on economic growth in Sub-Saharan Africa: A system generalized method of moment approach. *Journal of Economics and Development*, *23*(3), 254-266.

Alderman, H., & Fernald, L. (2017). The nexus between nutrition and early childhood development. *Annual review of nutrition*, *37*, (1) 447-476. doi:10.1146/Annurev-Nutr07184627

Alhassan, G. N., Adedoyin, F. F., Bekun, F. V., & Agabo, T. J. (2021). Does life expectancy, death rate and public health expenditure matter in sustaining economic growth under COVID-19: Empirical evidence from Nigeria?. *Journal of Public Affairs*, *21*(4), 1-11.

Anowor, O. F., Ichoku, H. E., & Onodugo, V. A. (2020). Nexus between healthcare financing and output per capita: Analysis of countries in ECOWAS sub-region. *Cogent Economics*

Anyanwu, J. C., & Erhijakpor, A. E. (2009). Health expenditures and health outcomes in Africa. *African Development Review*, *21*(2), 400-433. doi:10.1111/J.1467- 8268.2009.00215.X *& Finance*, *8*(1), 1-14. https://doi.org/10.1080/23322039.2020.1832729

Arthur, E. (2015). *Health expenditure, health outcomes and economic growth in Sub-Saharan Africa.* Doctoral dissertation, University of Benin. https://publication.aercafricalibrary.org/handle/123456789/474

Arthur, E., & Oaikhenan, H. E. (2017). The effects of health expenditure on health outcomes in Sub-Saharan Africa (SSA). *African Development Review*, *29*(3), 524-536. doi:10.1111/1467-8268.12287

Arthur, E., & Oaikhenan, H. E. (2020). Health Outcomes and Economic Growth in Sub-Saharan Africa. *African Journal of Health Economics*, *9*, 18-31. 10.35202/ajhe.2020.9218-31

Awe, A. A., & Ajayi, S. O. (2010). The nexus between human capital investment and economic growth in Nigeria. *Pakistan Journal of Social Sciences*, *7*(1), 1-7.

Ayipe, F. I., & Tanko, M. (2023). Public health expenditure and under-five mortality in low- income Sub-Saharan African countries. *Social Sciences & Humanities Open*, *8*(1), 1-18. https://doi.org/10.1016/j.ssaho.2023.100570

Bakare, A. A., & Olubokun, S. (2011). Health care expenditure and economic growth in Nigeria: An empirical study. *Journal of emerging trends in economics and management sciences*, *2*(2), 83-87. DOI**:** 10.5604/01.3001.0014.6882

Bul, A. M., & Moracha, O. R. (2020). Effects of economic growth on health outcomes: A panel data study of Sub-Saharan Africa. *International Journal of Science and Business*, *4*(4), 35-60. doi:10.5281/zenodo.3736314

Eggoh, J., Houeninvo, H., & Sossou, G. A. (2015). Education, health and economic growth in African countries. *Journal of Economic Development*, *40*(1), 93.

Fayissa, B., & Gutema, P. (2008). A health production function for Sub-Saharan Africa (SSA). *Department of Economics and Finance.Working Paper Series* No. *112*, 118. *National Bureau of Statistics.*

Frank, O., & Mcineka, T. T. (2021). health financing and health outcomes in Sub-Saharan Africa: A PLS-SEM Application. *Elementary Education Online*, *20*(4), 1251-1251. doi**:** 10.17051/ilkonline.2021.04.142

Gouda, H. N., Charlson, F., Sorsdahl, K., Ahmadzada, S., Ferrari, A. J., Erskine, H., Whiteford,H. (2019). Burden of non-communicable diseases in sub-Saharan Africa, 1990– 2017: results from the Global Burden of Disease Study 2017. *The Lancet global health*, *7*(10),doi: Https://Doi.Org/10.1016/S2214-109x (19)30374-2

Greene, W. H., & McKenzie, C. (2012). LM Tests for random effects (September 2012). NYU Working Paper No. 2451/31603). *National Bureau of Economic Research*. Available at https://ssrn.com/abstract=2145157

Grossman, M. (2017). On the concept of health capital and the demand for health. In *Determinants of health: an economic perspective 80(2),* (pp. 6-41). Columbia University Press. http://dx.doi.org/10.1086/259880

Grossman, M. (1970). *The demand for health: a theoretical and empirical investigation* Doctoral dissertation, Columbia University. DOI: 10.4236/psych.2010.12018

Gumbau Albert, M. (2021). The impact of health status and human capital formation on regional performance: Empirical evidence. *Papers in Regional Science*, *100*(1), 123-139. doi:10.1111/pirs.12561

Hausman, J. A., & Taylor, W. E. (1978). Econometrica: Journal of the econometric society. *Specification Tests in Econometrics*, *46*(6), 1251-1271.

Iddrisu, S. A. (2019). *Health and Natural Capital in an Augmented Solow Growth Model*.

Kibathi, M. H. (2019). *The Impact of HIV/AIDS Prevalence on Economic Growth in Sub-Saharan Africa*. Master's thesis, The University of Manchester, United Kingdom.DOI:10.1007/s11294-019-09754-3

Kiross, G. T., Chojenta, C., Barker, D., & Loxton, D. (2020). The effects of health expenditure on infant mortality in Sub-Saharan Africa: Evidence from panel data analysis. *Health economics review*, *10(5)*, 1-9. DOI: 10.1186/S13561-020-00262-3

Lawanson, A. O. (2012). Public sector healthcare financing and health outcomes in Sub- Saharan African countries. Ibadan University Press, Publishing House, University of Ibadan Ibadan.

Maijama'a, D., & Kachalla Mohammed, B. (2013). Impact of HIV/AIDS on economic growth and development in Nigeria. *Impact of HIV/AIDS on economic growth and development in Nigeria. April 25*. http://dx.doi.org/10.2139/ssrn.2695373

Modibbo, H. U., Jalingo, U. A., & Jalingo, M. U. (2019). Health Indices and Economic Growth Nexus: A Panel Co-integration Analysis for the Case of West African Countries. *International Journal of Economics and Development Policy (IJEDP)*, *2*(1), 10-18.

Nasiru, I., & Usman, H. M. (2012). Health expenditure and economic growth nexus: An ARDL approach for the case of Nigeria. *Journal of Research in National Development*, *10*(3), 95-100. www.transcampus.org./journals,

Novignon, J., & Lawanson, A. O. (2017). Health expenditure and child health outcomes in Sub- Saharan Africa. *African Review of Economics and Finance*, *9*(1), 96-121.

Novignon, J., Olakojo, S. A., & Nonvignon, J. (2012). The effects of public and private health care expenditure on health status in Sub-Saharan Africa: New evidence from panel data analysis. *Health Economics Review*, *2*(1), 1-8. DOI: 10.1186/2191-1991-2-22

Ogunjimi, J. (2019). Health expenditure, health outcomes and economic growth in Nigeria. *Health Outcomes and Economic Growth in Nigeria,* University of Ibadan – Department of Economics. http://dx.doi.org/10.2139/ssrn.3479072

Ogunleye, E. K. (2014). *Health and economic growth in Sub-Saharan Africa*. African Economic Research Consortium. University of Ibadan – Department of Economics. https://doi.org/10.1108/JED-06-2020-0078

Olayiwola, S. O., Bakare-Aremu, T. A., & Abiodun, S. O. (2021). Public health expenditure and economic growth in Nigeria: Testing of Wagner's hypothesis. *African Journal of Economic Review*, *9*(2), 130-150.

Olatunde, O. S., Adebayo, A. A., & Fagbemi, F. (2019). Health expenditure and child health outcome in West Africa. *International Journal of Social Sciences Perspectives*, *5*(2), 72-83. doi: https://doi.org/10.33094/7.2017.2019.52.72.83

Oleribe, O. O., Momoh, J., Uzochukwu, B. S., Mbofana, F., Adebiyi, A., Barbera, T., & Taylor- Robinson, S. D. (2019). Identifying key challenges facing healthcare systems in Africa and potential solutions. *International journal of general medicine*, *12 (1),*395- 403. doi: 10.2147/IJGM.S223882

Onisanwa, I. D., & Olaniyan, O. (2019). Health shocks and consumption smoothing among rural households in Nigeria. *Journal of Economics and Management*, *36*(2), 44-70. doi: https://doi.org/10.22367/jem.2019.36.03

Onisanwa, I. D., Sunday, B. S. I., & Adaji, M. O. (2018). Healthcare financing and health status analysis in Nigeria. *Amity Journal of Healthcare Management*, *3*(2), 31-42. https://amity.edu/userfiles/admaa/70a2bpaper%203.pdf

Otim, M. E., Almarzouqi, A. M., Mukasa, J. P., & Gachiri, W. (2020). Achieving Sustainable Development Goals (SDGs) in Sub-Saharan Africa (SSA): conceptual review of normative economics frameworks. *Frontiers in Public Health*, *8*, 584547. doi: 10.3389/fpubh.2020.584547

Shahid, A., Siddique, H. M. A., Kiani, A. K., & Shafique, U. (2021). Human health, FDI and economic growth nexus: A panel data analysis. *International Journal of Business, Economics and Finance*, *2*(1), 54-66. http://thessri.com/Archives.php.

Usman, H. M., Muktar, M., & Inuwa, N. (2015). Health outcomes and economic growth nexus:Testing for long run relationship and causal links in Nigeria. *International Journal of Economics and Empirical Research (IJEER)*, *3*(4), 176-183.

World Bank Africa Strategy for 2019–2023

World Development Indicator/ Data Bank (2023) – https://www.worldbank.org/en/about/annual-report/world-bank-group-downloads

World Bank Annual Report 2022: REGIONAL PERSPECTIVES (2022)
World Bank Africa Strategy for 2019–2023
World Development Indicator/ Data Bank (2023) - https://www.worldbank.org/en/about/annual-report/world-bank-group-downloads
World Bank Annual Report 2022: REGIONAL PERSPECTIVES (2022)
World Health Organization. (2022). Evidence as a catalyst for policy and societal change: towards more equitable, resilient and sustainable global health. Meeting report of the WHO Global Evidence-to-Policy Summit, 15–17 November 2021. World Health Organization.
World Health Organization. (2022). Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030. World Health Organization.
World Health Organization. (2023). Methodology for the update of the global health expenditure database 2020-2022. World Health Organization.
World Health Organization. (2022). Global spending on health: rising to the pandemic's challenges. World Health Organization.
World Health Organization. (2024). Global spending on health: coping with the pandemic. World Health Organization.
World Bank in Africa (2020). Sub-Saharan Africa's economic growth
World Bank in Africa (2021). Sub-Saharan Africa's economic growth
World Bank in Africa (2023). Sub-Saharan Africa's economic growth World Bank (2023). Multilateral investment guarantee agency- MIGA
World Health Organization. (2019). Nutrition landscape information system (NLIS) country profile indicators: Interpretation guide. **ISBN:** 9789241516952
World Health Organization Global Health Expenditure Database (apps.who.int/database). The data was Retrieved on January 30, 2022.
Yusufu, F., Awoyemi, O. B., & Komolafe, K. J. (2022). The effects of total health expenditureon economic growth in central and eastern Sub-Sahara African regions. *International Journal of Economics Development Research (IJEDR)*, *3*(2), 102-121.
doi: https://doi.org/10.37385/ijedr.v3i2.425
Yusuf, M., & Setiawan, A. B. (2022). The nexus between health and economic growth: Empirical evidence from Indonesia. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi dan Pembangunan*, *23*(2), 192-210. **doi: 10.23917/jep.v23i2.20018**

Salient Foreign Policy implications of Nigeria's Role in Regional Integration and Peacekeeping in Africa

Ejiroghene Augustine OGHUVBU

Department of History and International Studies, Faculty of Arts, Delta State University, Abraka, Nigeria
Email: augustine4best@yahoo.com
https://doi.org/10.57233/gijmss.v7i3.09

Abstract

Nigeria has made more contributions than any other nation on the African continent to the decolonization and complete independence of Africa, in addition to supporting the preservation of political stability, security, and peace in several African nations. Among those nations are Congo, Chad, Ivory Coast, Mali, Liberia, Somalia, and Sierra Leone. Because of this, the global community praised Nigeria's efforts to keep the peace in some of the region's most volatile areas. Some of these nations that benefited from Nigeria's kind gestures returned them with ingratitude. In light of this, this study looks at Nigeria's regional integration and peacekeeping and their consequences for the nation's foreign policy. The study utilized secondary data obtained from books, newspaper articles, bulletins, textbooks, journal articles, internet resources, and e-books, which were consulted for the purpose of this study. The Hegemonic Stability Theory by Kindleberger (1973) was used to interrogate the concept for understanding Nigeria's regional integration and peacekeeping efforts. Findings from the study show that Liberia, Sierra Leone, and other West African nations do not recognize Nigeria's contributions to the peace process in the region, which is why they voted against the country's application for and pursuit of a non-permanent seat at the United Nations Security Council. Consequently, the study recommends that Nigeria should exercise greater diplomacy and reason when determining whether to participate in peacekeeping efforts both within and outside the African continent.

Keywords: Decolonization; Foreign policy; Global community; Peacekeeping; Regional integration; Nigeria

1. Introduction

Realizing sustainable unity, peace, security, political stability, socioeconomic growth, and development depends critically on regional integration and cooperation. Among other things, they specifically offer appropriate venues and institutional frameworks that enable states to efficiently mobilize and combine their resources to expand markets and foster trade; they also guarantee smooth social mobility and capital transfers for the mutual gain of all the states (Kalagbor, 2024). As a result of this, the world has witnessed a notable increase in interest in

regional cooperation to accomplish a variety of political, economic, social, cultural, or security goals since the end of World War II. For example, nations formed the Association of South Eastern Nations (ASEAN) in 1967 in South East Asia; those in Central and Eastern Europe established 1957 saw the creation of the European Economic Community (EEC), which in 1993 became the European Union (EU); the organization of American States (OAS) was established in 1948 by nations in the Americas, while the organization of African Unity (OAU) was founded in 1963 by nations in Africa and renamed in 2002 by the African Union (AU).

Regional hegemons or powers are crucial to realising the objectives of regional integration, as evidenced by research on the subject by Damtie (2024), Kindleberger (1973), cited in Washaya (2024), Farah & Akinlola (2024), Brosig & Nivet (2024), Mahmud (2022), and others. Common examples include the hegemony of the British Empire in the eighteenth and nineteenth centuries, the Roman Empire in the seventeenth century, and the United States' Global and North American hegemony since the conclusion of the Cold War (Farah & Akinola, 2024).

A number of regional powers have received recognition recently for demonstrating exceptional leadership in advancing regional harmony and unity. South America's Brazil, West Africa's Nigeria, Eastern Europe's Russia, Southern Asia's India, Eastern Asia's China, and Southern Africa's South Africa are among these powers (Washaya, 2024; Damtie, 2024). However, some of these objectives are achieved through the foreign policies of states in the international system. Hence, Holsti (2016, cited in Kalagbor, 2024) noted that foreign policy is the conscious behavior of a nation-state towards its external environment. It refers to those goals, objectives, and aspirations a country seeks to achieve in another country while expecting that the promotion of its national interest would be the resultant effect of the achievement of those goals and also the strategies put in place to achieve those goals (Garba, 2020). Nigeria has had an Afrocentric foreign policy since gaining independence in 1960 because it places a greater emphasis on Africa.

Nigeria has made more contributions than any other nation on the continent to the decolonization and complete independence of Africa, as well as to a number of African nations such as Sierra Leone, the Congo, Ivory Coast, Mali, Somalia, Chad, Liberia, and so forth, maintaining peace, security, and political stability

(Garba, 2021). Variously, regarded as a "regional power" (Adebayo, 2022), "The Giant of Africa" (Dauda, Ahmad & Keling, 2019; Mustapha, 2020), and "Big Brother" to many African nations, Nigeria has gained recognition for these and many other reasons. These include its leadership position, generosity, and dedication to resolving the numerous issues and problems impacting the continent as a whole. According to Hoslsti (2016, cited in Kalagbor, 2024), nations get involved in foreign policy due to what they aspire to achieve from other nations. But in the case of Nigeria in Africa and West Africa this is not so. It is on this note that this study examines Nigeria's salient foreign policy implications regarding peacekeeping and regional integration in Africa.

2. Literature Review

2.1 Conceptual Clarifications

The Concept of Regional Integration

According to Denisova and Kostelyanets (2023a) geographic area is "a small group of states connected by a shared geography and level of mutual dependence." Stated differently, a region is a grouping of nations connected by geography. Scholars like Piccolino (2020) and Shumba (2024), however, contend that a region's physical proximity may not be its defining feature. Consequently, regions are deliberate interactions—whether or not they are related to the same geographic area—between states on social, cultural, political, and economic levels. A new political community is superimposed as a result of a political integration process, over the previous ones. According to Dal (2023), the process of persuading political actors in various national contexts to reorient their political actions, allegiances, and expectations towards a new centre whose institutions either have jurisdiction over or aspire to jurisdiction over previously existing national states is known as regional integration.

Based on the previously mentioned justifications, the study defines it an alliance of independent states with similar social, cultural, or historical values is known as regional integration. These states cooperate to achieve shared political, social, economic, or security goals; in return, the states cede a portion of their national sovereignty to the regional organization (Khudaykulova, 2020). The states may or may not be geographically close to one another. Therefore, collaboration for harmony, peace, and advancement between the 55 independent countries of the continent is referred to as regional integration in Africa.

Peacekeeping

The current events in Africa, especially in West Africa, have an impact on security, peacekeeping, and peace enforcement, so it is vital to focus on the contextual nature of these activities. Global and regional peacekeeping operations have been crucial in addressing and ending international conflicts (Erameh, 2021). The term "peacekeeping" primarily refers to operations authorized by the UN Charter that have as their main goal the preservation of world peace and security. According to Kalagbor (2024), the main components of peacekeeping are observation missions and lightly armed forces keeping an eye on the ceasefire, functioning with the parties' permission in an essentially static mode.

Peacekeeping, in its classic sense, refers to the containment of conflicts through the use of impartial third-party assistance in mediating disputes and persuading disputing parties to back down (Verhoeven & Gebregziabher, 2024). Therefore, for a peacekeeping operation to be effective, it must be able to win over not only the parties to the conflict but also international organizations that are regional and sub-regional, comparable to the African Union, the Economic Community of West African States, and the United Nations. "Peacekeeping" is a tactic intended to restore harmony to societies that were previously at odds (Adebayo, 2022: 217). Supervising ceasefires between warring parties is the primary goal of deploying military, police, and civilian personnel. Peacekeepers are responsible for creating an environment that prevents hostilities between and among the parties involved in the conflict. Maintaining reciprocal respect for people's rights and freedoms while actively attempting to foster enduring, peaceful relationships in war-torn countries is essential to peacekeeping (Ramontja & Akinola, 2024).

As a means to an end in the conflict resolution continuum, peacekeeping depends on additional political attempts to resolve disputes, such as arbitration, good offices, and negotiation, among others. Effective political processes need to be supported by peacekeeping (Khudaykulova, 2024). Since the development of this conflict management and resolution approach, peacekeeping operations have been carried out in several places, including Sierra Leone, Lebanon, Somalia, Cyprus, and the Central African Republic (CAR), to mention a few. It is commonly known that these tenets, which form the cornerstones of traditional peacekeeping, have proven problematic in numerous instances of intra-state conflict. The idea of peacekeeping is based on a few fundamental ideas, including the parties' agreement to the conflict, the restriction of force to self-defense, and—above all—the assertion of impartiality (Khudaykulova, 2024).

Erameh (2021) likened peacekeeping to nursing care in his writing: "KEEPING THE PEACE, which he said is like getting daily nursing care. It's similar to hospital staff tending to a patient's temperature and maintaining a reasonable level of health. And once you reach a certain stage, a skilled surgeon might be able to show up and handle the issue. The goal must be to keep the patient as comfortable as possible, as there may not be a great surgeon or the case may not be operable. It is important to acknowledge the challenges in resolving the fundamental disagreements that lead to peacekeeping (Erameh, 2021).

According to Saliu (2006), a peacekeeping mission is viewed as a useful way to pursue collective security and a defense of international peace. Simply expressed, collective security implies that all parties to the international system have an obligation to work together to stop unexpected developments from occurring in the global system. In other words, it implies that member states have a duty to support any member that is in need. Some have argued that there is no constitutional authorization for the term "peacekeeping mission" (Kohnert, 2023; Farah & Akinola, 2024). However, given how frequently it is used to handle crises, this does not imply that the peacekeeping mission is ultra vires; rather, it has the status of a legal instrument in principle (Saliu, 2006). Nevertheless, the acceptability problem was present from the start of the peacekeeping mission and has not been resolved by a sound theoretical framework put forth by global specialists. In spite of this, when conflicts are handled irregularly, the UN Secretary-General usually produces supporting documents for the Security Council that serve as a point of reference.

2.2 Africa's Historical Context for Regional Peacekeeping Integration

In Addis Ababa, Ethiopia, the Organisation of Africa Unity (OAU) was established, in 1963 with the goals of promoting cooperation among member states, safeguarding the independence and territorial integrity of African nations against external aggression, and assisting in their liberation from colonialism and apartheid. Even though the 1950s saw the beginning of the quest for regional integration by a few prominent leaders of the early independent African states, OAU formalized it in that same year (Kalagbor, 2024).

The OAU (1963–2002) made a substantial contribution to the successful elimination of interstate conflicts on the continent, the fight against apartheid in South Africa, and the advancement of African unity in addition to helping many current African countries achieve independence. Nigeria has also played a leading

role in the OAU's conversion to the AU, which was required following the end of colonialism for the African countries to confront their common security, social, political, and economic issues on the continent and to establish a collective voice in the world economy (Kohnert, 2023). African leaders convened in Libya in September 1999 for the 4th Extra-Ordinary Summit. The result was the Sirte Declaration, which promoted the African Union's establishment among other things. 53 African nations ratified at the 36th Extra-Ordinary Session of the Assembly of Heads of State and Government in Lomé, Togo, in July 2000, the AU Constitutive Act was passed.

After that, at the 2002 Durban Summit in South Africa, the OAU changed its name to the AU. At the 2005 conference in Uganda, under the topic "Desirability of a Union Government of Africa," the African Union (AU) recommended creating a continental government to speed up the continent's regional integration (Biswaro, 2012). Inaugurated on May 16, 2013, during the 50th anniversary celebration of the African Union's Ordinary Assembly in Addis Ababa, the "Agenda 2063" was finally adopted on January 31, 2015, during the Head of State and Government of AU's Ordinary Session. This agenda is a long-term strategy framework that spans 50 years and aims to support the African Union's (AU) efforts to build a unified regional governance by 2063 and to accelerate socioeconomic development—which will be known as the "United States of Africa" (USA) (Ramontja & Akinola, 2024).

2.3 Nigeria's Afro-Centric Foreign Policy Nature

No country is an island on its own. Although some countries have vast resources, they still require a form of relationship with others to aid the fulfilment of their national interests. Therefore, Osakwe (2017), highlights that "without accepting national interest as a guide, no nation can have a true guide as to what it needs to do in foreign policy" (Iyiola, 2016). Nigeria therefore wishes to use her resources, population, military capability, size, etc.… as an advantage to support and facilitate Africa's collective interest; Nigeria's historic mission fulfilled this mandate (Iganga, 2013). Thus, respective Nigerian constitutions, since independence in 1960 till date, clearly enacted and prioritized these basic strands under the core goal and guiding principles of state policy of Nigeria's foreign policy based on Africa-centred policy.

Nigeria's foreign policy is centered on Africa, which played out more clearly in 1973, in bilateral trade agreements when Nigeria had over 16 African States while

technical, cultural, and social links with other African countries increased tremendously. It was also involved in building damaged buildings for the Movement in Morocco (Assibong, 2017: 58). The OAU was founded in 1963 and later changed its name to the African Union in 2002, was founded in 1963 with Nigeria as a major contributor. Nigeria also prompted the UN General Assembly to hold an additional session to discuss the African Economic Crisis. Nigeria was instrumental in the OAU's 1987 adoption of a common position on African debt, which called for the cancellation of all bilateral debts and a significant infusion of cash into the continent to support the Structural Adjustment Programme (SAP), given the debilitating effects of indebtedness in the continent (Saliu, 2006: 120–121). Nigeria has promoted its Afrocentric policies by actively participating in peacekeeping missions in Sierra Leone, the Gambia, and Liberia.

2.4 Theoretical Concept for Understanding Nigerians' Aspirations for African Integration

Based on the Regional Hegemonic Stability Theory, Nigeria's contribution to gaining its independence in 1960, Africa has integrated into the region like a regional hegemon. Scholars like Keohane (1984), Gilpin (1988), Yarbrough & Yarbrough (1992), Kindleberger (1973), Prys (2008, 2010), and others have written about the theory. To explain how American and British hegemony, which he called Pax-Americana and Pax-Britannica, helped to keep the international order stable. Kindleberger (1973) developed the HST. According to the theory, a hegemon is any state that has greater economic and military might than others either globally or regionally, is able and willing to exercise leadership, and sets the rules necessary to preserve the stability of the world or region.

According to the HST, when a hegemon assumes the role of the leader or stabiliser, a stable international system is more likely to be developed and maintained; otherwise, the system would become unstable. According to Kindleberger (1973, p. 305), "there has to be a stabiliser, one stabiliser, for the world economy to be stabilised." The stabiliser in this context is a hegemon. According to Kindleberger (19 1973, p. 28), "a liberal economic order needs leadership, a country which is prepared consciously, under some systems of rules it has internationalised, to set standards of conduct for other countries; and to seek to get others to follow them." According to Kindleberger (1973), the lack of a hegemon to assume the necessary leadership role led to the global depressions of 1929 and 1939.

Hegemony requires, however, that a power shows ability, willingness, and commitment to maintaining regional stability. Ability is defined as the capacity to defend the region against outside intrusions or aggression. Willingness is the readiness of a hegemon to assume the responsibility (bear the expense) of leading the system, particularly when it comes to delivering public goods like aid to weaker states, international peace, and stable internal political economies.

Furthermore, Keohane (1984, p. 30) states that “a hegemon can be supported because it provides specific products and services that help weaker states." As stated by Kindleberger (1973), Keohane (1984), and Myers (1991), a hegemon needs to be able to maintain its position, which includes supplying public goods, upholding the law, defending the area from outside aggression, etc. (Schimm, 2006, Bach, 2007, Prys, 2008; Nolte, 2010).

Nigeria has outperformed most of its peers in terms of ability, willingness, and commitment to the cause of Africa. As a result of its unparalleled dedication to the continent, Nigeria has gained international recognition as a regional power in Africa and as the undisputed hegemon of the West African sub-region, even though there is very little agreement in the literature that the country is Africa's regional hegemon. Nigeria is the most populous country in Africa and the largest country of Black people worldwide. The Organization for Economic Cooperation and Development claims that one in four Africans and one in five people of African descent are Nigerians. Of every ten people in West Africa, six are Nigerians (Olanrewaju & Olunkanmi, 2020). According to the World Bank (2023a), Nigeria's population is estimated to be over 218 million, surpassing that of Ethiopia (123 million), Egypt (110 million), and its closest regional power rival, South Africa (59 million). For many years, Nigeria's economy has been the biggest in the world in terms of GDP volume. It is the top producer of crude oil in Africa (World Bank, (2023b) and ranks seventh globally as of 2022 (Punch, 2023). For many, it is a source of imported crude oil nations worldwide, including those in Africa.

Even though South Africa is posing a threat to Nigeria's dominance in the region, the latter has held that title since 2013 following an economic rebasing (Olanrewaju & Olunkanmi, 2020). Nigeria's GDP as of 2022 was $477 billion, greater than Egypt's $476 billion and South Africa's $405 billion (World Bank, 2023b). Furthermore, despite Nigeria's ranking as the fourth most capable country in Africa in 2022 (Elijah, 2023), it has been recognized as a significant

contributor to AU, ECOWAS, and UN peacekeeping efforts (Dauda et al. 2019; Mustapha, 2020). Nigeria's goal has always been to foster brotherhood among its fellow African states through its benevolence, not to dominate or conquer their territory. This was made evident in its prime minister Abubakar Bafawa Balewa's first speech to the UN in October 1960, when he unequivocally declared that, "We sincerely believe that peace on our continent can only be sustained on that basis, therefore, we will consider all African territories, whatever of size, as equals and will never force our will on any other country."

Nigeria had a significant influence on Africa and South Africa, dating back to the latter was an apartheid state from 1960 until its independence in 1994. The military government of General Sani Abacha was followed by pressure from South Africa for Nigeria to return to democratic rule. According to Olanrewaju and Olorunkanmi (2020), it even took the lead in demanding that Nigeria be subject to sanctions by the Commonwealth of Nations for allegedly violating human rights, in particular Ken Saro Wiwa and the nine other unjustly killed human rights activists.

In contrast to the circumstances on the continent, Nigeria is unquestionably acknowledged as the dominant 14 sovereign states that comprise the West African sub region—Benin, Ghana, Mali, Cote d'voire, Senegal, Liberia, Gambia, Sierra Leon, Togo, Guenea Bissau, Guinea, Burkina Faso, Cape Verde, and Niger—are the dominant force in the sub region. An important contributor to the establishment of the Economic Community of West African States (ECOWAS) was Nigeria, which is headquartered in the nation's capital, Abuja.

3. Methodology

To gather information for this study, several published and unpublished sources were consulted, including past publications, e-journals, books, newspaper articles, bulletins, journal articles, internet resources, and e-books.

4. Results and Discussions

Foreign Policy Implications of Nigeria's Role in Regional Integration and Peacekeeping in Africa.

Nigeria has a leading position in Africa thanks to its endowment and geostrategic advantages. Nigeria has an abundance of gas, oil, and solid minerals. It is the most populous country in the region and its land can be used to grow a wide range of cash and food crops. The export of oil brings in enormous sums of money to the

country, and there is still room for the export of gas, solid minerals, and agricultural goods (Ramontja & Akinola, 2024). Nigeria boasts one of the biggest, most well-trained, and equipped armed forces in the area. Nigeria's intention to lead Africa and Africans worldwide is best demonstrated by the fact that West Africa is the focal point of her foreign policy (Adebayo, 2022).

Similar to the situation in Liberia, the Sierra Leonean war started in 1991 as an insurgency led by the Revolutionary United Front (RUF) and supported by the National Patriotic Front Liberia (NPFL) against the corrupt and inept government. However, Nigeria unilaterally decided to intervene in Sierra Leone by sending troops from the Economic Community of West African States Monitoring Group (ECOMOG) into the nation (Ramontja & Akinola, 2024). Due to this, several civilians perished, women were brutally and savagely raped, and children as young as nine years old were forced to join rebel groups (Adebayo, 2022). President Tejjan Kabbah of Sierra Leone requested Abacha of Nigeria to intervene. The framework of ECOMOG intervention was the peacekeeping agreement between Nigeria and Sierra Leone (Damtie, 2024).

During the military incursions in Liberia and Sierra Leone, Nigeria supplied 90% of ECOMOG's finance and at least 80% of its troops (12,000 out of 16,000 in Liberia and 12,000 out of 13,000 in Sierra Leone), according to Osakwe (2017: 4). Additionally, Nigeria intervened on behalf of the government of Sierra Leone when a string of coups threatened the country's security by providing military intelligence, presidential guards, and security specialists. These supplemented the training exercises conducted by the Nigerian Army Training Assistant Group (NATAG) (Osakwe, 2017). Nigeria played a major role in enabling the creation of the ECOWAS Monitoring Group (ECOMOG), a backup force for sub-regional security. Nigeria under General Yakubu Gowon played a key role in the formation of the Economic Community of West African States (ECOWAS) in 1975, along with Eyadema of Togo. The Community aims to promote cooperation and integration that will result in the establishment of an economic union in West Africa in order to enhance living conditions for its citizens, maintain and strengthen economic stability, fortify ties between member states, and advance the advancement and development of the African continent (Erameh, 2021).

Nigeria's sub-regional integration endeavour in West Africa involved the implementation of the ECOWAS Trade Liberalisation Scheme (ETLS), which enhances trade within the sub-region by facilitating the processing of duty

concessions for registered companies and trade. Imports into Nigeria and vice versa are duty-free for goods from ECOWAS nations (Garba, 2020). The ETLS sought to create a free trade zone where businesses from member states could transport goods across the ECOWAS region without having to pay taxes or duties. Nigeria has also played a major role in the West Africa Gas Plant (WAGP) and West Africa Power Pool (WAPP). Under this integration programme, Nigeria exchanges power with Ghana, Togo, Benin, and Niger with plans to later extend to Mali, Senegal, Liberia, and Guinea. The project aims to put all ECOWAS member states together through electrical networks (Garba & Akuya, 2020).

Nigeria has been able to offer member states technical assistance through the Technical Aids Corps (TAC) as part of its role to promote regional integration in the sub-region. Through its Technical Aid Corps (TAC), Nigeria continues to sell oil to its neighbours at a discount in addition to offering technical and humanitarian assistance. It has benefited nations like Ghana, Liberia, Niger, and Gambia. Upon request from governments, the programme disperses experts from Nigeria throughout West Africa. In April 2018 Nigeria sent 500 Technical Aid Corps volunteers to Sierra Leone and also sent 6,000 teachers to Liberia (Punch, 2023).

In terms of foreign policy, Nigeria ought to have gained a great deal from her humanitarian and peacekeeping missions in West African countries. However, in 2009, Liberia and Sierra Leone both rejected Nigeria's bid for non-permanent membership in the UN Security Council, going against the conventional wisdom in international politics regarding reciprocity (Kalagbor, 2024). This ought to have been a means of compensating Nigeria for all of the help provided. No Nigerian human resource or construction company was given a contract to rebuild or reconstruct after the wars in Sierra Leone or Liberia as a token of appreciation for Nigeria. Nigerians have been mistreated and expelled from Gabon and Equatorial Guinea. Over taxation is one of the economic policies that Ghana implemented in an effort to reduce the number of Nigerian business people doing business there (Farah & Akinola, 2024). One instance of reciprocity in US-Nigeria foreign policy was when former president Obasanjo asked for Nigeria to be forgiven its debt, and Clinton asked Obasanjo to promise to pressure OPEC to lower the price of crude oil on the global market in exchange (Shumba, 2024). This juxtaposes Holsti's (2016 cited in Kalagbor, 2024) views on the concept of foreign policy to mean the conscious behavior of a nation-state toward its external environment. It refers to those goals, objectives, and aspirations a country seeks to

achieve in another country while expecting the promotion of its national interest would be the resultant effect of the achievement of those goals and also the strategies put in place to achieve those goals.

5. Conclusion and Recommendations

It is necessary to investigate the claims that the frequent occurrence of intra- and inter-state conflict throughout African history results from certain states in the region being underdeveloped or in the process of developing. The actions and presence of certain notable actors in each region, such as Nigeria, lessen the possibility that a crisis will cause irreversible harm to the continent. The implications of Nigeria's involvement in African peacekeeping and regional integration were explored in this study. In many nations both within and outside Africa, Nigeria was a key player in the peacekeeping and integration efforts on the continent. The international community has praised Nigeria's efforts to keep the peace in some of the world's most volatile areas. However, the nations that benefited from Nigeria's kind gestures returned them with ingratitude. Going by the findings of this study, the following recommendations are imperative:

(i) Nigeria should exercise greater diplomacy and reason when determining whether to participate in peacekeeping efforts both inside and outside of the continent. As previously mentioned, Liberia, Sierra Leone, and other West African nations do not recognize Nigeria's contribution to the peace process in either country, which is why they voted against Nigeria at the UN despite Nigeria's efforts to restore democracy and bring about peace in Sierra Leone, which resulted in the deaths of roughly 700 Nigerian soldiers.

(ii) Nigeria's foreign policy should be reviewed if the country's role isn't protecting its citizens abroad and raising the standard of living for its citizens. This is because the main reasons countries engage in international relations are to further their obscure national interests and advance their national development.

References

Adebayo, F. (2022). Tobi Amusa, Ohuah and history behind the N1.14bn vehicles for Niger. The Cable (online). The Cable (online) Retrieved from https://www.thecable.ng/tobiamusan- ozuah-and-history-behind-the-n1-14bn-vehicles-for-niger 24th June 2024.

Assibong, P.A. (2017). Political Science for Africa. *International Student edition*. University of Calabar Press.

Bach, D. C. (2006). Nigeria's manifest destiny in West Africa: Dominance without power. *Africa Spectrum,* Vol. 42(2), pp. 301-321

Biswaro, J. M. (2012). The quest for regional integration in the twenty first century: Rhetoric vs reality: A Comparative study. Tanzania: NkukinaNyota Publishers ltd.

Brosig, M., & Nivet, B. (2024). From regional organizations to adhoc coalitions for interventions: Francophone Africa and contemporary security challenges. In *Routledge Handbook of Francophone Africa* (pp. 458-472). Routledge.

Dal, S. (2023). Regional Integration in Africa: EAC and ECOWAS. *Bölgesel Araştırmalar Dergisi*, *7*(2), 489-515.

Damtie, F. (2024). Analyzing the dynamics: EU and UN perspectives on the African Union. *Journal of Asian Multicultural Research for Social Sciences Study*, *5*(1), 1-16.

Dauda, M., Ahmad, M. Z. B. & Keling, M. F. (2019). Foreign policy and Afrocentrism: An appraisal of Nigeria's role. *Journal of Business and Social Review in Emerging Economies,* (51), 107-124.

Denisova, T. S., & Kostelyanets, S. V. (2023). African Solutions to African Problems: Peacekeeping Efforts of the African Union and African Regional Organizations. *Vestnik RUDN. International Relations*, *23*(3), 451-465.

Elijah, I. (2023). 10 strongest African military powers by country in 2023 https://www.pulse.ng/news/world/10-strongest-african-military-powers-by country- in-2023/pfpkz0t

Erameh, N. I. (2021). The African Union and its expanding role in peacekeeping and conflict resolution in the post-Cold War era. In *Regionalism, Security and Development in Africa* (pp. 207-222). Routledge.

Farah Hersi, M., & Akinola, A. O. (2024). IGAD and regional integration: Theories. In *IGAD and multilateral security in the horn of Africa: Through the lens of the Somali conflict* (pp. 35-61). Cham: Springer Nature Switzerland.

Garba, D. & Akuva, I. I. (2020). The leadership style of Nelson Mandela as a pattern for African leaders. *Coventry University Journal of politics & international Affairs*, 8(1), 49-64.

Garba, D. (2020). Sixty years of Nigeria's Afrocentric foreign policy: A critical review. FUDMA *International Journal of Social Sciences*, 2(2), p. 96-107. Retrieved from http://journal.fudutsinma.edu.ng/index.php/FUDIJOSS/article/view/2563/1940 24th May 2022.

Garba, D. (2021).Nigeria-United States bilateral relations in historical perspectives. *FUDMA International Journal of Social Sciences*, 3(1), p. 160-173. Retrieved from http://journal.fudutsinma.edu.ng/index.php/FUDIJOSS/article/view/2587 20th June 2022.

Gilpin, R. (1988). The theory of hegemonic war. *The Journal of International history*, 18(4), 591-613.

Idagu, E. A., Obiageli, N. L. & Luka M. B. (2020). Nigeria and conflict resolution in Mali: A focus on specific contributions. *International Journal of Conflict Management*, 1(1), 1-17.

Iganya, O.I. (2013). Nigeria's afro centric policy: An assessment of the principle of Africa as the centre-piece of Nigerian foreign policy.

Keohane, R. (1984). *After the hegemon: Cooperation and discord in the world political economy.* Princeton, New Jersey: Princeton University Press.

Khudaykulova, A. V. (2023). Regionalization of peacekeeping in Africa: The case of the African Union. *Vestnik RUDN. International Relations*, *23*(2), 339-357.

Kohnert, D. (2023). Comparative analysis of the performance of EU and AU peacekeeping missions in Sub-Saharan Africa. *Available at SSRN 4595829*.

Mahmud, A. (2022, July 17). Nigerian military and peace restoration in Liberia. PR Nigeria online. Retrieved from https://prnigeria.com/2022/07/17/nigerian-military-peace/ 23rd 2024.

Mustapha, A. H. (2020). Nigeria and the Africa Union (2002-2019). *Journal of Global Studies*, 11(2), p. 35-54.

Myers, D. J. (1991). Regional hegemons: Threat perception and strategic response. 1st ed. New York: Routledge, Tailor & Francis.

Nolte, D. (2010). How to compare regional powers: Analitical concepts and research topics. *Review of international Studies,* 36(4), pp. 881-901.

Odinkalu, C. A. (2022, February 13). Nigeria and the Price of innumeracy. The Cable online. Retrieved from https://www.thecable.ng/nigeria-and-the-price-of-sovereign innumeracy 25th 2024.

Olanrewaju, J. S. & Olorunkanmi, O.J. I. (2020). Hegemonic rivalry in peripheral region: An assessment of Nigeria and South Africa's role in African politics. In O. Ogunnubi & S. Oyewole (Eds). Power politics in Africa: Nigeria and South Africa in comparative perspectives (pp. 96-106). *UK: Cambridge Scholars Publishing*.

Osakwe, C.C. (2017). The Nigeria led ECOMOG military intervention and interest in the Sierra Leone crisis: An overview. *Mediterranean Journal of Social Sciences*. 8(4), 107-116.

Piccolino, G. (2020). Regional integration. In *The Routledge handbook of EU-Africa relations* (pp. 188-201). Routledge.

Prys, M. (2008). Region, hegemony and power: India and South Africa compared. D.Phil Thesis, University of Oxford, Oxford, United Kingdom.

Punch (2023, November 21). Nigeria drops to seventh on OPEC production list. https://punchng.com/nigeria-drops-to-seventh-on-opec-production-list/

Ramontja, N., & Akinola, A. O. (2024). SADC peacekeeping missions and the quest for regional security: From Congo to Mozambique. In *Development and Regional Stability in Africa: Unlocking Potential* (pp. 131-151). Cham: Springer Nature Switzerland.

Saliu, H.A. (2006). Essays on contemporary Nigerian foreign policy, Vol. II. Vantage Publishers Ibadan.

Schirm, S. A. (2006). Leadership in regional and global politics: Why do emerging powers (sometimes) fail to reach their goals? In. Institute for Global and Area Studies (GIGA) Workshop on The Rise of (New) Regional Powers in Global and Regional Politics, 11-12, December 2006. Hamburg: Germany.

Shumba, M. (2024). Armed Conflict as an 'Undoing'Force in Regional Integration and Its Impact on the Consolidation of AfCFTA Development Mission. *Polish Political Science Yearbook*, (1 (53)), 179-189.

Union of International Associations (2018). Year Book of International Oganizations (2018- 2019), Vol 6. Retrieved from https://www.goodreads.com/book/show/42792497- yearbook-of-international-organizations-2018-2019-volume-5

Verhoeven, H., & Gebregziabher, T. N. (2024). From imperial power to regional policeman: Ethiopian peacekeeping and the developmental state. *International Affairs*, *100*(3), 1067- 1088.

Washaya, M. (2024). Operationalisation of the Abuja treaty (1991) and the impact of economic regionalism on the African Union's peace and security architecture. In *Development and Regional Stability in Africa: Unlocking Potential* (pp. 33-50). Cham: Springer Nature Switzerland.

World Bank (2023a). Population, total. Retrieved from https://data.worldbank.org/indicator/SP.POP.TOTL

World Bank (2023b). GDP Ranking 2022. Last updated 30 June 2023. Retrieved from https://datacatalog.worldbank.org/search/dataset/0038130

Yarbrough, B. V. & Yarbrough, R. M. (1992). Cooperation and governance in international trade: The strategic organizational approach. Princeton: Princeton University Press

Niger Delta Women Adaptive Measures against Oil Spillage: Interventions & Effectiveness

Victoria N. Azu Ph.D

Department of Political and Administrative Studies, Faculty of Social Sciences, University of Port Harcourt, Nigeria
Email: victoriaazu360@gmail.com
https://doi.org/10.57233/gijmss.v7i3.10

Abstract

The study examined the plight of Niger Delta women living in oil-spills polluted environment. As survival strategies, these women adopted various approaches such as protest, community- based women organisations, appeals etc, to seek government interventions. The study was necessitated by the fact that despite many years of agitations against environmental degradation and its socio-economic impacts on the residents, no remarkable improvement has been seen in the living conditions of the Niger delta women who bear most of the brunt of the oil spillages, given their relationship with the environment. The aim of this study is to investigate the effectiveness of these interventions and coping strategies adopted by these women against the challenges of oil spillages. The Environmental Kuznets Curve theory (EKC) was adopted to describe the connection between economic activities and environmental depletion. Data was generated from primary and secondary sources. While oral interview was used to obtain primary data, secondary sources include documentaries, books and other online publications. Interviews were conducted on 12 women and 6 men from each part of the Niger Delta mostly affected, especially Ogoni in Rivers, Akwa Ibom and Delta states. Findings show that although protests, advocacies and interventions have taken place, these strategies have left little or no improvement in the living conditions of Niger Delta women. The study therefore concludes that governments, NGOs, Oil companies etc, need to be decisive in adopting more critical and rewarding interventions, to salvage lives in the oil-bearing communities. Among others, the study recommends as follows: Government should focus on service sector economy to reduce pressure on the environment; compensation should follow clearer legal guidelines, equitable compensation processes, and active community engagement to restore livelihood, also oil sabotage should be controlled by engaging perpetrators in meaningful economic activities; there should be functional legislation against criminal elements sabotaging interventions, Oil companies should prioritise compensations to women; and support them with skills acquisition, vocations, while community properly gets engaged for resilience etc.

Keywords: Effectiveness, adaptive measures, Niger Delta women, oil spillage, interventions

1.0 Introduction

The Niger Delta region is part of the present-day South-South geopolitical zone located in Southern part of Nigeria. The region is established as the Africa's

largest delta, existing within an approximate enclave of 70,000 square kilometers, and with about one-third of it made up of swamps, constituting the third largest world mangrove forests (Gabriel, 2004). The Niger Delta region is recognized as the largest producer of oil resources in Nigeria, with its several forms and levels of environmental issued associated with its operations such as water, land, air pollution, etc. A number of these issues have been attributed to human and exploration activities leading to destruction of biodiversity, flooding and erosion of coastal and river banks, oil spillage, gas flaring, as well as noise pollution. Other problems include land degradation and loss of soil fertility. The history of oil spills in Nigeria dates back to 1908 when Nigeria experienced the first oil spillage in Araromi, part of the present Ondo state (Tolulope, 2004, cited in Kadata, 2012). Since the discovery of oil in commercial quantity at Oloibiri, Bayelsa state in 1956, and exploration started in 1958, oil spillage has become an existential reality associated with oil exploration activities in the Niger delta region. In July 1979 the Forcados tank 6 Terminal in Delta state incidence spilled 570,000 barrels of oil into the Forcados estuary polluting the aquatic environment and surrounding swamp forest (Ukoli, 2005)

Thus, in the oil-abundant Niger Delta region of Southern Nigeria, there is a growing concern over the impact of crude oil spills on human health and the environment; Ogoniland being the epicenter of these disturbing occurrences; 261 human settlements covering nearly over 1,000sq km (385sq miles) (Ekpali; 2022). Ekpali (2022) further stated that between 1976 and 1991, more than two million barrels of oil polluted Ogoniland in 2,976 separate oil spills as Nigeria became one of the world's largest oil producers. Similarly, in 2020 and 2021 alone, Nigeria's National Oil Spill Detection and Response Agency (NOSDRA) documented 822 combined oil spills totaling 28,003 barrels of oil discharged into the environment. The most disturbing aspect is that the polluted environment is the centre of economic activities on which the Niger Delta women depend for livelihood through farming, fishing, gathering of sea food, lumbering and gathering firewood for domestic and commercial use. Thus, these women become alienated from their environment as their means of survival has been separated from them, subjecting the helpless women to perpetual poverty. Therefore, the objective of this study is to investigate the strategies adopted by Niger Delta Women in coping with the challenges of environmental degradation caused by oil spillages; and the effectiveness of these strategies and interventions for policy recommendations.

2.0 Literature Review

Niger Delta Women

In a report on the gender dimension of Niger Delta struggle for resources, Okon (2002) described Niger Delta women as predominantly peasants, fishers and farmers who sustain themselves and families from their farming produce and fishing ponds. She noted that these women have been the breadwinners of their respective families as confirmed by most men in the Delta. It is sad to gather from the report that women have been the major victims of the exploitative activities of the Nigerian State and the oil multinational companies. Their vulnerability emanating from the loss incurred through cash crop exploitation, loss of arable farmland and water resources. Okon (2002) decried the plight of women who suffer psychological, emotional and physical torture arising from the repressive policies of the government and the oil companies; as well as military operations. In addition, they suffer loss of loved ones during military operations employed by the federal government to stop any resistance against exploitation and environmental degradation.

Gabriel (2004) noted that the economic activities of Niger Delta women are largely determined by their ecology. Women in the Niger Delta engage themselves in mainly fishing and gathering of seafoods, fuel wood for domestic and small-scale food processing as well as income generation. gin distillation from raffia palm trees (Raphia vinifera), collection of African mango seeds, Ogbono, snail, mat weaving etc.

Adaptive Measures

Law Insider (2024) refers to adaptive measures as any adjustment, whether passive, reactive or anticipatory that may be employed to ameliorate the anticipated adverse effect related to flood events. The study provided the following examples: installation of water conservation features and appliances; and planting of xerophytic landscaping.

With respect to oil spillage, the International Enviroguard (2023) suggested the following mitigating measures in an event of oil spillage: i) identify the source of the leakage and stop it if possible; ii) use of proper personal protective equipment (PPE), iii) isolate the affected area, iv) avoid any oil from getting into storm or sewer drains, v) clean up the spills using a combination of spill kits, sorbet pads, granular oil sorbet, and other tools; remove any oil - and any tools used to clean

up through appropriate waste vendor or environmental harmful waste containers and comply with any federal, state, or other local laws regarding reporting of oil spill. These requirements are however dependent on the quantity of oil spilled and its impact on the immediate environment.

Oil Spillage

Oil spillage refers to outflow of petroleum onto the surface of a large quantity of water. It can also refer to the release of oil into the environment, either leaked or discharged from a ship, lorry, truck etc. or accidental release of oil into a body of water from offshore drilling rig, or underwater pipeline, often constituting a hazard to marine life and the environment. Oceanic oil spills resulting from increased exploration and production of petroleum products in different continents; unintended or careless release of used gasoline solvents and crankcase lubricants by industries and individuals, as well as natural seepage from the ocean floor, add oil to the world's waterways at the rate of 3.5 million to 6 million metric tons a year(Collins dictionary, Cambridge dictionary & Encyclopeadia Britannica, 2020); cause an unprecedented environmental degradation. Periodic incidents of oil spills and related activities in Ogoniland, from 1958 as recorded by Aljazeera news (2022) are presented below:

i. **1970 -** The first documented oil spill occurred in the Boobanabe at Shell's Bomu oil well
ii. **April 26- May 7 2001 -** occurred in Yorla community, igniting fire that consumed crops and medical herbs of commercial value.
iii. **February 2003 -** explosion occurred at Shell's moribund Yorla oil field, causing another major oil leakage.
iv. **August 28, 2008 -**A huge oil spillage happened in Bodo community attributed to a faulty Trans-Niger Pipeline, lasting for about one month, estimated to about 4,000 barrels
v. **April 12, 2009 -**a spill ignited fire occurred at the Bomu manifold where several Shell pipelines intersected at Kegbara Dere, Ogoniland, causing oil to flow into the swamp. The fire lasted for 36 hours.
vi. **August 2011 -** Shell owned up for the twofold bursting of the Bodo-Bonny Trans-Niger Pipeline that triggered two huge oil spillages in Bodo. The Trans-Niger transmits up to 180,000 barrels of oil a day through the community.
vii. **May 7, 2012 -**A spill occurred in Kegbara-Dere, around 200mtrs from Bomu manifold.

viii. **June 2013-** A blast occurred at a Shell pipeline, dropping 6,000 barrels of crude into the streams and rivers in Bodo. The indigenes of Ogoni swore not to permit oil exploration to take place again in their communities until the challenges of environmental pollution have been addressed.
ix. **November 3, 2015 – After f**orty-five years of oil spill at Bomu, researchers discovered darkened soil and films of oil on the water even when Shell claimed to have restored the site two times in 1975 and 2012.
x. **June 2, 2016 –** Former Vice president of Nigeria - Yemi Osinbajo inaugurated a clean-up exercise in Ogoni land, together with the UN Deputy Secretary-General Amina Mohammed, the then Minister for environment.
xi. **March 25, 2017 -**Shell accepts to remediate Bodo, which was polluted from two spills in 2008.
xii. **April 18, 2019-** The Sun Newspaper **(2019)** recorded loss of two lives from oil spills in the Kegbara-Dere community.

Causes of Oil Spillage

Oil spillage can occur as a result of leakage from ships, well, pipeline and other haulers of oil, it can also be caused by accidents on tankers, refineries and drilling rigs. Poor storage facilities, massive transportation, inadequate regulation, human mistake and carelessness, breakdown of equipment, natural disaster, illegal bunkers etc (Vedanta; 2024). The United Nations Environmental Program also attributed most of the major oil spills to broken pipelines, sunk or grounded tanker, wrong drilling operations, vandalism from oil thieves and lack of pipeline maintenance (UNEP, 2021)

Adebayo (2023) has also reported what he described as 'a new oil spill at a Shell facility' in Nigeria. The National Oil Spill Detection and Response Agency (NOSDRA) told the Associated Press that the spill came from the Trans-Niger Pipeline operated by Shell that crosses through communities in the Eleme area of Ogoniland, a region. It has been described as "one of the worse in the last 16 years in Ogoniland'. The spill has contaminated farmland and a river, upsetting livelihoods in the fishing and farming communities in part of the Niger Delta, which has long been depleted by the impacts of environmental degradation caused by the activities of oil industry.

Environmental support for Women's Economic Activities

The ecology of the Niger Delta region is characterized by coastal ridge walls, mangrove and fresh water swamp forest and lowland rain forest. These features

support habitation for different types of plants, fish, reptiles, mammals and minerals. The Niger Delta rural women largely depend on this environment for their livelihood especially in fishing and harvesting of seafood such as shrimps, periwinkles, crab, fish, snail, shell fish etc,. The mangrove forests around the creeks are equally steady sources of wood fuel for domestic and small-scale food processing, for rural income. In the tropical rain forest, women's major economic activities are farming, collection of snails and other nontimber products, weaving, fuel wood gathering, tapping of rubber trees, etc. Fishing in this zone is practiced on a very low scale, mainly for subsistence (Gabriel; 2004). Thus, any form of environmental problem invariably speaks disaster in the livelihood of the Niger Delta women.

Impacts of Oil Spill – Environmental Degradation

Damage to aquatic life

When spill occurs, a moderate amount of oil sinks into the ocean and damages the health of the aquatic life, and contaminates the natural habitat of the ocean, and thus affects the entire food chain of the ecosystem, causing severe damage to birds and sea animals. In Bayelsa state, Oluwafemi (2013) encountered one Madam Grace James, a fisher woman from Bassambri community, Nembe LGA Bayelsa state. Grace lamented how the recurring oil spills around the Nembe waters have resulted in the migration of aquatic animals, especially fish. "Because of the frequent oil spill, I no longer have the keen desire to go fishing again, despite fishing for many years," she said; but I don't have another alternative". She also lamented that "when the oil companies brought relief materials, we who engage in fishing as a business, we don't get such materials".

Human Health

Speaking on the impact of oil spillage on human health, Ordinioha and Brisibe (2013) noted that oil spills contaminate ocean animals, consumption of these contaminated animals poses severe health challenge to humans; inhaling chemicals from spilled sites can also cause bronchia problems on humans. "Children in the Niger Delta grow up drinking, cooking and washing with polluted water. They eat contaminated fish and vegetables. They suffer from breathing problems. A 2017 study showed that babies in Nigeria were twice as likely to die in the first month of life if their mothers were living near an oil spill before becoming pregnant" (Friends of the earth int;l, 2019)

Similarly, Anthony (2023) has reported the case of oil spillage suffered by the indigenes of Ibeno in Akwa Ibom state who lamented water contaminated by oil spills, making it difficult for them to have safe drinking water. Consequently, those who couldn't afford a sachet of pure water at N100 drink the oily water from stream. Anthony re-echoed how a woman known as Rhoda equally recounted how she lost her pregnancy two years ago when she was working in Ibeno as a result of inhaling polluted air as confirmed by her doctor.

Economic Impact

Oil spill leaves considerable amount of economic and ecological impact on the environment. One of the economic activities most impacted by oil spills is fishing. Commercial fishing is suspended following major oil spills. Among other reasons, this is done to avoid damaging fishing vessels and equipment, and to prevent the catch and sale of likely contaminated fish and other sea food. Proceeds from halted farming due to degraded land also leave an economic vacuum among the rural women who depend on agriculture for their livelihood.

Land Degradation

Oil spillage results in massive degradation of land, affecting soil fertility as well, limits access to agricultural land. This condition is worsened by the traditional practices that inhibit women from land ownership and inheritance in Africa, despite the fact that the bulk of agricultural activities are carried out by women. Thus, land becomes very critical for the economic prowess of the Niger Delta women. The little land they could access through their husbands and male relatives and the crops planted therein, become contaminated by oil spills, leaving a huge gap between livelihood and the environmental conditions in the Niger delta region of Nigeria (Gabriel; 2004).

Damage to Forest plants

Oil spills destroy forest and affect the production of timber and other nontimber forest resources such as nuts, bamboo, grapes, apples, mushroom, medicinal plants, resins, honey, as well as aquatic animals, on which the rural women also depend on for their daily income and food (FAO; 2000).

Preventing Oil Spillage

The International Enviroguard (2023) noted that oil spills mostly occur in facilities where there is either above ground or underground storage tanks. She identified some preventive strategies as follows: regular inspection of any vessels,

tanks, or transfer operations; outlining specific rules and regulations for oil storage, transfer, and containment; formulating a detailed prevention and oil spill response plan; regular training and education for workers; possessing the right cleanup equipment on hand in the event of a spill etc

The figures below show some oil spill sites in the Niger Delta Region.

Fig. 1: Showing oil swirls in the river water, Bodo city

Source: https://www.foei.org/a-journey-through-the-oil-spills-of-ogoniland/ 2019

Fig 2: showing wooden fishing boats sinking into the oily mud, Bodo City (2019)

Source: https://www.foei.org/a-journey-through-the-oil-spills-of-ogoniland/ **2019**

Fig.3: showing Goi community struggling to fish (where once there was plenty)

Source: https://www.foei.org/a-journey-through-the-oil-spills-of-ogoniland/ (2019

Fig. 4: ExxonMobil record another oil spill in Ibeno communities in Akwa Ibom state

Source: https:/www.pmnewsnigeria.com/ 2016

Fig. 5: Oil spill in Itshekiri community in Delta State

Source: vanguardngr.com…/

Fig. 6: Mangrove trees in Nembe community drying up due to oil spills

Source: thecable.ng/inside

Fig. 7: Members of Nembe community paddle a canoe across Santa Barbara River amidst oil spill,

[Temilade Adelaja/Reuters] 2021

Table 1: Showing the record of oil spill incidence between January 2018 and July 2020

States	Abia	Akwa Ibom	Bayelsa	Cross River	Delta	Edo	Imo	Ondo	Rivers	Others	Total
No.of Spills	31	70	164	0	229	22	43	2	527	19	1,107
% of Incidents	2.8 %	6.32 %	14.8%	0.00 %	20.69 %	1.99 %	3.88 %	0.18 %	47.67 %	1.72 %	100 %

Source: https://www.oilspillmonitor.ng/#/198368.2020-2585998

Table 2: showing multiple spills in the Niger Delta region in 1 -10year period

NIGERIA

Multiple oil spills in the Niger Delta region

Oil was first discovered in commercial quantities in 1956 in Nigeria, and there have been multiple oil spills in the Niger Delta since then. In the last ten years, there have been 9,828 episodes documented, according to the government's spill detection agency.

Year	No of Spills	Major Spills	Spills with no Estimate	Spills with no JIV*
2011	1059	2	359	218
2012	1135	4	391	179
2013	1666	1	762	450
2014	1521	8	540	284
2015	920	4	268	158
2016	684	5	173	129
2017	599	6	178	73
2018	699	0	154	104
2019	723	5	192	70
2020	440	0	90	35
2021	382	2	122	33

*Join Investigation Limit

Source: nosdra.oilspillmonitor.ng

@AJLabs AL JAZEERA

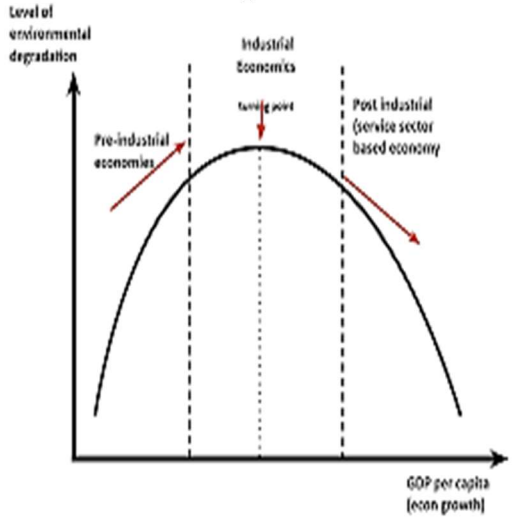
Table 1 shows that all the states of the Niger delta region have at one time or the other experienced oil spillage. This condition has adversely affected the indigenous people whose entire livelihood is dependent on farming and fishing; including numerous health issues reported by the indigenes of these communities. It is unfortunate that this ugly reoccurring incident has reduced the life expectancy of the victims to only forty years; ten years lower than the national life expectancy average (Ekpali; 2022). This condition has subjected these helpless women to perpetual impoverishment, frustration and unhealthy psychological disposition.

2.1 Theory Framework

Environmental Kuznets Curve (EKC)

Simon Kuznets developed a theory known as Kuznets Curve in his article "Economic Growth and Income Inequality" (cited in Bodin, 2022) where he explored if income distribution varies according the growth of a country's economy. He coined a hypothesis that with lower rate of economic growth, there is a corresponding rise in economic inequality. However, with increase in economic growth up to a point he refers to as 'turning point', economic inequality begins to decrease. Later, Grossman & Kruger developed the Environmental Kuznets Curve (EKC) in their study of the impact of North American Free Trade Agreement (1991); basically, looking at the link between the level of environmental degradation and economic activity. They thus, applied the EKC further in "Economic Growth and the Environment" where they found the inverted U-shape of relationship between environmental degradation and economic growth. They posit that with lower levels of income per capita in a country, the country experiences a higher degree of environmental degradation. At a turning point however, with increased income per capita, there is a declining level of environmental degradation (cited in Bodin; 2022). This is demonstrated in an inverted U-shaped graph below:

Figure 8: Showing the inverted U-shaped Kuznets curve



Graphical illustration of the Environmental Kuznets Curve
(Source: EconomicsHelp)

Clearly from the above, the curve is divided into three 'phases' the pre-industrial economies, industrial (which includes the turning point) and post-industrial economic stages respectively. A positive relationship between GDP and environmental degradation shows in the pre-industrial phase. At this stage economic activities are on top gear increasing industrialisation, which invariably raises emissions. The target at this stage is to improve conditions of living, so environmental destruction is not a concern in this stage. The second stage shows the peak of industrialisation and gets to a turning point. At this level, the relationship between GDP and environmental degradation gets to the peak and changes from a positive relationship to a negative one with a high level of environmental degradation. At this level the country experiences stabilisation in its industries and income, and begins to develop technologies to reduce emission and environmental degradation. This stage is a prelude to the third and last phase of the EKC which is the post-industrial economic phase. At this stage, there is a strong negative correlation between GDP and environmental degradation at the third stage. Thus, an increase in a country's income produces a corresponding decrease in its emissions. This is because, at this stage, the economy has moved from an industry sector to a service sector, producing lower emissions. Besides that, more advanced technologies that help reduce emissions have been developed at this stage.

Pettinger (2019) thus, summarises the theory, noting that the environmental Kuznets curve submits that economic development originally leads to a decline in the environment, but after a certain level of growth, a society begins to improve its relationship with the environment which then reduces the degree of environmental degradation.

However, critics have questioned the empirical validity of the EKC, claiming that EKC should be supported not only by theory, but by empirical data and tests as well; hence, Ekins (1995), Copeland and Taylor (2004) argue that there is very little evidence to support the EKC theory, claiming that a causal relationship between economic growth environmental degradation is vague; They argue that there are more important factors that affects environmental quality other than just income per capita; while Stern (2004) pointed out that due to recent technical developments, simultaneous reduction in emission has occurred both in poorer and richer countries, rather than being determined by income per capita.

3.0 Methodology

The study explores both primary and secondary sources. Oral interview was used to obtain primary data, while secondary sources include documentaries, books and other online publications. Interviews were conducted on 12 women and 6 men from the part of Niger Delta mostly affected by oil spillages especially Ogoni, Akwa Ibom and Delta. Many respondents were not recruited for interview because basically the same situation occurs in all the Niger Delta regions. Questions were directed to elicit information on agency or government interventions and how effective those interventions have been in impacting the lives of these women.

4.0 Findings

Responses and Interventions

In response to the above environmental menace, Niger Delta women formed themselves into community-based associations through which they voice their demand via consultations and sometimes protests under NGOs seeking government interventions.

Protests

Most recently, in February 2024, women of the Niger delta staged a peaceful protest against the Shell's intention to sale off their on-shore assets to investors. Thus, some community-based women organisations and environmentalists under the umbrella of Alauchi Women Development Initiative, Mba Okase Women, Eleme, Abua Women Association, Coalition of Ogoni Women Development Initiative, Pius Dukor Foundation, Kallop Environmental Centre, led by Kebetkache Women Development & Resource Centre, matched to the Rivers State government house in a peaceful protest expressing their dissatisfaction with Shell's announcement to sell off their on-shore assets to investors without engaging the communities (that have suffered decades of environmental destruction) in consultation or any adequate compensation paid. The group therefore requested that the Oil companies; SPDC, Nigeria Agip Oil Company (NAOC), Exxon Mobil Nigeria Limited, and Total Energy Nigeria Limited, prepared to sale all their onshore assets should redeem the environment before the sales. "**NO DIVESTMENT WITHOUT ECOSYSTEM RESTORATION!** the women demanded.

During the UN Women's event Leaders forum on the future women want, Usikpedo-Omoniye (2012), under the umbrella of the Niger Delta Women's

movement for Peace and Development (NDWPD), pointed out that oil operations in the Niger delta, together with other environmental issues have left a cumulative impact on the entire ecosystem of the region. She suggested that both the federal government of Nigeria and the multinational oil companies operating in Odi, Jesse and the entire Niger-Delta region should make intensive efforts at providing potable water in Odi, and clean up the environment continually polluted by the diverse oil exploration operations carried out by these multinational companies.

Decrying the degree of degradation in the Niger delta rightly described as "An Environmental Genocide", the Bayelsa State Oil and Environmental Commission (2023) informed that Non-governmental agencies, and the oil companies themselves, have also contributed efforts to control the destruction of biodiversity in the Niger Delta. The commission revealed that in November 1981, an association of 11 oil companies operating in the Niger Delta, including the Nigeria National Petroleum Corporation (NNPC), formed the Clean Nigeria Associates (CNA) to help prevent and control oil spills in the region. The Shell oil company also established the Niger Delta Environmental Survey (NDES) in collaboration with all members of the Oil Producers Trade Section (OPTS) of Lagos Chambers of Commerce. The NDES was jointly funded by OPTS, Shell, and former Rivers and Delta States governments. The main purpose of establishing NDES was to provide the following:

i) a comprehensive description of the Niger Delta area, identifying its ecological zones, boundaries and its natural resources; ii) an integrated view on the state of the Niger Delta environment and its relationship with the local people; iii) an indicative plan for the development and management of the Niger Delta area; iv) an analysis of the causal relationships between land use, settlement patterns, industry and the environment, to provide a base line for future development planning.

Other Non-governmental organizations (NGOs) such as 'Living Earth Nigeria Foundation', 'Our Niger Delta', and 'Environmental Rights Action', embark on public awareness sensitization and conservation of projects in the area; and working together to stop further destruction of the Niger Delta's delicate ecosystem.

Government

In response to the environmental degradation in Nigeria, government has established comprehensive policy and laws guarding against environmental and

biodiversity destruction. This policy was captured in 1999 Constitution of the Federal Republic of Nigeria. Pursuant to section 20 of the Constitution, the State is empowered to protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria. In addition, section 2 of the Environmental Impact Assessment Act of 1992 (EIA Act) provides that the public or private sector of the economy shall not undertake or embark on or authorize projects or activities without prior consideration of the effect on the environment. In this regard, the Federal Government of Nigeria promulgated various laws and Regulations to safeguard the nation's environment. These include: Federal Environmental Protection Agency Act of 1988 (FEPA Act) repealed by the National Environmental Standards Regulation Agency (NESREA) Act 2007. The following Regulations were made pursuant to the FEPA Act: Environmental Protection in Effluent Limitation; Pollution Abatement in Industries and Facilities Generating Wastes; and The Oil Pipeline Act of 2004. The NESREA Act allows each State and Local Government to set up its own agency for the protection and improvement of the environment within the State. Each State is also empowered to make laws to protect the environment within its jurisdiction. It is however unfortunate that these laws cannot be implemented because most state and local-government institutions involved in environmental resource management lack funding, trained staff, technical expertise, adequate information, analytical capability and other prerequisites for implementing the comprehensive policies and programs. (Bayelsa state oil & Environmental Commission.; 2023)

Oil Companies

The Oil Pipeline Act of 2004 makes it liable for the holder of an oil mining or exploration lease to 'pay compensation to the owners or occupiers for any damage' done to buildings, crops or profitable trees. This legislation includes damage 'as a consequence of any breakage of or leakage from the pipeline, or any auxiliary installation. However, the level of the compensation on offer is effectively decided on the basis of a valuation based on the Land Use Act designed to pay for compulsory purchase, rather than damage related to oil operations, as no specific formula is provided for calculation of the extent of damage. This is compounded by the fact that in most cases either the compensations do not get to those they were actually intended for, or get to them as peanuts. For instance, compensations are provided for victims in the on-going Ogoni Clean-up Project, but only very few persons who have access to those in charge or can meet their bidding benefit from the fund, as revealed by one of the

respondents on this. This has often led to violent conflicts subjecting the already traumatised women to further victimisation.

Explaining why the existing system doesn't work, (NOSDRA; 2014), pointed out that what is paid varies from place to place, with obvious unfairness, even when compensation is finally paid. NOSDRA also noted that "at present, neither the claimant nor the polluter can be held accountable for overdemanding or underpaying, since there is no real binding statute defining what is 'fair and reasonable' compensation. "Nigeria lacks a distinct compensation code which specifies the processes and methods that are to be used in compensation assessment under different circumstances. Furthermore, the enabling legislation on compensation – the Land Use Act – largely ignores the issue of pollution and its environmental damage... NOSDRA therefore concludes that the current situation regarding oil spill compensation in Nigeria is extraordinarily complex, and hence needs to be re-examined for reform.

From responses gathered during interviews conducted, responding to the question of whether any compensation is being paid to the victims of Ogoni oil spills during this Ogoni Clean-up exercise, one of the respondents revealed that 'yes compensation is going on in this Ogoni Clean up exercise, but only a few persons are receiving something', some form of training and grants were also given to only very few of them'. The second respondent pointed out that the authorities paying the compensation use some forms of gimmick to deny some persons access to compensation. For instance, they were asked to provide their voter's card or NIN as qualifying criteria to receive compensation. Apparently, a whole lot of people especially very rural women who were most affected but could not provide any of these requirements are denied compensation.

On the question of how much were paid to victims, the third and fourth responded said that her brother was paid N500,000.00 after several visits from Port Harcourt to their community, and that 50,000.00 was collected from him as appreciation to the person who helped him collected the money. By the time all his transport fares and other documentary expenses were deducted from the money, one can imagine what an amount less than N450,000.00 can do for someone (whose source of livelihood and entire physical possessions have been destroyed by oil spills) in Nigeria today.

On the question of how these victims of oil spillage survive in the face of their difficulties, the respondent informed that women usually travel far distances to other communities and states not affected by spillage to buy fish, pick periwinkle and other sea food to roast and sale. Sometimes they stay for days in other communities to be able to buy and roast the fish before coming home to sale. Adding all the cost of transport and other logistics, makes fish and other sea food quite expensive.

Discussion

Niger Delta women though still living in highly degraded environment, finding it difficult to eke out a living, still manage to adapt by travelling to other communities to seek means of livelihood, forming themselves into community-based organisations, and seeking interventions. Although interventions come from government through environmental protection laws, oil companies, community women organisations and NGOs engaging in protests, agitations and other forms of advocacy including international collaborations, to find solutions to the plights of Niger inhabitants, the Niger delta women have not experienced any meaningful improvement in their livelihood. In other words, these interventions have not been effective.

From the perspective of the Environmental Kuznets Curve (EKC) used in this study, we learn that the degree of environmental degradation suffered by Niger Delta inhabitants since 1958 exploration began in Nigeria shows that Nigeria has attained the turning point of the inverted U shaped graph, if development is prioritised in the governance system, Nigeria would have developed from industrial to a service sector economy, providing maintenance and developing service industries and technologies that can reduce the degree of environmental degradation as explained in the theory; and yield positive effect. It is however very unfortunate that the Nigerian state watches the 'goose that lays its golden eggs' to continue to grapple with this level of degradation and dehumanisation without decisive effort towards environmental sustainability.

5.0 Conclusion and Recommendations

It is no longer news that oil spill has taken its toll on livelihoods in the Niger delta region, causing high magnitude insecurity to environmental and human life. The degradation caused the environment by oil spills have contaminated and destroyed the mangrove forests, water bodies and the entire biodiversity of the Niger Delta. The Niger Delta mangrove forest known as the third largest in the world, and the

largest in Africa among others provide medicines, fisheries, wood for fuel and construction as well as shelter for the rural inhabitants. Thus, the survival of the endangered species such as Delta elephant, the white-crested monkey, the river hippopotamus and crocodiles, is increasingly being threatened by oil exploration and exploitation activities. Although interventions have come from government, NGOs, Oil companies etc, their efforts have not created any meaningful impact especially in the lives of the women who are always the most vulnerable. To secure the lives of these women and the future of their children, it has become expedient that governments, NGOs, Oil companies etc need to do something different and more critical than their earlier actions, to yield new results more rewarding than previous interventions. Government action at this level is imperative because the mistakes of today will definitely tell on the success level of tomorrow. Therefore, sustainable environmental action taken today is the key to fighting the challenges of the future. From the findings of the study, the following policy actions are recommended:

Government should focus on service sector economy to reduce pressure on the environment; and develop industrial technology that can improve oil exploitation activities, oil pipe maintenance and haulage management to reduce spills. Part of this strategy should involve proper inspection of oil haulage tankers to certify their condition before oil is loaded;

It is important that oil theft and sabotage are controlled by engaging those involved in this act into meaningful economic activities that will divert their attention from pipeline vandalization that often leads to oil spills.

Oil companies should ensure that women are adequately compensated as a matter of precedence; government should also support women to restore their environment, rehabilitate them to ensure sustainable future for them and their children. In addition to financial and infrastructural support, skills acquisition, value re-orientation and training can go a long way to re-align the women.

The analysis of compensation issues related to oil spills in the Niger Delta exposes several critical weaknesses in the existing framework. Addressing these weaknesses requires a multi-faceted approach that includes clearer legal guidelines, equitable compensation processes, and active engagement with affected communities to foster meaningful change and restore the livelihoods of those impacted by oil operations.

There should be a decisive legislation against criminal elements high-jacking the compensation process, making it difficult for victims to access their reimbursements.

Government should establish new agencies or strengthen existing ones to re-enforce the environmental laws; states should equally be empowered through financial and human capital to be able to enforce these laws. The creation of regional spill response centres along coastlines closer to these spill sites can also help to manage oil spill problems in the Niger Delta.

It is also recommended that strategies such as educating communities on the risks of oil spills, response procedures and likely consequences on the environment and livelihoods, and establishing emergency response team within communities, could help foster community engagement for resilience and empowerment.

- Government should work in collaboration with local and international NGOs, Universities and research institutes, to develop strategies that can control cases of oil spills and their consequences.

References

Adatu, A. K. (2012). Oil exploration and spillage in the Niger delta of Nigeria; *civil and environmental research*, vol 2.3

Adebayo, T. (2023). Oil spill from Shell pipeline fouls farms and river in a long polluted part of Nigeria. Retrieved from: https://apnews.com/article/nigeria-oil-spill-shell-niger-delta.

Ahiakwo, P. (2024). Niger Delta women protest Shell's on-shore sales. Retrieved from: https://www.energyfocusreport.com/niger-delta-women-protest-shell-on-shore-sales/…

Anthony, L. (2023). Oil spills: Akwa Ibom oil community battles deadly polluted water. Retrieved from: https://www.dailypost.ng/2023.

Aljezeeranews (2022). Multiple oil spills in the Niger Delta. Retrieved from: https://www.nosdra.oilspillsmonitor.ng

Aljezeera news (2022). Timeline: Half a century of oil spills in Nigeria Ogoniland. Retreived from: https://www.aljazeera.com

Bayelsa State Oil and Environmental Commission (2023). An environmental Genocide: counting the human cost of oil in Bayelsa Nigeria Retrieved from: https://www.report.bayelsacommission.org

Bodin A. (2022). The relationship between economic growth and environmental degradation Retrieved from https://www/diva-portal.org/smash/get/diva2:1676865/FULLTEXT01.pdf

Copeland, B.& Taylor, M. Scott, M. (2004). Trade, growth, and the environment. *Journal of Economic Literature:* JSTOR, 2004. Retrieved from https://www.jstor.org/stable/3217036?seq=1

Ekins, P. (1995). The Kuznets curve for the environment and economic growth: examining the evidence. Environment and Planning A: Economy and Space: *SAGE journals*, 1997 Retrieved from: https://journals.sagepub.com/doi/pdf/10.1068/a290805

Encyclopedia Britannica (2020). Oil spill. Retrieved from: https://www.britannica.com/science/oil-spill

Egbehuje, E. (2021). Niger delta residents protest against month-long oil spill. Retrieved from: https://www.aljezeera.com/new/2021-niger-delta-youths-protest-against-month-long-oil...

Environmental Law Research Institute (2021). Environmental policy and its enforcement in. Nigeria. Retrieved from: https://www.elri-ng.org/wp-content/uploads/2021/07/environmental-policy-and-its-enforcement.pdf

FOA (2000). Global forest resources assessment 2000. Retrieved from: https://www.fao.org/3/Y1997E.

Gabriel, A.O., (2004). Women in the Niger delta: Environmental issues and challenges in the third millennium. Retrieved from: https://www.semanticscholar.org

Grossman, Gene M. & Krueger, Alan B., Economic Growth and the Environment. NBER Working Paper 4634: NBER, 1994. (https://www.nber.org/papers/w4634)

Int'l Enviroguide (2023). Oil spill prevention & preparation. Retrieved from: https://www.int-enviroguard/blog/oil-spill-prevention-and-preparation

Johannes, L. (2012). An address presented by the National president, Niger delta women's movement for peace and development (NDWPD) at the UN women's event leaders forum on 'the future we want- shaping the future int'l development framework Janeiro, Brazil
Retrieved from: https:www.UNwoen.org

Law Insider (2024). Adaptive measures definition. Retrieved from: https://www.lawinsider.com/dictionary/adaptive-measures

NOSDRA (2014). Towards a new oil spill compensation system in Nigeria. Retrieved from: https://www.stakeholdersdemocracy.org/2015/05

Oluwafemi, A. (2023). How recurring oil spills rub Bayelsa fisher women of their livelihood. Retrieved from: https://www.thecable.ng/inside-story-how-recurring-oil-spills-rub-

Okon, E. (2002). A report of the Niger Delta women for justice (HDWJ) on the delta women siege on American oil copany, Chevron-Texaco in delta state of Nigeria. Retrieved from: https://www.laohamutuk.org

Ordinioha B. & Brisibe S. (2013). The Human Health implications of crude oil spills in the Niger Delta, Nigeria: An interpretation of published studies; *Nigerian Medical Journal.* 54(1): DOI: 10.4103/0300-1652.108887. Retrieved from: https://www.researchgate.net

Ozegbe, K. (2020). Statistical reflection of crude oil spill incidence and management in Nigeria Retrieved from: https://www.oilspillmonitor.ng/#/198368-2020-2585998

Partow, H. & Radka M. (2021). How to manage the damage from oil spills. Retrieved from: https://www.undp.org

PM News (2016). Fresh oil spill hits Ibeno communities in Akwa Ibom state. Retrieved from: https://www.pmnewsnigeria.com2016/12/12/fresh-oil-spill-hits-ibeno-communities-in-akwa-ibom/

Pettinger, T. (2019). Environmental Kuznets curve. Retrieved from: https://www.economicshelp.org/blog/14337environmental-kuznets-curve/

Stern, D.I. (2004). The rise and fall of the environmental Kuznets curve. World Development ScienceDirect, https://www.sciencedirect.com/science/article/pii/S0305750X04000798

Sun, J.W., The nature of CO2 emission Kuznets curve. Energy Policy: ScienceDirect, 1999
https://www.sciencedirect.com/science/article/pii/S0301421599000567

Usikpedo-Omoniye, C. (2012). Shaping the future international development framework. Retrieved from: https://www.unwomen.org>

Vanguard news (2022). 13 years after oil spill: fresh crises looms in Delta state. Retrieved from: https://www.vanguardngr.com/2022/10/13-yrs-after-..

Vedantu (2024). What is oil spill? Retrieved from: https://www.vedantu.com/geography/oil-spill

Outcomes of Teenage Pregnancy in Selected Rural Communities of Akwa Ibom State

[1]ESSET, Dorcas Mark, Ph.D & ABRAHAM, Ubong Evans Ph.D
[1]Department of Sociology and Anthropology, University of Uyo, Uyo, Akwa Ibom State
[2]Department of Sociology, Nigeria Police Academy, Wudil, Kano. Nigeria
Corresponding Email: ubangabraham@polac.edu.ng
Phone: +234 8037820533
https://doi.org/10.57233/gijmss.v7i3.11

Abstract

Teenage pregnancy is becoming rampant in the rural communities of Akwa Ibom State. From observation, most adolescent girls are becoming pregnant and are dropping out of school to become young mothers. Interrogation by the researchers revealed that a lot of the girls facing this problem are faced with poverty and in their quest to make a livelihood, they are exposed to sexual exploitation by men who took advantage of their vulnerability. However, the associated outcomes related to their plight were not adequately explored, which necessitated the emergence of this study. Based on this hindsight, this study examined the outcomes of teenage pregnancy in the selected rural communities of Akwa Ibom State. In-depth interview was used as a method of data collection. Purposive sampling technique was used to select 45 teenage pregnant girls (ages: 13 - 19) from three local government areas (L.G.As) of the state for data collection. The local government areas were: Uruan, Oruk Anam, and Mbo respectively. The choice of only 45 respondents was influenced by the fact that the number of teenage pregnant girls in the selected LGAs was not known. So, the researchers purposively went for 45 respondents to conveniently conduct in-depth interviews with them. Findings from the study showed that: the main outcomes of teenage pregnancy in the rural communities of Akwa Ibom State are multivariate and are the same across all rural communities. Key among the outcomes were the act of dropping out of school, economic burden, anger/non-support from parents, lack of money, non-visitation of the hospital, non-taking of drugs recommended by the hospital, and no intention to birth babies in the hospital. Consequent upon these, it is recommended that there is a need for widespread sensitization on the dangers of engaging in unprotected sex in the rural communities of Akwa Ibom State. If possible a door-to-door campaign should be organized by the government and other relevant agencies to sensitize teenage girls and their partners on the need to use condoms and other contraceptives if they must engage in sexual intercourse; otherwise, they should abstain from it.

Keywords: Teenage Pregnancy, Outcomes, Rural Communities

1.0 Introduction

Teenage age is a critical period universally. Teenage girls growing up in resource-poor settings worldwide face unique challenges as they transition to adulthood

(Kabiru, 2005). One of such challenge is the issue of teenage pregnancy which is a major problem confronting many girls in rural communities across the globe. As reported by UNICEF (2021), about 15 percent of young women give birth before the age of 18. This is worse in rural communities where the birth rate among teen girls is reported to be higher than what is obtainable in urban centers (Blackman, 2015; Bennett, DeClerque, Priscilla, Loda, and Klerman, 1997).

According to the World Health Organization (2024), 1.5 per 1000 girls aged 10 to 14 years give birth globally to children without husbands. This is a shortfall from 64.5 births per 1000 women in 2000 (WHO, 2024). However, despite this reduction in the global teenage pregnancy rate, there is still an indication that the menace is on the increase in Sub-Saharan Africa (Kassa, Arowojolu, Odukogbe, & Yalew, 2018); leading to a projection that the number of teenage pregnancies will increase globally by 2030, as the total population of adolescents continues to grow, with the greatest proportional increases in western and central, eastern and southern Africa (UNFPA, 2024; UNICEF, 2024).

According to global statistics, Sub-Saharan Africa has recorded the highest occurrence of teenage pregnancies, with childbirths to adolescent mothers accounting for more than half of all births in the sub-region (United Nations Population Fund, 2013). Reports have it that pregnancy among teenage girls of less than 18 years in the region has increased greatly in recent times in countries like Nigeria (9.2 million), the United Republic of Tanzania (3.7 million), the Democratic Republic of the Congo (3.3 million), Uganda (2.5 million) and Kenya (2.3 million) (Loaiza, 2013 cited by Omoro Gray, and Otieno, 2017). This is a pointer to what is expected in 2030 given the current projection of the teenage pregnancy rate in the world.

The factors contributing to teenage pregnancy are multi-dimensional, ranging from individual behaviour, economic, environmental, familial, traditional, and socio-cultural to religious (Ochen Chi, & Lawoko, 2019; Kassa, *et al*., 2018). Unarguably, low socioeconomic status, limited education, early sexual activity, lack of community support, poverty, increased accessibility to social media and pornographic sharing, cross-cultural influences, and decreased supervision by adults can perpetuate teenage pregnancy (Ochen *et al*., 2019). Other factors are weak moral values, lack of sexuality education, steady disintegration of the extended family system, breakdown of social cohesion, peer group influence, and the increasing number of irresponsible parents (Appiah-Sekyere & Awuah-

Nyamekye, 2012; Gould & Ward, 2015; Inyang, Makondelele, Thobile, & Makgopa, 2018).

Consequently, there are several detrimental health, psychological, and economic outcomes connected with teenage pregnancy that are disturbing and should not be underestimated (O'Brien, Chumbler, Bute, & Huff, 2015; Wilson-Mitchell, Bennett, & Sennett, 2014). These include critical maternal and neonatal outcomes such as undesirable maternal weight increase, prematurity (birth at <37weeks' gestation), pregnancy-induced hypertension, anemia, urinary tract infection, post-partum hemorrhage, mental disorders (e.g. depression), and STDs (United Nations Population Fund, 2013; O'Brien *et al.*, 2015; Spence, 2008; Forrest, 1993). Others are school dropouts (with subsequent lower educational accomplishment and reduced social prospects, including decreased lifetime earnings (abject poverty), restricted vocational opportunities, parting from a child's father, divorce or separation, and in some settings possible discrimination and denial by family or community members, violence, including suicide and homicide (UNICEF, 2008; WHO, 2012).

In response, various strategies have been adopted to deal with the challenges emanating from teenage pregnancy. One of the key strategies in addressing teenage pregnancy is the provision of pregnancy prevention information and services to adolescent girls. These include but are not limited to information regarding anatomy and the physiology of biological sex and reproduction, intimacy, body image for all adolescents (Brunner & Mattson, 2016; Martino, Elliott, Corona, Kanouse, & Schuster, 2008), and contraceptives (Bankole & Malarcher, 2010; de Castro, Barrientos, Braveman, Santelli, Place, & Eternod-Aramburu, 2018; McMiking, Lloyd, & Mrcog, 2017). Such information is provided by teachers, as well as health workers and parents who have major responsibilities toward the sexual reproductive health of adolescents (Baheiraei, Khoori, Foroushani, Ahmadi, & Ybarra, 2014; Baku, Agbemafle, Kotoh, & Adanu, 2018; Nobeluis, Kalina, Pool, Whitworth, Chesters, & Power, 2010).

However, the extent to which these services are provided for adolescent girls in rural areas is yet to be established, given the availability of sociocultural norms that do not allow parents or teachers to discuss sex education freely with adolescents (Akinkorah *et al*., 2019; Hagan & Buxton, 2012; Muhwezi, Katahoire, Banura, Mugooda, Kwesiga, & Bastien 2015, Kumi-Kyereme, Awusabo-Asare, & Darteh 2014). As a result of this, many rural adolescent girls

are left in the dark regarding sex education because of the perception that if they are exposed to such, it may enable them to engage in sex earlier and more often than anticipated (Ahinkorah *et al*., 2019).

The outcome is a high rate of teenage pregnancy in rural communities as compared to urban centres. This has attracted research from scholars in recent times who have chosen to penetrate rural areas more, in a more coordinated and multidisciplinary fashion to examine the menace of teenage pregnancy and the factors associated with it (Ayele, Gebregzabher, Hailu, & Assefa 2018; Sungwe, 2015; Izugbara, 2015; Envuladu, Agbo, Ohize, & Zoakah, 2014; Kupoluyi, 2013; Gideon, 2013; Nyarko, 2012; Alemayehu, Haider, & Habte, 2010; Fathi, 2003). Despite this effort, there are still areas with rampant cases of teenage pregnancy, particularly in sub-Saharan Africa that are yet to be covered with large-scale studies (Gunawardena, Fantaye, & Yaye, 2019).

Furthermore, there are concerns about inconsistent and inconclusive findings on the distribution of the problems associated with teenage pregnancy in Africa (Kassa *et al.,* 2018). Available studies in the literature have not shown the extent to which these problems are similar in the context of environment and culture. Again, data from Akwa Ibom State, particularly from the rural communities where teenage pregnancy is prevalent are lacking in the collection of such studies in the literature. Based on this hindsight, this study examined the main outcomes of teenage pregnancy across rural communities of Akwa Ibom State, to establish whether there are similarities or differences based on environmental, cultural, familial, or socioeconomic contexts in those communities. This is necessary because, despite the purported efforts put in place to check the menace, it is still increasing at a very worrisome rate.

2.0 Methods

The survey was adopted as the research design because of its explorative nature. Ten local government areas of Akwa Ibom State were used for this study. They were systematically selected from the list of local government areas representing the 3 senatorial districts of the state. As discussed under the sampling technique, women leaders were purposively contacted to select 5 teenage pregnant girls respectively from their communities who were pregnant and were facing livelihood issues for in-depth interviews.

Akwa Ibom is one of the six states in the south-south region of Nigeria. Its population as of the last national census conducted in 2006 was 3,178,950. However, based on projections, the state population is expected to rise to 7.3 million in 2025, 10.7 million in 2030, and, if not checked, "would double itself in 2039" (Ojoye and Odey, 2018). In its rural communities, there are reports of rampant cases of unwanted pregnancies, cases where teenage girls get pregnant before marriage, and cases where teenage girls give birth within 9 months of marriage (Girl Effect, 2016).

The study population comprised teenage girls between the ages of 13-19 who were pregnant during the time of study in selected communities of Akwa Ibom State. They were drawn from the three senatorial districts that make up the state for in-depth interview sessions on what caused their pregnancies. These senatorial districts are Uyo, Ikot Ekpene, and Eket senatorial districts that make up the state.

Purposive sampling technique was used to select respondents for the study. Akwa Ibom State is made up of three senatorial districts: Eket, Ikot Ekpene, and Uyo. These senatorial districts are made up of local government areas: Eket (12 LGAs); Ikot Ekpene (10 LGAs); and Uyo (9 LGAs). To select communities for this study, a list containing names of local government areas was prepared and numbers were assigned to each of the local government areas respectively. However, the researcher purposively picked one from each of the senatorial districts for the study. The choice of one local government area per senatorial district was to give the three senatorial districts a representation in the study. Thus, the process produced three local government areas for the study. The chosen local government areas were: Uruan (Uyo Senatorial District); Oruk Anam (Ikot Ekpene Senatorial District); as well as Mbo (Eket Senatorial District) respectively.

From each of the selected local government areas, women leaders were purposively contacted and mobilized to select 15 teenage pregnant girls from their communities for in-depth interview sessions. This was to give each local government area, a fair and equal chance to participate in the study. Therefore, we had a total of 45 respondents for data collection.

The study used the in-depth interview as a method of data collection. Based on this, a structured in-depth interview guide was developed and used to elicit information from the selected teenage pregnant girls from rural communities of

Akwa Ibom State on the subject matter. Before the field exercise for data collection, consent was sought from their parents/guardians to allow them to participate in the exercise, and it was duly granted.

At the end of data collection, the two principal researchers transcribed the responses obtained, arranged the data, and used the qualitative inductive approach to analyze and present the results thematically based on the objectives of the study. Throughout the process of analyses, they repeatedly cross-checked and verified the data to avoid mistakes.

3.0 Results and Discussions

Three variables were used to examine the outcomes of teenage pregnancy in rural communities of Akwa Ibom State. These were: education, economics, and health. Questions were generated during the in-depth interview session to probe each of the variables to determine amongst them, the main outcome of teenage pregnancy in rural communities of Akwa Ibom State. Responses from the in-depth interviews are presented below in themes.

Education

This variable was used to examine the outcome of teenage pregnancy in rural communities of Akwa Ibom State. Questions asked bothered on the following; the act of dropping out of school because of pregnancy, the act of sending teenage pregnant girls away from school by the school authority, the inability to cope with the shame, and stress of pregnancy, with education at the same time, the act of mocking the teenage pregnant girls by their classmates and teachers, and the intention to return to school after delivery.

Analysis from the in-depth interview responses indicated that one of the major outcomes of teenage pregnancy in rural communities of Akwa Ibom State is the issue of dropping out of school. Most of the girls interviewed reported that they dropped out of school as a result of their pregnancy. As submitted by some of them:

> I withdrew from school after I discovered that I was pregnant. My parents are not alive, and I have nobody to support me. So, I have stayed back from school *(excerpt from an IDI session with a teen pregnant girl, age 16, in Uruan L.G.A, 2022)*.

> Things are not okay with me. I don't have money. I have stopped going to school because since I became pregnant, I have always been sick. So, I decided to stay back and take care of myself *(excerpt from an IDI session with a teen pregnant girl, age 14, in Oruk Anam L.G.A, 2022)*.

> I went to school for two months, I did not know that I was pregnant. However, when I found out about my pregnancy, I withdrew from school because of shame, and I could not combine school with the stress of this pregnancy *(excerpt from an IDI session with a teen pregnant girl, age 13, in Mbo L.G.A, 2022)*.

These revelations are worrisome and they indicate that many young persons are out of school in Akwa Ibom State because of unwanted pregnancies.

Economic

This variable was also used to examine the outcomes of teenage pregnancy in rural communities of Akwa Ibom State. Questions asked bothered on the economic burden pregnancy at teenage age has brought upon the girls, the non-support from parents because they were angry over the pregnancy, the act of sending the teenage pregnant girls away from home by their parents/guardians because of the pregnancy, the non-acceptance of the pregnancy by the man responsible for it, the non-support from men who got teenage girls pregnant, the non-support from family and friends, the non-engagement in economic activity by the teenage pregnant girls to cater for their welfare and that of their unborn child, and their lack of money to cater for their welfare and that of their unborn babies after delivery.

Views from the in-depth interview sessions revealed that most teenage pregnant girls have economic burden during the period of pregnancy because some of them do not have any economic engagement that could cater to their welfare and that of their unborn child, and they do not receive help from family and friends, including the men that got them pregnant. This much is as reported by some of them below;

> What I have experienced is that nobody has been helping me anymore since I got pregnant. If I seek help, my people are telling me to go to the man who got me

> pregnant. As you can see now, my month of delivery is quite close, yet I have nobody to help me. I have acquired nothing in preparation for the birth of my child *(excerpt from an IDI session with a teen pregnant girl, age 15, in Uruan L.G.A, 2022)*.

> Before I became pregnant, I used to plait people's hair and make money. However, now that I am pregnant, I am ashamed, and I can't go out to plait hair again. People are talking too much. They are saying that I wanted it, and I have seen it by becoming pregnant *(excerpt from an IDI session with a teen pregnant girl. Age 17, in Mbo L.G.A, 2022)*.

> Things are difficult for me. I don't have money to eat. If I am not given, I can't eat. These days I have been very sick, and I am told that my baby is not well positioned. My main problem is that I don't have money to go to the hospital. Right now, I am looking for someone to borrow money *(excerpt from an IDI session with a teen pregnant girl, age 18 in Oruk Anam L.G.A, 2022)*.

One of the major reasons they face economic burden is that their parents who served as their support system, stopped supporting them because of anger over the pregnancy, as narrated by some of them below;

> Yes, my parent got angry, and they stopped supporting me. I don't know why they got angry to that extent. Right now, I am not even staying with them *(excerpt from an IDI session with a teen pregnant girl, age 16, in Uruan L.G.A, 2022)*.

> My dad is late. My family has stopped being supportive. They sent me to the man who got me pregnant and said I should go to him for support. Meanwhile, this man they are pushing me to is a student, and he has no money *(excerpt from an IDI session with a teen pregnant girl, age 17, in Mbo L.G.A, 2022)*.

> Right now, it is only my mom that is supporting me. My dad told me to go for an abortion, but I refused. My mom said I should not go for the abortion *(excerpt from an IDI session with a teen pregnant girl, age 14, in Oruk Anam L.G.A, 2022)*.

However, these submissions do not suggest that all parents are overreactive in rural communities of Akwa Ibom State over the pregnancy status of their teen daughters. Even though they may be angry at the initial stage, some of them do not stop showing support to their daughters even in that circumstance. This was observed in the reports presented by some of the teen pregnant girls as captured below:

> Only my mom is helping me, nobody else. My mom supports me by sharing farm-weeding contracts with me. If she goes out and has a contract to weed farms for people, she will share it with me. That is how I am working to raise money for delivery. Also, if she cooks, she shares with me too *(excerpt from an IDI session with a teen pregnant girl, age 15, in Oruk Anam L.G.A, 2022)*.

> I did not grow up to see my parent. I grew up with my aunt. She has been supportive. She is feeding me and assisting me as she can. When I am sick, she buys drugs for me *(excerpt from an IDI session with a teen pregnant girl, age 14, in Uruan L.G.A, 2022)*.

On the aspect of sending them away from home, some of them reported that when their pregnancy status was known, their parents got angry and sent them away from home, as narrated by some of them below;

> When my parent heard that I was pregnant, they got furious and sent me away from the house. I had to go to my grandmom's place. My grandmom accommodated me. She loves her grandchildren and cannot pursue me *(excerpt from an IDI session with a teen pregnant girl, age 16, in Mbo L.G.A, 2022)*.

Further reports indicated that some men in the rural communities of Akwa Ibom State who got the teen pregnant girls pregnant refused to accept such pregnancy.

When information about the pregnancy gets to them, they deny, abscond, or stop relating with the girls involved. Below are some of the accounts of the encounter as narrated by some of the teen pregnant girls:

> He has refused to accept the pregnancy, or, even to come out or pick up my calls. He is not from this village; he came for Christmas with his friend and got me pregnant. When I reported to his friend that I was pregnant, he said that he had not seen him recently, but he had told him before now, that he didn't want to suffer by keeping a girl like me *(excerpt from an IDI session with a teen pregnant girl, age 15, in Uruan L.G.A, 2022)*.

> He is in Port Harcourt, he does not stay here. When I discovered that I was pregnant, I called him on the phone, but he did not answer me. I have gone to meet his parent, but they have refused to answer me too *(excerpt from an IDI session with a teen pregnant girl, age 13, in Oruk Anam L.G.A, 2022)*.

> When I discovered that I was pregnant, I informed my aunt, and she took me to his compound. On reaching there, he ran away. I looked for his number and called him, but he denied it and told me that he was not responsible for it and that I should look for who impregnated me. He has not given me any support *(excerpt from an IDI session with a teen pregnant girl, age 16, in Mbo L.G.A, 2022)*.

This trend of responses is worrisome because it shows that men who got these girls pregnant are not ready for the responsibility of fatherhood. They only enjoy having unprotected sex with them and getting them pregnant, but are not ready to take up the responsibility of having a child, which is why they deny the pregnancy, or, run away when confronted with the news of the pregnancy. Apart from denying the pregnancy, absconding, or stopping to relate with the pregnant girls, it was also reported that they do not give support as men responsible for the pregnancy.

However, some of the teenage girls reported that they have been receiving support from their family members, particularly from their moms, aunts, and grandmoms who have an idea of what pregnancy and childbearing mean. In most of the cases reported, it was their moms, aunts, and grandmoms who always provided support, even when their dads became angry and sent them away from home. As narrated by some of them,

> My mom is helping me, nobody else. My mom supports me by sharing farm-weeding contracts with me. If she goes out and has a contract to weed farms for people, she will share it with me. That is how I am working to raise money for delivery. Also, if she cooks, she shares with me too *(excerpt from an IDI session with a teen pregnant girl, age 19, in Uruan L.G.A, 2022)*.

> When my parent heard that I was pregnant, they got furious and sent me away from the house. I had to go to my grandmom's place. My grandmom accommodated me. She loves her grandchildren and cannot pursue me *(excerpt from an IDI session with a teen pregnant girl, age 17, in Mbo L.G.A, 2022)*.

> It is only my mom that is helping me. She gave me a farm outside the knowledge of my father. It is the land that I am cultivating. Proceeds from there are what I will use for my survival and that of my baby (*excerpt from an IDI session with a teen pregnant girl, age 18, in Oruk Anam L.G.A, 2022)*.

Furthermore, responses from the in-depth interview also revealed that most of the teen pregnant girls have nothing to do economically that can cater to their welfare and that of their unborn child. As narrated by some of the teen pregnant girls,

> I don't have anything to do presently to take care of myself and the unborn baby. I have plans to learn handwork after delivery *(excerpt from an IDI session with a teen pregnant girl, age 15, in Uruan L.G.A, 2022)*.

> I have nothing to do. I don't have money, so I can't start anything (*excerpt from an IDI session with a teen pregnant girl, age 17, in Mbo L.G.A, 2022)*.

> I have nothing to do. I have no money to do anything (*excerpt from an IDI session with a teen pregnant girl, age 14, in Oruk Anam L.G.A, 2022)*.

The responses here show that most of these girls have nothing to do that will cater to their welfare and that of the unborn child. It is either they are believing and waiting on God for divine intervention, or, they are hoping for people to help them.

Since most of them claimed they do not have economic engagements that can care for their welfare and that of their unborn babies, it is obvious that they won't also have money to help them achieve that aim. This was confirmed in their responses during the in-depth interview session. Most of them claimed they don't have money, and because of that, they have not prepared adequately for the birth of their babies, and their post-delivery welfare.

As narrated by some of them;

> I do not have money because I don't have anything that I am doing that can help me make money. However, through the help of people, I have acquired the things needed for the delivery of the baby. It is remaining the baby's bath. I have yet to buy it because I do not have the money for it (*excerpt from an IDI session with a teen pregnant girl, age 13, in Uruan L.G.A, 2022)*.

> I have nothing to do. I have no money to do anything (*excerpt from an IDI session with a teen pregnant girl, age 15, in Oruk Anam L.G.A, 2022)*.

> I don't have money because I have nothing to do (*excerpt from an IDI session with a teen pregnant girl, age 14 in Mbo L.G.A, 2022)*.

Health

This variable was also used to examine the outcomes of teenage pregnancy in rural communities of Akwa Ibom State. To achieve this, questions were asked on issues bothering the non-visitation of health centers/hospitals by teen pregnant girls.

Data from the in-depth interview session also revealed the same thing as the majority of respondents submitted that since they got pregnant, they haven't visited the hospital. Here are their reasons as submitted by them:

> I don't want to go to the hospital, because I have a phobia of injections, I can't stand them (*excerpt from an IDI session with a teen pregnant girl, age 16 in Uruan L.G.A, 2022)*.
>
> Since I got pregnant, I have not gone to the hospital because I do not have money (*excerpt from an IDI session with a teen pregnant girl, age 15 in Oruk Anam L.G.A, 2022)*.
>
> I have not gone to the hospital. I have not taken drugs from there. I only visit the TBA's place (*excerpt from an IDI session with a teen pregnant girl, age 17 in Mbo L.G.A, 2022)*.

Since it has been established that most teen pregnant girls do not like visiting the hospital; it is also obvious that they won't take medications from the hospital too. This was the finding from the in-depth interview session where the majority of teen pregnant girls claimed that don't go to the hospital, and since they don't go, they don't also take drugs recommended by the hospital.

Similarly, since they do not visit the hospital and take medications from there too, it is obvious they do not also intend to deliver their babies in the hospital. The result from the in-depth interview session also revealed the same. Most of the teen pregnant girls who were interviewed said that they did not intend to deliver their babies in the hospital.

As narrated by them;

> I will give birth in the church. Why I chose the church is that the father of my boyfriend is a pastor. I will go back there to live in the church before delivery. Also, I want to give birth in the church because all the children my mom gave birth to, were delivered in the church (*excerpt from an IDI session with a teen pregnant girl, age 18, in Mbo L.G.A, 2022)*.

> I don't have the intention to give birth at the hospital. I will go to the TBA's place. That is where my mom and grandmom want me to go. All my sisters gave birth there, so, I will also go there (*excerpt from an IDI session with a teen pregnant girl, age 15, in Oruk Anam L.G.A, 2022)*.

> I will give birth at the TBA's place. My mom said all her children gave birth there. So, my case won't be different, and it is cheaper there (*excerpt from an IDI session with a teen pregnant girl, age 15, in Uruan L.G.A, 2022)*.

From the trend of responses, it is obvious that in rural communities of Akwa Ibom State, the decision over the place of delivery is beyond the teen pregnant girl. It is not solely her decision to take, but more of a family thing, particularly from the mom who is an experienced person in the business of pregnancy and delivery.

Since the issue of shame and stigmatization was not a popular opinion on why teen pregnant girls don't visit the hospital, we further probed to know whether the services rendered in the hospitals are too costly that they cannot afford to pay, hence the reason they stay back. Most of the teenage girls responded to this and claimed that this is the major reason they do not visit the hospital.

As narrated by some of the respondents,

> I don't go to the hospital. It is costly. When you go to the hospital, they keep asking for money. Anytime you go there, you spend money: 1,000, 2,000, 3,000, etc. So, I don't have much money (*excerpt from an IDI session with a teen pregnant girl, age 13, in Mbo L.G.A, 2022)*.

> Since I got pregnant, I have not gone to the hospital because I do not have money (*excerpt from an IDI session with a teen pregnant girl, age 15, in Oruk Anam L.G.A, 2022)*.

> I don't have money. I won't go to the hospital. I have not even purchased anything for delivery (*excerpt from an IDI session with a teen pregnant girl, age 17, in Uruan L.G.A, 2022)*.

Furthermore, since they admitted that they don't go to the hospital, we also sought to know whether they prefer the TBA's place. The result obtained indicated that teenage pregnant girls in rural communities of Akwa Ibom State prefer the TBA's place for the delivery of their babies to the hospital. As narrated by them,

> I prefer the traditional birth attendant's place. I don't like taking injections. I am more comfortable with the services of the TBA's place than the hospital. Again, I don't like the hospital because of the way the nurses treat people. When my aunt gave birth, I was with her in the hospital. The way the nurses spoke to her was harsh. They are rude in character. Before they offer assistance, they talk to you anyhow (*excerpt from an IDI session with a teen pregnant girl, age 16, in Uruan L.G.A, 2022)*.

> I prefer to give birth in the church because I don't have money to pay for the hospital bill. Why I chose the church is that the father of my boyfriend is a pastor. I will go back to the church and live there before delivery. Also, I want to give birth there because all the children my mom had, were delivered in the church (*excerpt from an IDI session with a teen pregnant girl, age 15, in Mbo L.G.A, 2022)*.

> I prefer the traditional birth attendant's place because that is where my mom wants me to go. All my sisters gave birth there, so I will go there (*excerpt from an IDI session with a teen pregnant girl, age 14, in Oruk Anam L.G.A, 2022)*.

This trend of responses shows that teen pregnant girls prefer traditional birth attendant places to the hospital. What is fascinating about their preference is that their decision to patronize the TBA's place is mostly influenced by their moms who once used the TBA's place for the delivery of their babies.

Discussion

From the results presented, it is obvious that the main outcomes of teenage pregnancy in rural communities of Akwa Ibom State include; the act of dropping out of school, economic burden, anger/non-support from parents, lack of money, non-visitation to the hospital, non-taking of drugs recommended by the hospital, and no intention to birth babies in the hospital.

From the above findings, it was discovered that when teenage girls get pregnant, they drop out of school and discontinue their education. This has implications for their future and livelihood, as most of them expressed unwillingness to return to school after delivery. This is worrisome because educational qualification is a prerequisite for any meaningful employment in Nigeria. Therefore, in a situation where the majority of the girls are dropping out of school because of pregnancy, their future looks bleak. This is in line with the submissions of Mengo (2010); Van-Harmelen (2007); Brown (2009), Seigel and Brandon (2014); Assin-Meytin and Green, (2015) and Tull (2020), who argued in the literature that teen pregnant girls always drop out of school because they cannot balance their education and the obligations that come with being a parent. Sometimes they lose concentration when they are not sure of their welfare and that of their unborn baby. Thus, the dual responsibility of going to school and preparing for motherhood is a challenge when there is no means of survival for both the mother and the unborn child.

The economic burden was a recurring decimal in the responses of the participants during the in-depth interview sessions. A lot of them complained that they have difficulty in feeding and paying for accommodation. They also lamented that they could not provide food and clothing for themselves, and the situation was even more complicated when they were sent away from home by their parents for getting pregnant outside of wedlock. This corroborates the views of Blackman (2015) and Larson (2007) in the literature who observed that pregnancy can have far-reaching consequences for teens by causing them economic disadvantages.

To make things worse for teenage pregnant girls, some of their parents who should give them support and make things easy for them, tend to be angry and

drive them away from home to go and live with men who got them pregnant. The implication therefore is, that since most of them were not prepared for the exit from the home, they will be shocked and are likely to be confronted with poverty which may push them to engage in any available livelihood activity within their reach for survival. This corroborates with the views of Breakwell (1993), and Hudson and Iniechen (1991) in the literature who argued that since most teenage pregnancies are unplanned, most teenage mothers are always economically and materially disadvantaged. They depend on people to survive. If they are not given, they can't eat. This also extends to the unborn child, who will be born into poverty and raised to maintain the poverty cycle, which may eventually lead to future pregnancies and other socioeconomic consequences.

Surprisingly, the majority of the men whom their parents pushed them to go live with, also pushed them away, therefore, further exposing them to more dangers in society at their adolescent age. This is worrisome because it shows that men who got these girls pregnant are not ready for the responsibility of fatherhood. They only enjoy having unprotected sex with them and getting them pregnant, but are not ready to take up the responsibility of having a child, which is why they deny the pregnancy, or, run away when confronted with the news of the pregnancy.

Most of these girls remain in the web of poverty. They lack the finances to take care of medical services both antenatal and postnatal services. This informed their decision as reported during the in-depth interview to choose to deliver their babies in the homes of traditional birth attendants (TBAs) whom they perceive offer cheap services, than the hospital they assumed is costly. This situation is similar to the observation of Adamson (2001), Nili, Rahmati, and Sharifi (2002), Ezegwui, Ikeako, and Ogbuefi (2012), Kongnyuy, Nana, Fomulu, Wiysonge, and Kouam (2008), Brown (2009), and WHO (2004; 2017) who argued in the literature that the majority of teenage pregnant girls in the rural areas do not receive antenatal care, and most of them are unbooked for such services for reasons ranging from ignorance of the importance of antenatal care, lack of family, and social support, non-availability of antenatal care services, poverty, unpleasant remarks by antenatal health workers toward unmarried teenagers who are pregnant, to attempts to evade public glare since most clinics lack privacy.

What is fascinating about their refusal to visit the hospital is that most of them do not believe in the services rendered by the hospital. It is not only about the lack of money to visit the hospital. They are socialized by their moms, grandmothers,

aunties, and senior sisters who equally delivered their babies at the traditional birth attendant place to follow suit. The efficacy of the TBA's place is still questionable as most times, delivery at the TBA's place comes with complications that usually demand hospital assistance to help save the lives of the teen pregnant girl and the unborn baby. In most cases, before the teen pregnant girl could be rushed to the hospital, they either lose their life or that of the baby. This calls for supervision and regulation of the sector to ensure that lives are not lost to quacks who present themselves as traditional doctors and deceive our young girls into patronizing their services.

4.0 Conclusion and Recommendations

Teenage pregnancy is a rampant phenomenon in rural communities of Akwa Ibom State. Its occurrence has made many young promising girls drop out of school, live in perpetual poverty with no hope of survival, and bring forth babies they cannot cater to. Sadly, very little has been done to reduce the scourge in our rural communities. However, a lot still needs to be done to address the issue, to prevent other potential adolescent girls from growing to face the same conditions that expose others in their communities to unwanted pregnancy.

Arising from the findings of the study, the following recommendations are put forward:

(a) The study suggests that the government and other relevant authorities should embark on widespread sensitization on the dangers of engaging in unprotected sex in the rural communities of Akwa Ibom State. If possible a door-to-door campaign should be organized to sensitize teenage girls and their partners on the need to use contraceptives if they must engage in sexual intercourse, otherwise, they should abstain from it.

(b) Furthermore, adolescent girls in rural communities should be empowered through grants, and loans by government and donor agencies to help them improve their livelihoods. This will make them less dependent on men who take advantage of them and exploit them sexually.

(c) Efforts should also be made by the government, particularly at the local level to sensitize teen pregnant girls and their parents/guardians on the need to visit the hospital during pregnancy for antenatal and postnatal services. This will help discourage the culture of patronizing the TBA's place for delivery.

References

Adamson, P., Brown, G., Micklewright, J. and Wright, A. (2001). *A league table of teenage births in rich nations.* Innocenti Report Card. Italy: UNICEF Innocenti Research Centre.

Ahinkorah, B. O, Hagan, J. E., Seidu, A. A., Mintah, J. K., Sambah, F., Schack, T., et al. (2019). Examining pregnancy-related socio-cultural factors among adolescent girls in the Komenda-Edina-Eguafo-Abrem municipality in the central region of Ghana: A case-control study. *Front Pub Health*, 7:93.doi: 10.3389/fpubh.2019.00093

Alemayehu, T., Haider, J., Habte, D. (2010). Determinants of adolescent fertility in Ethiopia. *Ethiopian Journal of Health Development*, 24(1): 30 – 8.

Appiah-Sekyere, P. and Awuah-Nyamekye, S. (2012). Teenage pregnancy in the life and thought of the traditional Akan: Moral perspectives. *Sociology Study,* 2(2): 129-138.

Assini-Meytin, L. C. and Green, K. M. (2015). Long term consequences of adolescent parenthood amongst African-American Urban youth: a propensity score matching approach. *Journal of Adolescents Health*, 56(5):529-35.

Ayele, B. G., Gebregzabher, T. G., Hailu, T. T., Assefa, B. A. (2018). Determinants of teenage pregnancy in DeguaTembien District, Tigray, northern Ethiopia: a community-based case-control study. PLoS One, 13(7):e0200898. https://doi.org/10.1371/journal.pone.0200898.

Baheiraei, A., Khoori, E., Foroushani, A. R., Ahmadi, F. and Ybarra, M. L. (2014). What sources do adolescents turn to for information about their health concerns? *International Journal of Adolescent Medical Health,* 26:61–8. doi: 10.1515/ijamh-2012-0112.

Baku, E. A., Agbemafle, I., Kotoh, A. M. and Adanu, R. M. (2018). Parents' experiences and sexual topics discussed with adolescents in the Accra Metropolis, Ghana: A qualitative study. *Advanced Public Health*. 1–15. doi: 10.1155/2018/5784902

Bankole, A. and Malarcher, S. (2010). Removing barriers to adolescents' access to contraceptive information and services. *Studies on Family Planning,* 41:117–24. doi: 10.1111/j.1728-4465.2010.00232.

Bennett, T., DeClerque, S., Priscilla, G., Loda, F. and Klerman, L. V. (1997). Rural adolescent Pregnancy: A view from the south. *Family Planning Perspectives*, 29(6): 256-268.

Blackman, K. (2015). Addressing pregnancy among rural teens, Vol. 23, No 23. Available at: https://www.ncsl.org/research/health/addressing-pregnancy-among-rural-teens.aspx.

Breakwell, G. (1993). Psychological and social characteristics of teenagers who have children, In: Lawson A, Rhodes DL (eds). *The politics of pregnancy, adolescent sexuality and public policy.* New Haven: Yale University Press.

Breuner, C. C. and Mattson, G. (2016). Sexuality education for children and adolescents. *Pediatrics*, 138(2): e20161348.

Brown, S. R. (2009). Addressing teen pregnancy in rural setting through comprehensive teen- Focused prenatal programs. A thesis submitted to Graduate School of Public Health, University of Pittsburgh. Available at: http://d-scholarship.pitt.edu.

De Castro, F., Barrientos-Gutierrez, T., Braverman-Bronstein, A., Santelli, J., Place, J. M., Eternod-Arámburu, M, et al. (2018). Adolescent access to information on contraceptives: A mystery client study in Mexico. *Journal of Adolescent Health*, 62:265–72. doi: 10.1016/j.jadohealth.2017.08.001

Envuladu, E. A., Agbo, H. A., Ohize, V. A., Zoakah, A. I. (2014). Determinants and outcomes of teenage pregnancy in a rural community in Jos, Plateau state, Nigeria. *Sub-Saharan African Journal of Medicine,* 1(1): 48.

Ezegwui, H. U., Ikeako, L.C. and Ogbuefi, F. (2012). Obstetric outcome of teenage pregnancies at a Tertiary Hospital in Enugu, Nigeria. *Nigerian Journal of Clinical Practice*, 15(2).

Fathi, E. A. (2003). Teenage pregnancy in sub-Saharan Africa: Cameroon as a case study. The Ohio State University.

Forrest, J. D. (1993). Timing of reproductive life stages. *Obstetrics Gynecology*, 82:105–11.

Gideon, R. (2013). Factors associated with adolescent pregnancy and fertility in Uganda: Analysis of the 2011 demographic and health survey data. *American Journal Social Research,* 3(2):30–5.

Girl Effect (2016). State of the girl report. Accessible at: www.girleffect.org.

Gould, C., and Ward, C. L. (2015). Positive parenting in South Africa: why supporting families is key to development and violence prevention. Policy Brief-Report No. 77. Pretoria: Institute for Security Studies.

Gunawardena, N., Fantaye, A.W., Yaya, S. (2019). Predictors of pregnancy among young people in sub-Saharan Africa: A systematic review and narrative synthesis. *BMJ Global Health,* doi:10.1136/ bmjgh-2019-001499.

Hagan, J. E. and Buxton, C. (2012). Contraceptive knowledge, perceptions and use among adolescents in selected senior high schools in the Central Region

of Ghana. *International Journal of Social Research*, 3:170–80. doi: 10.5296/jsr.v3i2.2311.

Hudson, F. and Ineichen, B. (1991). *Taking it lying down, sexuality and teenage motherhood*. Hong Kong: Macmillan Education Ltd.

Inyang, B. A., Makondelele, R., Thobile, Z. P., and Makgopa, M. (2018). The role of socio-cultural factors and parenting practices on the prevalence of teenage pregnancy in Vhembe District, Limpopo Province. *Journal of Sociology and Anthropology*, 9(3-4): 69-79.

Izugbara, C. (2015). Socio-demographic risk factors for unintended pregnancy among unmarried adolescent Nigerian girls. *South Africa Family Practice*, 57(2): 121–5.

Kabiru, C. (2005). Adolescent girls' well-being in resource-poor settings. Accessible at: www.unicef-irc.org.

Kassa, G. M., Arowojolu, A. O., Odukogbe, A. A. and Yalew, A. W. (2018). Prevalence and determinants of adolescent pregnancy in Africa: A systematic review and meta-analysis. *Reproductive Health,* 15, 195. https://doi.org/10.1186/s1978-018 0640-2.

Kongnyuy, E., Nana, P., Fomulu, N., Wiysonge, S. and Kouam, L. (2008). Adverse prenatal outcomes of adolescent pregnancies in Cameroon. *Maternal and Child Health Journal*, 12, 149-154. https://doi.org/10.1007/s10995-007-0235-y.

Kumi-Kyereme, A., Awusabo-Asare, K., Darteh, E. K. (2014). Attitudes of gatekeepers towards adolescent sexual and reproductive health in Ghana. *African Journal of Reproductive Health,* 18(3):142–53.

Kupoluyi, J. A., Njoku, E. O., Oyinloye, B. O. (2013). Factors associated with teenage pregnancy and childbearing in Nigeria.

Larson C. P. (2007). Poverty during pregnancy: Its effects on child health outcomes. *Pediatrics & child health*, *12*(8), 673–677. https://doi.org/10.1093/pch/12.8.673.

Martino, S.C. Elliott, M. N., Corona, R., Kanouse, D. E. and Schuster, M. A. (2008). Beyond the "big talk": the roles of breadth and repetition in parent-adolescent communication about sexual topics. *Pediatrics,* 121: 612–8. doi: 10.1542/peds.2007-2156.

McMicking, J., Lloyd, J. and Mrcog, M. (2017). Contraception in adolescents. *Women Health,* 19:1–8.

Mengo V. N. (2010). Zambia school policy for teen mothers, a partial success. Accessible at: http://www.IPSnews.Net/News.a sp.

Muhwezi, W. W., Katahoire, A. R., Banura, C., Mugooda, H., Kwesiga, D., Bastien, S., et al. (2015). Perceptions and experiences of adolescents, parents and school administrators regarding adolescent-parent communication on sexual and reproductive health issues in urban and rural Uganda. *Reproductive Health,* 12:110. doi: 10.1186/12978-015-0099-3.

Nili, F., Rahmati, M. R.andSharifi, S. M. (2002). Maternal and neonatal outcome in teenage pregnancy in Tehran Valisar Hospital. *ActaMedicaIranica,* 40;55-9.

Nobelius, A. M., Kalina, B., Pool, R., Whitworth, J., Chesters, J. and Power, R. (2010). Sexual and reproductive health information sources preferred by out-of-school adolescents in rural southwest Uganda. *Sex Education*, 10:91–107. doi: 10.1080/14681810903491438.

Nyarko, S. H. (2012). Determinants of adolescent fertility in Ghana. *Int J Sci*., 5(1): 21–32.

O'Brien C. C., Chumbler, N., Bute, J. and Huff, A. (2015). Building a "Better Life" the transformative effects of adolescent pregnancy and parenting. *Sage*, 5:1–9. doi: 10.1177/2158244015571638.

Ochen, A. M., Chi, P. C. and Lawoko, S. (2019). Predictors of teenage pregnancy among girls aged 13-19 years in Uganda: A community-based case-control study. *BMC Pregnancy Childbirth,* 19, 211. doi: 10.1186/128840192347.

Omoro, T., Gray, S. C. and Otieno, C. M. (2017). Teen pregnancy in rural western Kenya: A Public health issue. *International Journal of Adolescence and Youth,* 23(4): 399-408. doi: 10.1080/026738432017140.

Seigel, R. S. and Brandon, A. R. (2014). Adolescents, pregnancy and mental health. *Journal of Pediatric Adolescence Gynecology,* 27(3):138-50.

Spence, N. J. (2008). The long-term consequences of childbearing: physical and psychological well-being of mothers in later life. *Res Aging*, 30:722–51. doi: 10.1177/0164027508322575

Sungwe, C. (2015). Factors associated with teenage pregnancy in Zambia. Lusaka: University of Zambia.

Tull, K. (2020). *Consequences for adolescents when they become pregnant, and become mothers.* K4D Helpdesk Report 882. Brighton, UK: Institute of Development Studies.

UNICEF (2024). Adolescents. Investing in a safe, healthy and productive transition from childhood to adulthood is critical. Available at: https://data.unicef.org

UNICEF (2021). A league table of teenage births in rich nations. Innocenti Report Card No.3. UNICEF Innocenti Research Centre. Available at:

http://www.unicefirc.org/publicati ons/pd f/repcard3e.pdf.

UNICEF Fact Sheet (2008). Young people and family planning: Teenage pregnancy.

UNFPA (2024). World population dashboard. Available at: https://www.unfpa.org/data/world- population-dashboard.

United Nations Population Fund (2013). *Motherhood in childhood: Facing the challenge of adolescent pregnancy*. New York: UNFPA.

Van Harmelen, U. (2007). 'Educationally related challenges faced by teenage mothers on returning to school', Namibian Case Study. MEd dissertation. Grahams town: Rhodes University.

Wilson-Mitchell, K., Bennett, J., and Sennett, R. (2014). Psychological health and life experiences of pregnant adolescent mothers in Jamaica. *International Journal for Environmental Research and Public Health,* 11:4729–44. doi: 10.3390/ijerph110504729.

World Health Organization (2017). Adolescents: Health risks and solutions. Available at: http://www.who.int/mediacentre/factsheets/fs345/en/.

World Health Organization (2024). Adolescent pregnancy. Fact Sheet 364. Available at: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy.

WHO discussion papers on adolescence (2004). Adolescent pregnancy issues in adolescent and development: 5-10.

A Conceptual Review of the Knowledge and Perceptions of Female Secondary Schools Students towards Obstetric Fistula in Nigeria

Idayat Bolanle Oluwafemi & Ahmad Kainuwa, Ph.D
Department of Educational Foundation, Federal University Gusau, Zamfara State, Nigeria
Corresponding email: adufem2000@yahoo.com
https://doi.org/10.57233/gijmss.v7i3.12

Abstract

Obstetric fistula is one of the major reproductive health challenges resulting in maternal morbidity and deaths among young women of secondary school age in most parts of Nigeria. Recent statistics from the Federal Ministry of Health indicated that about 12,000 new cases are reported each year and this poses serious threat to women reproductive capacity and fecundity. This study is a conceptual review of the knowledge of and perception factors of the obstetric conditions among female secondary school students in Nigeria. Data were obtained from secondary sources such as scholarly research findings on obstetric fistula by professionals in reproductive health published in on-line academic journals and featured on Google Scholar and Research Gates platforms. in addition to data published by the Federal Ministry of Health. The data provided an up-to-date state of knowledge among secondary school students and their perceptions towards obstetric fistula. Findings revealed that among secondary school students, the level of knowledge about the reproductive health condition was relatively low and their perceptions about the reproductive health condition were influenced by belief systems, health education, psychological factors, social stigmatisation, and socio-cultural norms among others. The study recommends the inclusion of obstetric fistula as an item in the curriculum of one of the health subjects taught in secondary schools to boost the level of knowledge and further moderate female students' perceptions about the reproductive health condition, among others.

Keywords: Maternal Health, Fistula, Education, Reproduction and Gender

1.0 Introduction

Obstetric fistula is a debilitating condition that predominantly affects women in developing countries, where access to adequate maternal healthcare is limited. This condition, characterized by an abnormal connection between the birth canal and bladder or rectum, usually results from prolonged, obstructed labour without timely medical intervention. Obstetric fistula is a global issue, affecting women across various continents, with significant variations in prevalence and impact.

In Asia, countries such as India and Bangladesh continue to grapple with high incidences of obstetric fistula due to inadequate maternal healthcare services. In rural areas of India, the healthcare infrastructure is particularly limited, contributing to the persistence of this condition (Ahmed, Ariff & Muneer, 2021). In Latin America, although less prevalent, obstetric fistula remains a concern in countries like Bolivia and Peru, where rural women face significant barriers to accessing timely medical care (United Nations Population Fund [UNFPA], 2022). The Middle East also records cases in conflict-affected countries such as Yemen and Afghanistan, where limited healthcare infrastructure exacerbates the problem (World Health Organization, 2023). Even in developed regions like Europe and North America, cases have been reported among immigrant populations from high-prevalence regions, highlighting the global nature of the issue (Wall, 2022).

Similarly, in Africa, the burden is substantial and highly pronounced, with countries like Nigeria, Ethiopia, and Kenya, reporting high prevalence rates due to factors such as cultural practices, early marriage, poverty, inadequate healthcare systems and limited access to emergency obstetric care (Muleta et al., 2017; Women and Health Alliance International, 2021). Ethiopia has one of the highest rates of obstetric fistula, with thousands of new cases each year. Organizations such as Hamlin Fistula Ethiopia have been instrumental in providing treatment and raising awareness (Tebeu et al., 2022). Kenya faces similar challenges, particularly in rural areas, where efforts by the government and NGOs focus on providing treatment and preventive measures (Women and Health Alliance International, 2021). Tanzania and Uganda have also reported numerous cases, with national efforts aimed at both treatment and community education programs to prevent the condition (Bangser, 2022). Malawi, despite improvements in maternal healthcare, still struggles with obstetric fistula, particularly in rural areas where access to emergency obstetric care is limited (Kayondo et al., 2021).

Nigeria, with an estimated 150,000 women affected and about 12,000 new cases annually, faces a significant burden. The northern regions, including Zamfara State, are particularly affected due to high rates of early marriage and limited access to maternal health services (Federal Ministry of Health, 2020). In Nigeria, obstetric fistula is a major public health issue, with significant regional disparities in prevalence and access to treatment. Kano State faces similar challenges, with cultural practices and inadequate maternal healthcare contributing to high rates of obstetric fistula (Dennis & Radolph, 2020).

Katsina State is also affected, with ongoing efforts to improve maternal healthcare and provide surgical repairs for affected women (Federal Ministry of Health, 2020). In Borno State, conflict and displacement have exacerbated the issue, with many women lacking access to adequate obstetric care (Wall, 2022). Bauchi State has implemented programs to educate women about obstetric fistula and improve access to emergency obstetric care (Musa et al., 2018). Sokoto State has focused on both treatment and prevention, with initiatives to reduce early marriage and improve maternal health services (Bangser, 2022). Zamfara State, in the northwest, has high rates of obstetric fistula, largely due to early marriage and limited healthcare infrastructure. Efforts to address the issue include awareness campaigns and improved healthcare services (Wall, 2022).

Prior research highlights several gaps in the understanding and management of obstetric fistula. While global initiatives have raised some awareness, the depth of knowledge, especially among young women in secondary schools, remains limited. Studies suggest that education and awareness programs targeting young women can significantly contribute to early prevention and destigmatization (Dennis & Radolph, 2020; Kayondo et al., 2021; Wall, 2022). In view of the gaps identified in the background above, it is imperative to conduct a conceptual review of the knowledge and perceptions of female secondary school students towards obstetric fistula in Nigeria expected to provide update on our state of knowledge.

Therefore the main objective of this study is to engage in a conceptual review of available academic literatures on the knowledge and perception factors of obstetric fistula among female secondary schools students in Nigeria towards making appropriate recommendations that will assist to increase knowledge and address wrong perceptions about the reproductive health challenge.

2.0 Theoretical Framework

Health education theories provide a framework for understanding how knowledge and awareness influence health behaviours. The Health Belief Model (HBM), developed by Rosenstock (1974), posits that knowledge is a critical precursor to behaviour change. The HBM suggests that individuals are more likely to engage in health-promoting behaviours if they have sufficient knowledge about a health issue and perceive it as a serious threat. The model includes constructs such as perceived susceptibility, perceived severity, perceived benefits, and perceived barriers, all of which are influenced by an individual's knowledge and awareness

of the health issue. Another relevant theory is the Theory of Planned Behaviour (TPB) by Ajzen (1991), which highlights the role of knowledge in shaping attitudes, subjective norms, and perceived behavioural control. According to the TPB, knowledge influences individuals' attitudes towards a behaviour, the perceived social pressure to perform or not perform the behaviour (subjective norms), and their confidence in their ability to perform the behaviour (perceived behavioural control). In the context of obstetric fistula, knowledge about the condition can positively influence attitudes towards seeking medical care and support for affected women. It has been widely applied across various health contexts, demonstrating its versatility in guiding interventions aimed at improving health outcomes through behaviour change.

In the context of obstetric fistula among female students, the HBM offers a structured approach to addressing several critical objectives. Firstly, understanding the levels of awareness among students is essential. According to the HBM, individuals are more likely to engage in health-promoting behaviours if they perceive themselves as susceptible to a health threat and understand the severity of its consequences (Champion & Skinner, 2018). Studies applying the HBM to issues such as vaccination uptake have shown that enhancing perceived susceptibility and severity can motivate individuals to seek information and adopt preventive measures (Rosenstock et al., 1988). Similarly, for obstetric fistula, interventions should focus on educating female students about the causes, symptoms, and implications of the condition to increase awareness and promote early intervention. Secondly, perceptions towards individuals affected by obstetric fistula are shaped by cultural, social, and educational factors. The HBM emphasizes the role of perceived benefits of health-promoting behaviours and the need to address perceived barriers such as stigma and misinformation (Montano & Kasprzyk, 2018). Research has shown that negative perceptions and stigma towards health conditions can hinder supportive behaviours and lead to social exclusion (Ahinkorah et al., 2020). Therefore, interventions aimed at changing attitudes towards obstetric fistula should highlight the benefits of supportive actions and debunk myths and misconceptions that contribute to stigma and discrimination.

Furthermore, the HBM is instrumental in analysing behaviours towards obstetric fistula among female students. It underscores the importance of perceived benefits of taking action and reducing perceived barriers to behaviour change (Carpenter, 2020). Studies have demonstrated that individuals are more likely to engage in

health-promoting behaviours if they perceive tangible benefits and have the resources to overcome barriers (Montano & Kasprzyk, 2018). Applied to obstetric fistula, interventions should aim to promote supportive behaviours such as seeking medical care, providing emotional support, and advocating for improved healthcare services for affected individuals.

3.0 Methodology

This study is a conceptual review of data published in learned journals of professional competence on obstetric fistula. Essentially it draws data from secondary sources. Specifically, existing literature were reviewed and explored to examine factors influencing the knowledge and perception of obstetric conditions and their consequences on the health and wellness of the patients. The data obtained from secondary sources such as journal archives, health reviews and data from sources such as the UNICEF, the Federal Ministries of Health & Education, formed the basis of analysis and discussion.

4.0 Results and Discussions

The conceptual review is presented in two sections for better clarification and understanding.

a. Knowledge and awareness about Obstetric Fistula
b. Perceptions Factors about Obstetric Fistula

Knowledge and awareness about Obstetric Fistula

Knowledge and awareness are fundamental components in understanding health-related issues such as obstetric fistula. Various scholars and health education theories have conceptualized these components in different ways, highlighting their importance in health promotion and disease prevention. Knowledge is defined as the information and understanding that individuals have about a particular subject. It encompasses facts, concepts, and principles acquired through education, experience, or research. In the context of obstetric fistula, knowledge includes understanding the causes, symptoms, prevention, and treatment options. Comprehensive knowledge about obstetric fistula involves not only recognizing the medical aspects but also understanding the social, cultural, and psychological implications of the condition.

Scholars such as Nutbeam (2020) have emphasized the importance of health literacy, which includes functional, interactive, and critical literacy. Functional literacy involves basic reading and writing skills necessary for understanding

health information. Interactive literacy includes more advanced cognitive and social skills that enable individuals to actively participate in healthcare. Critical literacy involves the ability to critically analyse information and use it to exert greater control over life events and situations. These dimensions of health literacy are crucial for empowering individuals with the knowledge needed to prevent and manage health issues like obstetric fistula.

Awareness refers to the recognition or perception of a situation or fact. In health contexts, awareness involves recognizing the existence, severity, and implications of a health condition within a community. Awareness campaigns are often the first step in public health interventions aimed at addressing health issues. In the context of obstetric fistula, awareness involves understanding the condition's prevalence, risk factors, and the importance of timely medical intervention. Freimuth et al. (2021) describe awareness as the ability to recognize and understand health-related issues and their impact on individuals and communities. Awareness is often measured through public health campaigns' reach and the level of community engagement and response. In the case of obstetric fistula, awareness campaigns might focus on educating communities about the condition's preventable nature and encouraging women to seek skilled birth attendance and emergency obstetric care.

Obstetric fistula remains a significant public health issue in Nigeria, with awareness levels among female students being a critical determinant of both prevention and management strategies. According to Wall et al. (2023), awareness of obstetric fistula among young women in Nigeria is reportedly low. Their study, which involved surveys conducted across several secondary schools in northern Nigeria, revealed that only a small fraction of female students had ever heard of the condition. This is indicative of a broader issue where knowledge about obstetric fistula is severely limited among adolescents, who are a critical demographic for preventive health education. Wall et al. (2023) further highlighted that even among the students who were aware of obstetric fistula, there were significant misconceptions regarding its causes. Many students attributed the condition to spiritual or supernatural factors rather than understanding it as a result of medical complications during childbirth. This mis-attribution underscores a severe gap in health education, where essential information about reproductive health and safe childbirth practices is not adequately conveyed to young women. Such misconceptions can perpetuate

stigma and prevent effective communication about the condition, further isolating those affected and discouraging them from seeking help.

The lack of accurate knowledge about obstetric fistula has profound implications. It poses a substantial barrier to seeking timely medical intervention because students who do not understand the medical nature of the condition are less likely to recognize the importance of skilled birth attendance or emergency obstetric care. This situation is exacerbated by cultural and educational deficiencies in reproductive health, leading to delayed treatment and increased complications for those who develop obstetric fistula. As highlighted by the Health Belief Model (HBM), knowledge is a critical precursor to behaviour change. If female students are not informed about the causes, symptoms, and prevention of obstetric fistula, they are unlikely to engage in health-promoting behaviours that could mitigate the risk of developing this condition.

Adding to this perspective, Ahmed and Holtz (2017) explored the sociocultural dimensions of obstetric fistula awareness in rural Nigeria. Their qualitative study involved focus group discussions with secondary school students and highlighted the pervasive influence of cultural beliefs and practices. Many participants associated obstetric fistula with moral failings or divine punishment, reflecting deep-rooted stigma and ignorance. The study revealed that in many communities, obstetric fistula is not viewed through a medical lens but rather as a social or spiritual issue. This perception significantly impacts the level of awareness and understanding among young women, who are often not exposed to accurate information about the condition. The qualitative approach of Ahmed and Holtz (2017) provided in-depth insights into the reasons behind these misconceptions. The focus group discussions revealed that cultural narratives and traditional beliefs are deeply embedded in the community's understanding of health and illness. For instance, some participants believed that obstetric fistula was a curse or a punishment for infidelity or other perceived moral transgressions. This belief system not only stigmatizes the affected women but also isolates them from seeking help, as the condition is seen as a source of shame and dishonour.

Moreover, the study highlighted that these cultural beliefs are perpetuated by influential community figures, including elders and religious leaders, who often have a significant impact on the community's health practices and beliefs. In rural areas, where access to formal education and healthcare services is limited, the words of these leaders carry considerable weight. This creates a challenging

environment for health educators trying to disseminate accurate information about obstetric fistula. The deep-seated cultural stigma associated with the condition means that even when students receive correct information, they may still be influenced by the prevailing community beliefs. Ahmed and Holtz (2017) also pointed out that the language used to describe obstetric fistula in local dialects often carries negative connotations, further contributing to the stigma. The lack of a neutral or medical term for the condition in many local languages means that it is often discussed in terms that imply blame or moral failing. This linguistic barrier complicates efforts to educate young women about the medical causes and treatments for obstetric fistula.

A study by Muleta et al. (2017) in Ethiopian schools provides relevant insights into the level of awareness about obstetric fistula, which can be indicative of similar trends in Nigeria. In their study, it was found that prior to the intervention, the general level of awareness among female students was remarkably low. Many students had never heard of obstetric fistula, and those who had often harboured significant misconceptions regarding its causes and implications. These findings suggest that without targeted educational interventions, awareness levels are minimal, which could be reflective of the situation in Nigerian schools as well. Expanding on this, Wall et al. (2023) noted that awareness of obstetric fistula among young women in Nigeria is alarmingly low. Their surveys across several secondary schools in northern Nigeria revealed that only a small fraction of female students had ever heard of the condition. Those who were aware often misunderstood its origins, attributing it to spiritual or supernatural causes rather than understanding it as a medical complication arising from childbirth. This lack of accurate knowledge poses a substantial barrier to seeking timely medical intervention, as students are less likely to recognize the importance of skilled birth attendance or emergency obstetric care.

Ahmed and Holtz (2017) explored the sociocultural dimensions of obstetric fistula awareness in rural Nigeria. Their qualitative study involved focus group discussions with secondary school students and highlighted the pervasive influence of cultural beliefs and practices. Many participants associated obstetric fistula with moral failings or divine punishment, reflecting deep-rooted stigma and ignorance. This highlights the broader social and cultural context that significantly shapes the level of awareness among female students in Nigeria, suggesting that awareness is not only low but also clouded by misinformation and stigma. Further research by Ijaiya et al. (2020) on the knowledge and attitudes of

Nigerian women towards obstetric fistula showed that even among those who had some awareness, there was a significant gap in understanding the medical causes and the preventative measures available. Their study, conducted in Kwara State, indicated that most women had little to no knowledge about the availability of treatment options or the importance of timely medical care during childbirth. This gap in knowledge extends to younger populations, including secondary school students, suggesting that awareness is fragmented and insufficient.

A study conducted by Donnelly et al. (2021) in Lagos, Nigeria, also sheds light on the general lack of awareness among young women about reproductive health issues, including obstetric fistula. The study involved surveys and interviews with female students, revealing that while there is some awareness of maternal health issues, specific knowledge about obstetric fistula is lacking. This suggests that even in more urbanized and possibly better-informed areas, the level of awareness remains critically low. Similarly, findings by Ezeonu et al. (2023) in Enugu State emphasize that misconceptions about obstetric fistula are widespread among secondary school students. Their study showed that many students who had heard of the condition believed it to be a result of witchcraft or a curse, rather than a preventable and treatable medical issue. This indicates a significant gap in both awareness and understanding, which could have severe implications for the health-seeking behaviours of young women in these regions.

From the review of the literatures above, It is crystal clear that there is general recognition and acceptance that obstetric fistula, a significant public health issue, affects women of lower age and that the incidence varies from one region to the other in Nigeria. However, lack of comprehensive and updated regional data, low level of awareness, misconceptions about the condition based on cultural norms, lack of knowledge about the available treatment options and post-operative care and support and limited research and knowledge about specific risk factors in different contexts and lack of improved education and training programs for health care providers regarding the prevention, diagnosis and treatment of obstetric fistula especially in low settings communities like Gusau remain the uncovered gaps in obstetric research. This study covers the gap in area of inadequate knowledge of the medical condition with the aim of suggesting appropriate recommendations that would assist in boosting the level of awareness to achieve optimum prevention and management among the vulnerable population.

Perception factors about Obstetric Fistula

Perceptions are critical in understanding how individuals respond to health-related issues, including obstetric fistula. The conceptualization and constructs provide a direction in explaining their impact on health behaviours and the outcomes. The predispositions or tendencies to respond positively or negatively towards a particular idea, object, person, or situation. In the context of obstetric fistula, attitudes encompass the feelings, beliefs, and values that female students hold towards women affected by the condition. These attitudes can range from empathy and support to stigma and discrimination. Theories such as the Theory of Planned Behaviour (TPB) highlight the significance of attitudes in influencing behaviour. According to Ajzen (1991), attitudes towards a behaviour, combined with subjective norms and perceived behavioural control, shape an individual's intention to engage in that behaviour. In the case of obstetric fistula, positive attitudes towards affected women can lead to supportive behaviours, such as advocating for their medical treatment and social reintegration. Conversely, negative attitudes can result in social ostracism and discrimination, further complicating the lives of affected women.

Perceptions involve the way individuals interpret and make sense of information and experiences. In health contexts, perceptions play a crucial role in determining how individuals understand and react to health issues. Perceptions of obstetric fistula might include beliefs about its causes, consequences, and the effectiveness of available treatments. Social Cognitive Theory (SCT), proposed by Bandura (1986), provides a framework for understanding how perceptions are formed and influenced. SCT posits that observational learning, social experiences, and environmental influences shape individuals' perceptions. For instance, if female students in Gusau, Zamfara State, perceive obstetric fistula as a condition resulting from divine punishment or personal fault, they are less likely to support affected women and advocate for medical interventions. Conversely, accurate perceptions informed by education and awareness campaigns can foster a more supportive and empathetic community.

Different scholars have conceptualized attitudes and perceptions in various ways to explain their influence on health behaviours. For instance, Fishbein and Ajzen (1975) in their theory of Reasoned Action (TRA), which later evolved into TPB, emphasized the role of attitudes towards the behaviour as a predictor of behavioural intentions. They argued that positive attitudes towards health behaviours, such as seeking medical care, are essential for translating knowledge

into action. Furthermore, Witte's (2022) Extended Parallel Process Model (EPPM) highlights how perceptions of threat and efficacy influence health behaviours. EPPM suggests that individuals are more likely to adopt protective behaviours if they perceive a health threat as severe and believe that they have the capability to effectively respond to it. This model can be applied to understand how female students' perceptions of obstetric fistula influence their preventive and supportive behaviours.

The perceptions of female students towards women affected by obstetric fistula are a critical aspect of understanding the broader social and cultural dynamics that influence the lives of these women. A thorough literature review reveals varied and complex perceptions that are shaped by cultural, social, and educational factors. According to Maheu-Giroux and Filippi (2021), perceptions of women affected by obstetric fistula in Nigeria are predominantly negative, with many female students viewing these women through a lens of stigma and social ostracization. Their qualitative research involving focus group discussions with secondary school students in northern Nigeria revealed that affected women are often perceived as being morally or spiritually tainted. This stigmatization is linked to misconceptions about the causes of obstetric fistula, which many students incorrectly attribute to promiscuity or divine punishment. These negative perceptions contribute to the social isolation and marginalization of affected women, compounding their physical and psychological suffering. The perception factors are listed and discussed below:

1. Belief Systems

Building on this, Siddle et al. (2023) delved into the societal perceptions of obstetric fistula in Nigeria through surveys and interviews, shedding light on the deeply entrenched negative attitudes prevailing in communities. Their research revealed that these perceptions are not only widespread but also reinforced by long standing belief systems. For instance, in their interviews with community members, they found that obstetric fistula is often misunderstood as a result of moral failings or divine punishment, leading to stigmatization of affected women. Moreover, the study highlighted the perspectives of female students, who expressed sympathy and pity towards women with obstetric fistula. However, alongside these sentiments, there was also a noticeable sense of fear and avoidance. This ambivalence among students underscores a broader societal issue of lacking empathy and understanding towards the condition. It reflects a gap in knowledge and awareness, exacerbated by the scarcity of accurate information

about obstetric fistula and its causes. For example, some participants in the study mentioned how they had heard myths and misconceptions about obstetric fistula, further perpetuating stigma and isolation. This misinformation contributes to the marginalization of affected women, impacting their mental and emotional well-being. Therefore, the findings of Siddle et al. (2023) provide compelling evidence of how entrenched cultural beliefs and societal norms perpetuate a cycle of stigma surrounding obstetric fistula.

2. Psychological Factors: In a similar vein, Kelly and Kwast (2023) explored the attitudes of female students towards women with obstetric fistula in Tanzania, offering insights relevant to the Nigerian context. Their mixed-methods research encompassed quantitative surveys and qualitative interviews, revealing a complex landscape of perceptions among students. Similar to findings in Nigeria, Kelly and Kwast found that while some students expressed compassion towards women with obstetric fistula, many harboured stigmatizing views. A prevalent belief emerged among students that obstetric fistula is a consequence of personal failure or misconduct. This perception not only perpetuates stigma but also contributes to the social exclusion and discrimination faced by affected women in both Tanzanian and Nigerian contexts. The study's findings underscore the deep-seated nature of stigma surrounding obstetric fistula and highlight the critical need to address cultural and social attitudes. By unpacking these attitudes through rigorous research methods, Kelly and Kwast (2023) provide compelling evidence of the pervasive challenges that women with obstetric fistula encounter in their communities. Their work underscores the importance of targeted educational initiatives and advocacy efforts aimed at dispelling myths, promoting accurate understanding of obstetric fistula, and fostering empathy and support for affected women.

3. **Health Education**: Mselle et al. (2021) focused on the transformative role of education in shaping perceptions of obstetric fistula among Tanzanian secondary school students. Their research provides compelling evidence that targeted educational interventions can effectively alter societal attitudes, reduce stigma, and increase empathy towards women affected by obstetric fistula. Through their study, Mselle et al. implemented educational programs that specifically addressed the medical causes and consequences of obstetric fistula. They conducted pre- and post-intervention assessments to measure changes in students' attitudes and perceptions. The findings revealed a significant positive shift: students who participated in the educational sessions showed marked improvements in their

understanding and empathy towards women with obstetric fistula. For instance, prior to the intervention, many students held stigmatizing beliefs about obstetric fistula, viewing it as a consequence of personal failure or moral misconduct. However, after receiving education that emphasized the medical complexities and social implications of the condition, students demonstrated more compassionate attitudes. They were able to grasp the systemic factors contributing to obstetric fistula and recognized the importance of supportive environments for affected women.

4. **Social and cultural factors:** Holme et al. (2017) conducted a comprehensive study focusing on the cultural and social barriers that hinder positive perceptions of women affected by obstetric fistula in Nigeria. Their research utilized case studies and surveys to identify several entrenched factors contributing to negative attitudes towards these women, including religious beliefs, patriarchal norms, and societal taboos surrounding discussions about reproductive health. For example, the study highlighted how religious beliefs often frame obstetric fistula as a consequence of divine punishment or moral failure, perpetuating stigma and marginalization. Additionally, patriarchal norms dictate rigid gender roles, leading to the perception that women who experience obstetric fistula have somehow failed in their traditional roles as wives and mothers, further exacerbating their social exclusion. Holme et al.'s findings underscored the critical need for a cultural shift in perceptions through increased awareness and education about the true causes and treatment of obstetric fistula.

Collectively, these studies highlight a consistent pattern of negative perceptions towards women affected by obstetric fistula among female students in Nigeria. The findings from Maheu-Giroux and Filippi (2021) and Siddle et al. (2023) reveal that these perceptions are rooted in cultural and social beliefs that stigmatize affected women. The work of Kelly and Kwast (2023) and Mselle et al. (2021) demonstrates that educational interventions can effectively change these perceptions, reducing stigma and increasing empathy. Holme et al. (2017) and Creanga et al. (2017) further emphasize the importance of addressing the broader cultural and social context to foster positive perceptions and support for affected women. The negative perceptions identified in these studies have significant implications for the well-being and social integration of women with obstetric fistula. They contribute to the isolation and marginalization of affected women, exacerbating their physical and emotional suffering. The consistent finding across

all studies is that negative perceptions are widespread and deeply ingrained, highlighting a critical area for intervention.

5. **Stigmatisation**: Creanga et al. (2017) conducted a study in Ethiopia that explored the profound impact of community perceptions on women living with obstetric fistula, a context that resonates with challenges faced in Nigeria. Their research illuminated how pervasive negative attitudes towards obstetric fistula patients are detrimental, particularly affecting the mental well-being and social reintegration of affected women. For instance, Creanga et al. found that community perceptions often stigmatize women with obstetric fistula as being cursed, morally flawed, or socially undesirable. These beliefs not only isolate affected women but also contribute to their exclusion from community life and access to essential support services. Importantly, the study highlighted how such negative perceptions are internalized by individuals within the community, including female students, who then perpetuate these biases through their own attitudes and behaviours. By demonstrating the alignment of their findings with the Nigerian context, Creanga et al. underscored the need for concerted efforts to shift community perceptions.

5.0 Conclusion and Recommendations

Muleta et al. (2018), like several authors, provides contextual insights suggesting that behavioural responses are influenced by community perceptions and the quality of healthcare services available. The findings underscore the need for comprehensive strategies that address both individual attitudes and systemic barriers to support for obstetric fistula survivors. Community perceptions significantly influence students' behaviours, indicating that broader societal attitudes need to be addressed to foster supportive behaviours among students. When the community collectively views obstetric fistula as a serious health issue rather than a moral failing, students are more likely to adopt supportive behaviours. For instance, in communities where there is a collective effort to support and rehabilitate affected women, students are more likely to engage in positive behaviours such as advocating for affected peers, participating in community support groups, and assisting in reintegration efforts. This collective community support can create an environment where students feel encouraged and empowered to act empathetically towards affected individuals. Conversely, in communities where obstetric fistula is highly stigmatized, students may internalize these negative attitudes, leading to behaviours that isolate and marginalize affected individuals.

Just like other reproductive health challenges, the dimension of the underlying causes, the physical and psychological implications of obstetric condition on the victims, it is evident that the perception is related to the cultural and religious interpretation of the etiology, the manifestation of pains and discomfort and the anticipated consequences of the medical condition. Some of the perception factors found in the literatures, though may play out in all or parts in some geopolitical zones in Nigeria, as in other African countries highlighted, but specific research which utilises either quantitative or qualitative methods among residents will identify, in concrete terms, the peculiarities of each region. This remains an area of further studies on this theme, to cover the gap in research. Some other recommendations are listed and discussed in the next section.

The following recommendations are made for policy formulation and implementation:

(a) Since most studies reported the low level of knowledge about the health condition among the secondary students in most parts of the country, efforts at increasing awareness through agents of socialization will increase light shedding on the phenomenon of obstetric fistula.
(b) Education as an instrument of social change and formal education affords opportunities to acquire more knowledge. There is therefore, the need to include obstetric fistula as an item in the curriculum of one of the health subjects taught in secondary schools to boost the level of knowledge and further moderate female students' perceptions about the reproductive health condition among others.

References

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179-211.

Ahmed, S., & Holtz, S. A. (2017). Social and economic consequences of obstetric fistula: Life changed forever? *International Journal of Gynecology & Obstetrics*, 99(S1), S10-S15.

Ahmed, A., Ariff, S., & Muneer, S. (2021). Maternal health in rural India: Challenges and strategies. *Indian Journal of Community Medicine*, 46(2), 175-179.

Ahinkorah, B. O., Ameyaw, E. K., & Seidu, A. A. (2020). Analysis of barriers to healthcare access and utilization among adolescents in sub-Saharan Africa. *BMC Public Health*, 20(1), 1-12.

Ahinkorah, B. O., Ameyaw, E. K., & Seidu, A. A. (2020). Women's education level, antenatal care use, and skilled birth attendance in West Africa: a meta-analysis. *Archives of Public Health*, 78, 1-11.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. *Prentice-Hall, Inc.*

Bangser, M. (2022). Obstetric fistula and stigma. *The Lancet*, 367(9509), 535-536.

Carpenter, C. J. (2020). A meta-analysis of the effectiveness of health belief model variables in predicting behaviour. *Health Communication*, 25(8), 661-669.

Champion, V. L., & Skinner, C. S. (2018). The Health Belief Model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behaviour and health education: theory, research, and practice* (pp. 45-65). Jossey-Bass.

Creanga, A. A., Ahmed, S., & Genadry, R. R. (2017). Prevalence and determinants of obstetric fistula in Ethiopia: Results from the 2005 national demographic and health survey. *Obstetrics & Gynecology*, 110(3), 630-635.

Dennis, C., & Radolph, C. (2020). Addressing obstetric fistula in northern Nigeria: Challenges and opportunities. *African Journal of Reproductive Health*, 24(4), 112-117.

Donnelly, K., Weitz, T. A., & Gerber-Finn, L. (2021). Girls' and women's health: An overview. *The Future of Children*, 25(2), 15-29.

Ezeonu, P., & Udigwe, G. O. (2023). The place of public enlightenment campaigns in prevention and control of obstetric fistula in Enugu State, Nigeria. *Nigerian Journal of Clinical Practice*, 17(5), 589-594.

Federal Ministry of Health, Nigeria. (2020). National strategic framework on obstetric fistula elimination in Nigeria.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behaviour: An introduction to theory and research. *Addison-Wesley Pub. Co.*

Freimuth, V. S., Quinn, S. C., Thomas, S. B., Cole, G., Zook, E., & Duncan, T. (2021). African Americans' views on research and the Tuskegee Syphilis Study. *Social Science & Medicine*, 52(5), 797-808.

Goffman, E. (1963). Stigma: Notes on the Management of Spoiled Identity. *Prentice-Hall*.

Holme, A. M., Breen, M., & MacArthur, C. (2017). Obstetric fistula: A study of women managed at the Monze Mission Hospital, Zambia. *Journal of Obstetrics and Gynaecology*, 27(7), 689-695.

Ijaiya, M. A., Aboyeji, A. P., & Olatinwo, A. W. (2020). Obstetric fistula in Nigeria: Predictors of knowledge and attitudes among reproductive-aged women in Nigeria. *Journal of Obstetrics and Gynaecology*, 30(2), 165-168.

Johnson, L., Smith, K., & Brown, T. (2020). Cultural beliefs and practices influencing obstetric fistula in Gusau, Zamfara State: A qualitative study. *International Journal of Gynecology and Obstetrics*, 150(2), 193-198.

Kayondo, M., Wasswa, S., Kabakyenga, J., & Mukiibi, N. (2021). Predictors and outcome of surgical repair of obstetric fistula at a regional referral hospital, Mbarara, western Uganda. *BMC Urology*, 11, 23.

Kelly, J., & Kwast, B. E. (2023). Traditional birth attendants: A resource for health education? *Health Policy and Planning*, 8(1), 48-56.

Maheu-Giroux, M., & Filippi, V. (2021). Inequities in obstetric fistula care and prevention: A review of the literature. *International Journal for Equity in Health*, 10(1), 20.

Montano, D. E., & Kasprzyk, D. (2018). Theory of reasoned action, theory of planned behaviour, and the integrated behavioural model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behaviour and health education: theory, research, and practice* (pp. 67-96). Jossey-Bass.

Mselle, L. T., Moland, K. M., & Mvungi, A. (2021). Exploring the social consequences of obstetric fistula: An overview of the literature. *International Journal of Women's Health*, 3, 77-82.

Mselle, L. T., Kohi, T. W., & Mvungi, A. (2021). Counselling and knowledge on obstetric fistula prevention among pregnant women in rural Tanzania: a cross-sectional study. *BMC Pregnancy and Childbirth*, 11(1), 1-10.

Muleta, M., Hamlin, E. C., Fantahun, M., Kennedy, R. C., & Tafesse, B. (2017). Health and social problems encountered by treated and untreated obstetric fistula patients in rural Ethiopia. *Journal of Obstetrics and Gynaecology Canada*, 29(10), 826-829.

Muleta, M., Rasmussen, S., & Kiserud, T. (2018). Obstetric fistula in 14,000 rural Ethiopian women. *Acta Obstetricia et Gynecologica Scandinavica*, 87(8), 1010-1016.

Musa, A., Kabir, M., Muhammad, S., & Sufiyan, M. (2018). Awareness and practices of women on obstetric fistula in Bauchi State, Nigeria. *Journal of Public Health and Epidemiology*, 10(12), 433-438.

Nutbeam, D. (2020). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15(3), 259-267.

Obare, F., van der Kwaak, A., & Birungi, H. (g12019). Factors associated with unintended pregnancy, poor pregnancy outcomes and post-partum contraceptive use among HIV-positive female adolescents in Kenya. *BMC Women's Health*, 19(1), 1-14.

Onasoga, O. A., Afolayan, J. A., & Oladokun, O. A. (2017). Determinants of maternity care services utilization among married women of reproductive age in Nigeria. *International Journal of MCH and AIDS*, 6(1), 30-43.

Raassen, T. J., Verdaasdonk, E. G., Vierhout, M. E., & Jongejans, E. (2021). Posterior vaginal wall prolapse in Benin City, Nigeria. *International Journal of Gynecology & Obstetrics*, 114(1), 64-67.

Rosenstock, I. M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 328-335.

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the Health Belief Model. *Health Education Quarterly*, 15(2), 175-183.

Siddle, K., Mlay, R., & Moyo, P. (2023). Community and healthcare provider perceptions of obstructed and fistula-related childbirth in rural Tanzania. *African Journal of Reproductive Health*, 17(4), 159-170.

Tebeu, P. M., de Bernis, L., Doh, A. S., Rochat, C. H., Delvaux, T., & Bensaid, T. (2022). Risk factors for obstetric fistula in the Far North Province of Cameroon. *International Urogynecology Journal*, 23(3), 387-394.

Thaddeus, S., & Maine, D. (2023). Too far to walk: maternal mortality in context. *Social Science & Medicine*, 38(8), 1091-1110.

Turan, J. M., Johnson, K. & Polan, M. L. (2023). Experiences of women seeking medical care for obstetric fistula in Eritrea: implications for prevention, treatment, and social reintegration. *Global Public Health*, 6(1), 56-72.

UNFPA. (2022). Obstetric fistula: A silent tragedy. Retrieved from https://www.unfpa.org/obstetric-fistula-silent-tragedy

Velleman, Y., Puskas, M., & Hawkes, S. (2018). Children as carers: the global context. *University of London Press, London*.

Wall, L. L., Arrowsmith, S. D., & Briggs, N. D. (2023). Obstetric fistulas in Nigeria and Niger: A literature review of studies published since 1990. *African Journal of Reproductive Health*, 8(1), 29-40.

Witte, K. (2022). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs*, 59(4), 329-349.

Women and Health Alliance International. (2021). Addressing obstetric fistula in Kenya: Challenges and progress. Retrieved from https://www.wha-international.org/addressing-obstetric-fistula-in-kenya

World Health Organization. (2023). Obstetric fistula in conflict-affected settings: Yemen and Afghanistan. Retrieved from https://www.who.int/news-room/fact-sheets/detail/obstetric-fistula-in-conflict-affected-settings

Effects of Non-Verbal Communication in Apparels: Opinion Survey of Adult Public Perception of the Secret Language of Jeans in Asaba Urban Delta, Nigeria

J. N. Odedede

Department of Mass Communication, Delta State University, Abraka, Nigeria
E-mail: odeonyechoa@yahoo.co.uk
https://doi.org/10.57233/gijmss.v7i3.13

Abstract

This study examined the effects of non-verbal fashion communication: Opinion survey of adult public perception of the secret language of Jeans in Asaba Urban, Delta, Nigeria. Qualitative and Quantitative methods were used to elicit information. One thousand two hundred (1200) questionnaires were administered and collected. A sample of 400 respondents was drawn from three categories of adults; students, artisans and traders residents in Asaba urban Delta. Data were explored using the statistical packages for Social Science (SPSS) version 2.0 to test for the variation observed in wordless fashion communication. The results revealed that jeans symbolizes references and is accepted by both male and female in the Asaba. It symbolizes social interface (58.33%), cultural context (64.84%) and enhance identity (66.66%). Finally, jeans clothing conformed human body and perceived as a product of identity. This study also revealed that wearing of jeans among the adults has communication modes, social and cultural implications. Generally, perceptions held by Asaba urban residents reflect different value system among demographic strata.

Keywords: Adult, fashion communication, Jeans, non-verbal

1. Introduction

Jeans fashion is a product of clothing and a type of culture hybrid used across cultures. Clothing is used to convey many facets of a person's social identity, socio-economic status, gender, religion and occupation (Kodzoman, 2019). Clothing is a language of nonverbal communication that through its symbols conveys much about the wearer (Mona Mohamed *et al*.,2022). It's a transmission of information through symbolic messages (Todorovic *et al*., 2014). Similarly, Tajuddin (2018) regarded jeans as *prima- Donna* of fashion. Miller & Woodward (2012) also affirmed the worldwide use of jeans. Thus, jeans as a product of clothing can tell information and about social identities. Symbolically, it represents membership of a particular group (Steffen, 2009). Thus, clothing not only shows our appearance but also represents our interior world (Todorovic.et

al.,2014).What we wear says a lot about a person. It differentiates people of lower class and higher by expressing their personality. Jeans clothing was first produced for the Genoese Navy because of its durability and worn comfortable while swabbing the deck. Also, Jeans clothing is an inseparable part in human social nature, and accepted as modern clothing and casual clothing in United States of America, Europe and other parts of the world where individual are considered as positively equal.

However, values may differ in other social context. Jeans denote several meanings within a particular social context for example, wearing of Jeans in the Asia or America continents may mean different things with regards to jeans worn in African cultures. Jeans clothing provides a pictorial understanding into the lifestyle of a specific social environment. Presently, both the eastern and the western world wear jeans as fashion which varies in terms of color, brands and style. Thus, the non-verbal communication accompanied with jeans clothing is an integral aspect that conveys, a range of social instruction. Therefore, the intent of this work is to explicitly conduct a perceptive public opinion survey of non verbal fashion communication among adults of the secret language of jeans in Asaba urban area of Delta State, Nigeria.

Despite the facts that clothes are peculiar to culture, the non-verbal communication of jeans apparel has become a ubiquitous aspect of modern fashion with individuals using jeans to convey subtle messages about their personality, status and values. However, the secret language of jeans remains largely unexplored. Also, lack of understanding the meaning and interpretations attached to different jeans style, colors, and designs stifle personal expression. More so the growing popularity of jeans among adult in Asaba, its concomitant implication on cultural value and identity perpetuating harmful gender norms. Several factors might influence the ubiquitous use of jeans in Asaba. This is worrisome and raises important questions about the role of non-verbal communication in shaping social perception and interactions.

It is against this backdrop that this study seeks to conduct a perceptive opinion survey of non-verbal fashion communication among adults of the secret language of jeans in Asaba Urban area of Delta State, Nigeria. The specific objectives of this study are; to identify the various meanings and interpretations associated with different jeans styles, color and designs among adults in Asaba. Also to examine the relationship between jeans apparel and social perceptions among adults in

Asaba. Others are; to determine the extent to which the 'secret language of jeans' influences social interactions and relationships in Asaba and to find out the cultural and social influences that shape perceptions of jeans as a form of non-verbal communication among adult in Asaba. This study is significant for the reasons outlined below:

i Studying nonverbal communication focusing on the context of jeans can reveal valuable insights into human social interactions, cultural dynamics, and individual identity expression.

ii It will help us to know our cultural values, norms, and attitudes. For example, jeans may represent rebellion and individualism in one culture while symbolizing casualness and comfort in another.

iii Studying nonverbal communication through jeans can provide insights into how individuals use clothing to communicate identity without saying a word.

iv It will aid in the connotative meanings of Jeans clothing for example, bikini for young generation is sexy, classy but the older generations, bikini is considered as indecency.

2.0 Literature Review

2.1 Conceptual Definitions

Jeans and Types

Jeans have become an increasingly global form of dress and are worn by all ages. People of different genders, sex-qualities, social classes, religion and races wear jeans. Jeans convey intrinsic information about the wearer and serves as a reflection of period. Jeans is a type of sturdy cloth which symbolizes rebellion among teenagers from the subculture. Research shows that jean fabric originated in Nimes, France during the middle Ages (Howard, 2011). Jeans are most common clothing in our closet regardless of the time; place or manner in which you choose to wear them in late 1940s jeans clothing became associated with youth culture and as fashion designer labels. Later in 19th century, Jean changed from the rugged work wear fashion to the stylish wide leg jeans for men and low-rise hip hugger jeans for women which are now popular in the youth market.

Language Semantic of clothing

Language is a type of communication, sharing of ideas, transfer thoughts and other activities through words. Language in clothing can be interpreted as denotative and connotative. More so, connotative meaning is about feelings; while the denotative meaning of jeans is regarded as casual clothing. Also, denotative

and connotative meanings are acceptable signs that consistently communicate meaning of a word.

Jeans Clothing Fashion as Modalities of Communication

Clothing can communicate and influence one's mood (Tiggemann *et al*., 2009). Clothing fashion conveys information that moves the audience to act or think. Jean fashion can be used to influence audience. Jeans fashion is a product of clothing that expresses who we are and what we value. Jeans fashion a product of clothing performs the basic modes of communication i.e. interpretative functions by transmitting information between individuals using sets of behavioral symbols and signs. It communicates individual popularity and status through appearance and presentation. It is interpersonal though non-verbal cues displayed in clothing like display of body shape through a tight jean to attract opposite sex.

Non – Verbal Communication

Nonverbal communication encompasses all body language communication. A communication that is not limited to the use of words but by means of facial expression, gestures, eye contact, posture, tone of voice, bodily contact, spatial behavior, clothes and any other aspects of appearance and smell (Larsson, 2014) Nonverbal communication plays a crucial role in conveying our thoughts, emotions and intentions more effectively than words, for example our facial can convey a wide range of emotions like happiness ,sadness, fear and surprise expression Also, nonverbal cues provide information about a person's mood, feelings and attitude.

2.2 Empirical Literature Review

Social Psychology of clothing

Clothes are powerful signal to our peers and strangers projecting the self image, we want to display (Dunne, 2010). Jeans may be regarded as cue for sexual signals creating attractiveness in today society for both genders. It gives vivid description of us. Individual expresses their feelings through clothing (Sullivan *et al.,* 2017). Clothing communicates hidden secrets that exert powerful influences on our self perception and confidence. Clothing improves our image and influences the wearer's mood (Gurney *et al.,* 2016). For example, security uniform may indicate safety (Civile & Obhi, 2017). Furthermore, clothing colour conveys value attitudes, personalities or individuality (Wolfe, 2012). Similarly, Adam & Golinsky (2012) reported that when clothing is worn it has symbolic

meaning to the wearer and also has behavioral consequences. Howlett *et al*.,(2015) study of subtle clothing changes participants rated women as less competent when their blouses were unbuttoned as compared to buttoned. Also, Graff *et al.,(*2012) and Murnen *et al.,(*2013) research shows that women in provocative clothing are rated less competent. Whereas it is clear in their findings that dressing provocatively can indeed have negative consequences and right combination of clothing project power. Sontag& Lee (2004) study the importance of body image in relation to clothing. They affirmed that body image may affect clothing behavior and clothing may affect body image and self-feelings.

Synopsis of various Secret Languages of Jeans Clothing

Jeans is a product of clothing, widely utilized by people of every age, colour, sex, race, profession etc. Jeans is fashionable and various style variation include drop Crotch Jeans, Taper Jeans, Regular legs, Wide leg Jeans, Hip – Huggers, High waist and Low waist Jeans, Boy friend Jeans, Dad Jeans, Flare Jeans, Bell – bottoms, Skinny leg jeans, Saggy Jeans, printed jeans, painted jeans, patched jeans and embroidered jeans, all communicate information and have different effects on the wearer and the eyes that sees them. Jeans are provocative wears that reveals sexuality and repel attraction of the opposite sex. The fitness influences the body image revealing bodies as targets of objectification; body appearance and true self. The social attractiveness of jeans transforms the wearer signaling individual status. The comfort it brings to wearers suggests casualness from childhood – adulthood of all ages and by all professions. The symbol and labels at the back pocket signal social association of class/groups. Also, colors in Jeans clothing communicate attractiveness or unattractiveness (Kodzoman, 2019) and enhance visual aesthetic appearance. Color defines wearer and develop symbolic meaning (Brannon, 2010) and cue for sexuality and seductive. Generally, color affect attractiveness and give sensitive indication in social context. Several studies have regarded jeans clothing as a significant aspect of nonverbal communication with different styles and designs conveying different messages. Roberts *et al*., (2010) research findings revealed that clothing color affects attractiveness.

Perception of Jeans Apparel

A person self identity determines the clothing preference and use. Jeans clothing affect individual impression differently because the information it communicates differs. Some viewed jeans as fashionable and attractiveness in the social context. Others see it as business attire worn in important place as a person work identity (Kang *et al.,* 2011). More so, some perceived jeans clothing as stereotyping,

discriminating and imitating social hierarchy. Jeans clothing can reflect power between groups; a subliminal advertising between gender. Other perceptions include national identity, economic, social and political stands promoting awareness that affect individual life. Slepian (2015) research finding shows that wearing formal clothing is related to psychological formality and social distance, while casual clothing is related to intimacy and familiarity. Individuals are believed to use clothing to define and communicate their social identities to others (Asenjo, 2014).Thus, people who wear formal clothing are regarded more competent and rational than those who wear casual clothing. Holmlund *et al.,* (2011) reported that older women prefer fabrics with good quality, good finish, comfortable fit and suitable fabrics for their shape. On psychological dimensions, Au Lam & Ho (2016) studied older men and women in terms of fashion attribute in Hong Kong and pointed out that older men had a significant lower preference for vibrant colours than older women.

2.3 Theoretical Framework

The study is based on Social Identity theory. The concept intersects in the realm of human interactions. Social identity theory posits that individuals define themselves based on their membership in social groups and use this social group's membership to shape their self concept and behavior. The theory is propounded by Taijfel and John Tuner in 1979 and it consists of three main components; First the cognitive which deals with the process of categorization where individuals group themselves and others into social categories race, gender and nationalities. Second the Affective Components which involves the emotional investment in ones group membership that leads to loyalty and attachment. Third is the Evaluative component this is often accompanied by a desire for positive distinctiveness and a need to maintain or enhance ones social status. Social identity theory strength relies on the ability to shape individual self-esteem and their desire for positive distinctiveness. Also, critics argue that social identity theory oversimplifies complex social dynamics and allow the scope is too wide that it may not fully capture the specific contexts. Islam (2014) affirmed that "individuals define their own identities with regard to social groups and such identifications work to protect and bolter self-identity".

Social identity theory (SIT) is highly relevant to the study particularly in the context of Group membership. Jeans can be a symbol of a group membership with different styles or brands signifying affiliation with specific social groups. In the context of identity expression, Jeans can express one's identity, values and social

interest. Also, Jeans can be a form of nonverbal communication revealing the wearer's personality, social status, group identity dynamics and cultural expression

3.0 Methodology

Study Area

The geographical location for this research is Asaba, capital of Delta State with a population of 149,603 (National Population Commission, 2006) having a metropolitan population of 500,000 people. The study will focus on the adult residents in Asaba with special emphasis on the following; adult undergraduate students in Dennis Osadebay University, Asaba, traders and artisans were selected for the study. These categories of participant were chosen because of their varied interactions in different social context allowing them to be in position to provide reliable data and exhaustive qualitative insights in the study of Jeans as nonverbal communication.

Research design

The study adopted the survey research design to investigate the non-verbal fashion communication; opinion survey of adult public perception of secret language of jeans in Asaba Urban Delta, Nigeria. Questionnaire was used as an instrument for data collections containing specific items related to the study. Also, questionnaire was administered face to face among adult residents of Asaba within duration of three weeks.

Population of study

Population of the study comprises of adult, within the category of 18 and 40yrs for both Male and Female who resides in Asaba urban, Delta, Nigeria. A total population of 199,746 was selected showing the number of male as 101,287 and female 98,459 (National Population Commission 2006).

Sample Size Selection

Four hundred was calculated using the Yemane formula (1967) to determine the sample size for this study and calculation procedure of Odedede (2022) was adopted.

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

N = Sample size
n = Population size
e =Level of precision at 95% confidence
199,746/ 1 + 199,746 $(0.05)^2$
N = 199,746 / 199,747 x (0.0025)
199,746 / 499.3675 = 399.9 =400

Research Instrument

A total of four hundred (400) questionnaires were self-administered to adults' male and female undergraduates in Dennis Osadebay University (75 for each of the categories), traders (100) and artisans (150) in Asaba Delta State, Nigeria. The questionnaire copies were structured into two parts. The part A contains the demographic variables of respondents, while part B consisted of questions regarding the substantive issues of the research.

Data collection

Questionnaire was used as the instrument for data collection

4. Data Presentation and Discussion

Data elicited from the questionnaire was analyzed with the Statistical Package for Social Science version 2.0. The result was presented in form of mean and percentages to test the variation observed in non-verbal fashion communication: opinion survey of adult public perception of the secret languages of Jeans in Asaba urban Delta, Nigeria.

Table 1: selected respondents in Asaba urban Delta, Nigeria

Respondent	Frequency	Percentage (%)
Students	150	37.5
Artisan	150	37.5
Traders	100	25
Total	400	

Table 2: Social demographic variables of respondents

Sample Size	400
Sex	
Female	233 (58.25)
Male	167 (41.75)
Age	
18years	100 (25.00)
20-25	167 (41.75)
25-30	133 (33.25)
Occupation	
Student	167 (41.75)
Trader	120(30.00)
Artisan	113 (28.25)
Marital Status	
Single	150 (37.50)
Married	120 (30.00)
Cohabiting	130 (32.50)

Source: Responses from the questionnaire

Table 3: What identity formed a status for wearing jeans?

S/N	Description	Percentage (%)
1	Do jeans fashion from ones identity or social class Yes No I don't know	 220 (55.00) 57 (13.25) 123 (30.75)
2	Do wearing jeans makes persons trendy Yes No I don't know	 200 (50.00) 150 (37.50) 50 (12.50)
3	Does wearing jeans stick ones out from other and show originality Yes No I don't know	 213 (53.25) 110 (27.50) 77 (19.25)
4	Do wearing of jeans forms individual nationality Yes No I don't know	 250 (62.50) 117 (29.25) 33 (8.25)

5	Do wearing jeans form individual economic status Yes No I don't know	 197 (49.25) 137 (34.25) 66 (16.50)

Source: Responses from the questionnaire

Table 4: How effective do jeans transmit non-verbal communication?

S/N	Description	Percentage (%)
1	Do jeans clothing inform others our personal and collective affinities? Yes No I don't know	 167 (41.75) 116 (29.00) 117 (29.25)
2	Do jeans clothing enhance appearance? Yes No I don't know	 234 (58.50) 83 (20.75) 83 (20.75)
3	Do jeans clothing gives wordless signals? Yes No I don't know	 183 (45.75) 144 (36.00) 73 (18.25)
4	Do jeans clothing to draws sexual attention? Yes No I don't know	 73 (18.25) 210 (52.50) 117 (29.25)
5	Do jeans clothing enhance identity? Yes No I don't know	 267 (66.75) 68 (16.00) 67 (16.75)

Table 5: How do adult perceive jeans fashion?

S/N	Description	Percentage (%)
1	Does jeans cloths gives negative impression ?	
	Yes	200 (50.00)
	No	133 (33.25)
	I don't know	67 (16.75)
2	Do jeans clothing give practical reaction?	
	Yes	217 (54.25)
	No	117 (29.25)
	I don't know	67 (16.75)
3	Do wearing jeans cloths make individual feel well, dress and current?	
	Yes	193 (48.25)
	No	90 (22.50)
	I don't know	117 (29.25)
4	Does jeans clothing influence mood?	
	Yes	217 (54.25)
	No	90 (22.50)
	I don't know	93(23.25)
5	Is jeans clothing considered as immodest?	
	Yes	143 (35.75)
	No	107(26.75)
	I don't know	150 (37.50)

Source: Responses from the questionnaire

Table 6: What is the symbolic reference of jeans in contemporary society?

1	Do jeans clothing symbolize social interface?	
	Yes	233(58.25)
	No	97 (24.25)
	I don't know	70 (17.50)
2	Do jeans replicate ones appearance?	
	Yes	157 (39.25)
	No	103 (25.75)
	I don't know	140 (35.00)
3	Do jeans perceived as a cultural context?	
	Yes	148 (37.00)
	No	133 (33.25)
	I don't know	119(29.25)
4	Is jeans clothing seen as a denial of social class?	
	Yes	177 (29.25)
	No	113(28.25)
	I don't know	110 (27.50)
5	Do jeans clothing represent juvenile?	
	Yes	93(23.25)
	No	90 (22.50)
	I don't know	217 (54.25)

Source: Responses from the questionnaire

Discussion of Findings

Three categories of adult were selected from the Asaba urban Delta for this study. Four hundred questionnaires were distributed each for this selected category making it a total of 400 questionnaires that was administered. Majority of the respondents were male (58.25%) and female (41.75%). This shows that male respondents wear jeans trousers more than female respondents. This also signifies that jean trousers connote masculinity. Also, the study present three different age groups 18years (25%), 20 -25 (41.75%) and 25-30years (33.25%). This indicates that the respondents between the age 20-25 have high preference for jean clothing. The study also revealed the occupation of the respondents' student

(41.75%), Artisan (28.25%) and Trader (30.00%). This indicates that majority of the respondents' were students with an average percentage of 41.75%. More so, the marital status of the respondents shows that single (37.50%), married (30.00%) and cohabiting (32.50%). These also affirmed that respondents were mostly single (37.50%). Furthermore, section B the study explains the following research questions.

Research questions carried out to examine what identity form a status for wearing jeans established that the respondents accepted that wearing jeans forms ones identity, (55%) makes one trendy (50%) show originality (53.33%) from individual nationality (62.5%) and forms individual economic status (49.25%). These indicates that jeans are widely embraced (Asenjo, 2014) as part of Asaba social/ cultural wears and a classic symbol. Also, result on question related to how effective do jeans transmit non-verbal communication shows that jeans give wordless signals (45.75%) and collective affinities (41.75%). Jeans enhance appearance (58.50%) and enhance identity (66.75%). These give a positive impression that a jean communicates and gives non-verbal signals. More so, the result for question on how adult perceived jeans fashion shows that jeans can be perceived in different ways. Respondent agreed that jeans can give negative impression (50%) and practical reaction (54.25%). Jeans makes individual current (48.25%) and influences mood (54.25%). It can also be perceived as immodest. The result confirmed versatility of jeans cloths and the different meaning which it connotes.

Further, result on the symbolic references of jeans in contemporary society revealed that jeans is symbolized as social interface (58.25%) as cultural context (37.00%) replicate appearance (39.25%) as a denial of social class (29.25%) and as juvenile (23.25%). This reinforces the fact that jeans clothing is a symbolic product. From the foregoing it is obvious that jeans represent democratization conformed to human body. Generally, accepted by everyone, a symbol of comfort and perceived by adult as a product of identity.

5. Conclusion

The study provided insights on how jeans fashion, a product of clothing that transmit meaningful non-verbal signals. Generally, jeans clothing were accepted by the three categories of adults (undergraduate students, artisans and traders) in the Asaba urban Delta as a social fabrics.

References

Adam, H. & Galinsky, A.D. (2012). Enclothed Cognition. *Journal of Experimental Social Psychology*, 48,918 – 925

Asenjo, O. (2014). Power, social identity, and fashion consumption. Master's Degree Thesis, Stockholm Business School, 1 – 48

Au J., Lam, J. & Ho, C. (2016). Design preferences and experience of older peoples choice in fashion in Hong Kong. *International journal of Fasion Design, Technology and Education. 9(3): 183-192*

Brannon, E. (2010). Fashion forecasting. Fairchild Books, New York.

Civile, C., & Obhi, S.S. (2017). Students wearing Police uniforms exhibit biased attention toward individuals wearing hoodies. *Fontiers in Psychology*, 8, 62.

Dunne, L.S.(2010). Clothing in practice: Key design barriers to commercialization. Fashion Practice. 2 (1), 41 – 66.

Graff, K., Murnen ,S.K. & Smolak, L. (2012). Too sexualized to be taken seriously? Perceptions of a girl in childlike vs sexualizing clothing. *Sex Roles* 66, 764-775.

Gurney, D.J., Howlett, N., Pine, K.J., Tracey, M., & Moggridge, R. (2016). Dressing up posture: The interactive effects of posture and clothing on competency judgments. *British Journal of Psychology 108(*2), 436 - 451

Hartmans, C., Heremans, S. Langrain M; Yan Asch K & Schoenmakers, B. (2014). The doctors new Clothes: professional of fashionable? *Primary Health Care* 3 (3), 1-5.

Holmlund, M., Hagman A. & Polsa, P. (2011). An exploration of how mature women buy clothing: empirical insights and a model. *Journal of Fashion Marketing and Management,* 108-122

Howard, M.C. (2011).Transnationalism and society: An introduction, McFarland, 262 pp

Hurlbert, A. & Ling, Y. (2012). Understanding colour perception and preference. In: Best (Ed.) Colour design: Theories and Applications. Woodhead publishing series in Textiles 129 – 157.

Islam, G.(2014). Social Identity Theory. In: *Encyclopedia of critical psychology,* Springer –Verlag, Germany.

Kang, M. & Johnson, K.(2011). Men at works: Using dress to communicate identities. *Journal of Fashion Marketing and Management* 15 (4), 412 – 427

Kodzoman, D. (2019). The Psychology of Clothing: Meaning of colors, body image and gender expression in Fashion. *Scientific Review*

Larsson, S.P. (2014). Do you see what I see: A cross – cultural study on interpretation of clothing as non – verbal signal? Master of Science, Department of Applied Information Technology, University of Gothenburg, 2 – 62

Miller, D. & Woodward, S. (2012). Blue Jeans: The Art of the ordinary. University of California Press.

Mona Mohamed, A.E. (2022). Clothing visual communication in printed fashion designs with it's nonverbal communication. MJAF, 296-323.

Murnen, S.K. & Smolak, L. (2013). I'd rather be a fashion model than a famous scientist. The rewards and cost of internalization in Zurbriggen El.,Roberts TA., ed. The sexualization of girls and girlhood; causes, consequences and resistance. Oxford University Press 235-255.

Odedede, J.N. (2022). Impact of COVID- 19 Lockdown on youth Sexuality in Delta State, Nigeria: Media View. *Gusau International Journal of Management and Social Sciences* 5 (1), 264 -279.

Robert, S.C., Owen,R.C., Havlicek, J.(2010).Distinguishing between perceiver and weaer effect in clothing color –associated attributions. *Evolutionary Psychology* 8(3), 350-364.

Slepian, M.L., Ferber, S.N., Gold, J.M., & Rutchick, A.M. (2015). The cognitive consequences of formal clothing. *Social Psychological and Personality Science* 6 (6), 661 – 668.

Sontag, M.S, & Lee ,J.(2004). Proximity of clothing to self-scale. Clothing and Textile Research journal (22), 161-177.

Steffen, D. (2009). Categorizing Product Meaning: An investigation into the product Language of Clothing and Fashion. In L.Chen (eds.). Design and semantics of form and movement. https://www.northumbria.ac.uk/static/5007/design

Sullivan,C.R., Kazlauciunas, A., & Guthrie, J.T.(2017). Colored Apparel-Relevance to attraction in Humans. *Journal of fashion Technology & Textile Engineering* 5(3), 1 -12.

Tajfel, H. & Turner, J.C. (1979). An integrative theory of intergroup conflict: In W.G. Austin & S. Wordiel (Eds.),The Social psychology of intergroup relations (pp. 33 -47), Monterey, CA. Brooks.

Tajuddin, F.N. (2018). Cultural and social identity in clothing matters "different cultures, different meanings". *European Journal of behavioural Sciences*, 1 (4) 1 -25

Tiggemann, M., Lacey C., (2009) .Shopping for clothes; Body satisfaction, appearance investment and function of clothing among female shoppers. Body Image (6) 285-291

Todorovic,T.,Toporisic,T.,Pavko-cuden,A. (2014).Clothes and costumes as form of Nonverbal communication.''Scientific Review/pregledni znanstveni clanek.57(4)321-333

Turner, T.S. (2012).The Social skin HAU: Journal of Ethnographic Theory, 2(2), 486 -504.

Wolfe, M.G. (2012). Fashion. Goodheart Trinity Park.

A Review of Climate Change, Fodder Degradation and Access Deprivation as Drivers of Farmer - Herders' Conflict, Unsustainable Livestock Production and Insecurity in North-Western Nigeria

[1]Rabi'u Tukur, [2]Ismail Muhammed, [1]Mohammed Mohammed Sani and [1]Ali Danladi Abdulkadir

[1]Department of Environmental Resource Management, Federal University Dutsin-ma, Katsina State, Nigeria
[2]Department of Geography, Federal University Dutsin-ma Katsina State, Nigeria
Corresponding E-mail: rtukur@fudutsinma.edu.ng
https://doi.org/10.57233/gijmss.v7i3.14

Abstract

Climate change-induced fodder degradation and access deprivation have emerged as significant drivers of conflict between farmers and herders, exacerbating insecurity in North Western Nigeria. This review article delves into the intricate relationship between climate change, livestock production, resource access, and conflict dynamics in the region. The impacts of climate change on fodder availability and quality, compounded by unsustainable grazing practices, have led to dwindling resources for livestock, thereby heightening competition and tension between farmers and herders. Drawing upon geographic, ecological, and socioeconomic perspectives, this review analyses the environmental and socioeconomic contexts shaping the conflict landscape in North Western Nigeria. Moreover, it examines the concept of relative deprivation among herders, exploring how perceived disparities in resource access fuel intergroup conflicts. The study also underscores the multifaceted nature of conflict root causes, including environmental degradation, climate variability, population growth, historical grievances, and governance challenges. Additionally, it highlights the role of policy interventions and sustainable resource management strategies in mitigating conflict and promoting peaceful coexistence between farmers and herders in the region. Ultimately, this review underscores the urgent need for holistic approaches that address both environmental degradation and socioeconomic disparities to foster sustainable development and peace in North Western Nigeria.

Keywords: Access Deprivation; Climate Change; Farmers- Herdsmen Conflict; Fodder Degradation; Insecurity; Livestock Production.

1.0 Introduction

Climate change, primarily driven by the emission of greenhouse gases (GHG), leads to increased temperatures and atmospheric warming (IPCC, 2013). The livestock sector is a significant contributor to global GHG emissions, accounting

for about 14.5% (Gerber *et al.,* 2013). Rising GHG emissions globally result in severe land degradation, loss of biodiversity, reduced water availability, and increased air pollution (Bellarby *et al.,* 2013; Thornton & Gerber, 2010, Birendra & Ashisan, 2016). Climate Change poses significant threats to global livestock systems due to its impacts on global warming and associated changes in climate variables, affecting animal feeds, water resources, animal health, and production, and impacting the processing, storage, transport, retailing, and consumption of livestock products (Godde *et al.,* 2021).

Livestock production has been crucial to human civilization, responsible for 12% of anthropogenic GHG emissions (Petr *et al.,* 2014). Sustainable intensification of livestock production systems, supported by sustainable fodder production, may become a key climate mitigation technology. However, livestock production systems vary globally, and the potential impacts of climate change on these systems are a significant concern (Godde *et al.,* 2021). The global demand for livestock products is expected to double by 2050, driven by improvements in living standards. However, climate change threatens livestock production by affecting the quality of forage, livestock feed, water availability, disease incidence, and overall biodiversity (Melissa *et al.,* 2017). Livestock production is a vital agricultural activity, contributing significantly to global food security by providing 17% of global kilocalories and 33% of global protein consumption (Melissa *et al.,* 2017). Recent data indicates that the livestock sector contributes 15% and 31% of global per capita calorie and protein supply, respectively, with regional variations (FAOSTAT, 2020). These changes can be attributed to the impact of climate change on livestock production globally.

Climate change has directly or indirectly influenced agricultural production worldwide, including crops, forage, horticulture, vegetables, forests, livestock, and fisheries. Significant changes in ecological systems have been recorded, and rapid climate change affects ecosystems and species' ability to adapt, increasing biodiversity loss (Birendra & Ashisan, 2016). Fodder crops play a crucial role in combating climate change across different regions. However, climate change has reduced grazing areas, leading to fodder crises, decreased green fodder yield (GFY), and reduced milk and meat production. These effects can result in loss of rural household income, unemployment, and dietary nutrition supply worldwide (Birendra & Ashisan, 2016). Sustainable fodder/forage/pasture management can offer ways to provide quality feed to dairy cattle, reduce livestock emissions, build and store carbon in the soil, and mitigate the effects of climate change (EIP-

AGRI, 2020). More research is needed to improve fodder yield and livestock feeds, particularly in understanding the interaction between climate change and livestock production (IPCC, 2014; Aydinalp & Cresser, 2008).

Livestock production in Nigeria faces challenges such as communal land disputes, cattle rustling, and limited access to grazing resources (Saifullahi *et al.,* 2021). Unsustainable grazing practices and climate change contribute to the degradation of grazing lands (Ayansina & Stephen, 2019). Climate change directly impacts food security and the rural economy in Northern Nigeria (Grace, *et al,* 2016). Unsustainable grazing has affected vast grazing lands in Northern Nigeria, leading to relative deprivation among herdsmen (Kingsley & Charles, 2020).

The root causes of Farmer-Harder's conflict in North-Western are both natural and man induced. Climate change contributed to loss of available grazing lands and water sources. The social and economic conditions as well contributed to escalating condition of violence. Farmer herder conflict is one of the major problems militating against rural economic development and consequently affecting Gross Domestic Product (GDP). The problem led to many security challenges such as banditry, kidnapping and robbery. The review intends to examine how climate change affect vegetal and grazing land degradation, resource access deprivation such water and fodder which are considered as drivers of forest and fodder degradation leading to farmer-herder's Conflict and Insecurity in north- western Nigeria. This review also aims to examine causes of farmer-herders conflict as found by different researchers and recommend possible solutions to the problems examined.

2.0 Conceptual Clarifications

2.1 Climate Change

Climate Change is the long term-shift in climatic variables or elements and weather patterns. These changes may be natural, but anthropogenic activities has been identified as the major driver of climate change, primarily due to burning of fossil fuels such coal, oil and gas which produces Green House Gases (GHGs). The resulting changes in global climate is altering the complex web of systems that allow life to thrive on earth such as rainfall, wind patterns, ocean currents and distribution of plant and animal species. Climate change is already affecting regions around the world. Unabated, its future negative impacts will likely be vast, costing much more than preventing it (IPCC, 2018, IRENA, 2019a, IRENA, IEA and REN21, 2018).

2.2 Access Deprivation

The social science approach to access deprivation describes it as the state of lacking access to resources and opportunities that are necessary for social well-being. These resources consist of the occupational status, educational level, financial status, socio-economic status and residence in a deprived area. The concept of social deprivation and social exclusion share a similar focus on the inability of individuals to participate fully in the life of their community or society. Two types of access deprivation are identified, Absolute Deprivation (AD) and Relative Deprivation (RD). Absolute Deprivation refers to lack of basics of life such as water, shelter, water and fuel. While Relative Deprivation is, the type experienced when individuals living status is less when compared with others, this made those individuals feels deprived (Atkinson et al, 2014). Natural resources deprivation in this context will be a situation whereby access to natural capital such as water, vegetation, soil, and other natural endowments are deprive for individual or community.

3.0 The Study Area

3.1 North Western Nigeria Geographic Outlook

North western Nigeria is located between latitudes 12°N to 14°N and longitudes 3.000°E to 10.350°E, comprising seven states: Katsina, Kano, Jigawa, Sokoto, Kebbi, Kaduna, and Zamfara. The region covers approximately 226,662 km², representing one-fourth of Nigeria's total land area. The area falls within the Sudan Savanna region, characterized by a tropical savanna climate (Tropical wet and dry climate described as Aw climate by Koppen) with distinct wet and dry seasons. Annual rainfall ranges from 450mm in the North to about 1000mm in the Southern part, with an unpredictable and unreliable pattern. The mean annual temperature is between 26°C and 28°C, but can exceed 40°C at the beginning of the rainy season (Udo, 1970, Hess *et al.,* 1996; Mortimore & Adams, 1999, Zakariyya & Muhammed, 2018 and Maiwada *et al.,* 2020).

Ecologically, the Sudan Savanna zone of North western Nigeria is dominated by grasses suitable for livestock grazing and scattered trees that can withstand drought. Human activities such as grazing and land cultivation have largely modified the vegetation, leading to its degradation. Indigenous and exotic plants are found in farmlands, forest reserves, and settlements, Some of the indigenous plants include, *Parkia biglobosa, Prosopis africana, Annegesus leocarpus, Tamarindus indica, Diospyros mespiliformis, Vitex doniana, Adansonia digitata,*

Balanites aegyptiaca, Brudella farruginea, Andropogons gayanus, Emperata Cylindrica, Casia hirtusa, Casia saberiana, Acacia nilotica, Acacia seyel, Combretum glutinosum, Combretum mole, *Ziziphus mucronata, Ziziphus spina Christie, Ziziphus mauritiana, Feidherbia albida, Cretiva adansonii* etc, and some of the exotic plants includes *Azadirachta indica, Eucalyptus cameldulensis, Lacocina lacocipala* etc (Tukur, *et al*, 2013).

North western Nigeria is an area of long historical richness of social, cultural and economic endowments that characteristically displayed common system of living. This has gone beyond the reaches of other tribes in the other parts of the country. Economically, agriculture has been the major livelihood strategy of the people. Agriculturally, animal husbandry and field cultivation form the major primary source of production and has been sustainable and catered for the teaming population of the area. Rain-fed and irrigation are two major means of cultivation which directly affect the teaming population by providing job throughout the year. Abundance of grazing and vast agricultural lands contributes to long historical successful of agricultural production. The area specialises in cereals (maize, millet sorghum, rice) and leguminous (peanut, cowpea, soya beans) crop production, with production of more than seventy percent of the grain demand in Nigeria and Neighbouring countries such as Niger, Benin, Chad, Cameroun and Mali (Tukur, *et al,* 2013).

4.0 Climate Change Impact

4.1 Climate Change and Livestock Production in North Western Nigeria

Nigeria experiences two distinct rainy seasons: the long rainy season from April to October and the short rainy season from November to March. Climate change has disrupted these patterns, resulting in irregular rainfall and prolonged droughts in some regions. As a consequence, the availability of natural pastures and water sources for livestock has dwindled, affecting their health and productivity (IPCC, 2014). Changes in local fodder crops composition are being brought on by changes in temperature and precipitation pattern which is a consequent of climate change. As a result of the decline in their nutritional content or an increase in their susceptibility to pest and diseases, several traditional fodder species may no longer be viable for livestock grazing. This emerging trend in the field of livestock production led to the introduction of potential resilient and adaptive fodder species to curtail the perceived problem of fodder shortage and scarcity (World Bank, 2019).

Climate change in Nigeria is manifesting in the form of rising temperatures, prolonged droughts, and increased frequency of extreme weather events. According to the Intergovernmental Panel on Climate Change (IPCC) report, temperature in Nigeria is projected to increase by 1.5 to 2 degrees Celsius by the mid-21st century. These temperature increases are already contributing to reduced fodder quality and availability. High temperatures can inhibit plant growth and decrease the nutritive value of forage crops, thereby compromising livestock health and productivity (IPCC, 2018). The changing climate patterns have also led to increased precipitation variability and prolonged droughts in certain regions of Nigeria. In the northern regions, for example, there has been a noticeable decline in annual rainfall, negatively affecting pasture growth and availability. This has direct implications for livestock farming, as the shortage of fodder can result in reduced animal weight gain, lower milk production, and increased mortality rates (FAO, 2020).

The expansion of arid and semi-arid areas due to desertification and land degradation poses a direct threat to fodder production. In Nigeria's northern regions, where livestock farming is prevalent, these environmental changes have led to the depletion of grasslands and the encroachment of deserts, making it difficult for pastoralists to find suitable grazing lands (FAO, 2019). The impacts of climate change are majorly manifested on desertification and drought occurrences. This is attributed to the climate change vulnerability characteristics of the area (Olagunju, 2015). The effects of climate change on rangelands are highly variable, depending on geographical location, but there is a broad consensus that climate change has altered, and will continue to alter, the onset, duration and intensity of extreme events.

Forage sector is an important part of agriculture, as it makes availability of quality feed to animals. Climate change causes multiple environmental problems which affected fodder crop production. It causes remarkable changes in the composition, growth and development of postures (Ziervogel *et al.*, 2006, Polley *et al,* 2013 and Hopkins and Del Prado, 2007). It was observed that factors such as changing precipitation pattern and rates, enhanced evaporation rate, decreased soil moisture content etc. are responsible for changes in diversity of perennial grasses and trees for fodder (Stokes *et al.,* 2008). The area is a zone of intensive grazing and cultivation for the fact that it is characterized with moderate to medium fertile soil for cultivation and fodder growth for grazing activities. However, recent and long fluctuation of climatic variables had contributed too many changes in the physical

characteristics of grazing lands and farm lands. According to Iro (2017) in Adewuyi and Olofin (2018) livestock production in Nigeria is faced with many problems (drought, herdsmen-farmers conflict, diseases, climate variability) that affected sustainable animal production particularly North western Nigeria. These problems are of varying nature and degrees, the North suffered dwindling and poor posture resources status, while the South is more of land scarcity (Moretimore & Wilson, 1965; Awogbade, 1980).

Studies by Babatunde *et al*. (2017) and Ogunwale *et al.* (2019) provide evidence of the adverse effects of climate change on forage production and quality in Nigeria. It was found that the decreased forage availability and increased lignin content in grasses have direct consequences for livestock productivity and health. As a result, it is imperative for farmers, policymakers, and researchers to develop adaptive strategies to mitigate these impacts, such as introducing drought-resistant forage species or implementing sustainable land management practices to maintain forage quality and quantity in the face of a changing climate.

The changing climatic conditions of North western Nigeria is one of the driving force of climate variability and desertification and this has negative effect of pressure on land resources particularly fodder and water for animals (Cecchi & Melesse 2016). Although livestock production has been growing for decades, though with dwindling resources that largely affected by human and environmentally induced factors. The lack of adequate grazing land and climatic variability has restricted livestock production from keeping pace with the growing demand for livestock products. High demand for land resources by the growing population had created land hunger unsustainable production system and consequent poverty among rural and urban dwellers and this leads to a stronger struggle and competition for natural capital among farmers and herders in most part of the region resulting to violent clashes and conflict, thus leading to the loss of innocent lives and property. The escalation of violence in the region led to severe insecurity and threatens agricultural activities and sustainability of livestock production (Ibrahim et al. 2018; Bollig 2006; Ayantunde *et al*. 2014; Theisen *et al*. 2013 and Ayantunde *et al*. 2011).

5.0 Drivers of Farmer-Herder Conflict and Insecurity in North western Nigeria

5.1 Forest and Fodder Degradation

Forest resource in Nigeria is facing serious set-backs due to quite a number of reasons that are acting on it which are directly or indirectly acting on the resource

(Forest). Some of the direct factors include; illegal mining, illegal grazing, lumbering, expansion of farmlands, woodfuel extraction etc. while the indirect factors include; population increase which consequentially aggravate demand for environmental resources leading to degradation. Some of these factors/reasons were not addressed squarely by both government and the Nigerian citizenry. The generality of Nigerians does not consider forest as resource that need to be given outmost protection for many generations use. The understanding of the Nigerian populace on forest resource led to its degradation to the current level. It is widely considered that forest in Nigeria is communally owned, hence its massive and unsustainable use.

The consequential effect of forest degradation in northern Nigeria has manifested in recent times, when Nigeria is experiencing multiple violence over vegetal resource among the users. Notably in the vast savannah region of the country where grazing and cultivation is more pronounce and being the major livelihood option for rural majority and some urban households. As identified by Macaulay (2014) more than 80% of the inhabitants of Northern Nigeria are farmers in different aspect of agricultural production (crop production, pastoral farming and nomadic pastoralism). These agricultural activities require sustainable use of the available land, which if not managed properly may lead to the over-exploitation of the natural resource and consequently, degradation. The current condition of natural resource particularly vegetation and water in north western Nigeria is disheartening due to high level degradation leading to scarcity of forage (fodder) for grazing. Barbier (2014) reported that forage degradation and scarcity leads to movement of many poor pastoralists and farmers in Africa (Nigeria inclusive) often resort to moving southwards of the country to a new piece of land for cultivation and grazing. Moreover, Fulani herdsmen in Nigeria were considered as migrant from neighboring countries of West Africa according to some historical evidences, this assertion of many Nigerians has made things so difficult for them in the North not even south. As such moving southward rendered their integrity un-identifiable with other Nigerian ethnicity; access to land resources to its fullest is cumbersome.

Many factors were responsible for herdsmen-farmers' conflict in Nigeria, depending on the cause of the conflict. Farmland and farm produce destruction play a vital role in this case. The struggle for land for grazing by the herdsmen and on the other hand farmers struggling for land to cultivate had overwhelmingly increases the conflict. Other factor also contributes such as; poor governance,

cattle rustling, poor infrastructure, climate change, transformation and problems in agriculture and pastoralism, armed group and attack, impunity and ineffective governance (Gulsah, 2020 and John, 2018).

5.2 Resources Access Relative Deprivation

The concept, Relative Deprivation (RD) has been widely used by different academic disciplines such as Economics, Political Science, Sociology and History to explain violence and its causes among people (Stouffer, 1949, Merton, 1957, Pettigrew, 1967 & Gurr, 2010). Sociologist view Relative Deprivation (RD) as a concept that has been viewed as social comparison between people's interpersonal and intergroup relationships (Smith *et al.,* 2012). On the other hand, political scientist emphasizes people's present situation compared with either their past/future desires or deserves selves. However, the basic structure of RD is moderately similar across the different social science disciplines. According to the relative deprivation theory, which Samuel Stouffer first put forth in 1949, people compare their circumstances to those of others in their social group, and the impression of relative disadvantage can result in a variety of psychological and behavioral reactions. When herders in Northern Nigeria perceive a lack of access to grazing pasture, water supplies, or feed in comparison to neighboring herders or other resource users in the area, they are said to be experiencing relative deprivation with relation to vegetative resources (Gurr, 2010).

Agricultural communities in northern Nigeria are currently facing multi-faceted conflict between pastoralists and farmers. The conflicts have caused the loss of human life as well affected resources such as crops, water, grazing lands and livestock negatively. Relative deprivation among herders in Northern Nigeria can lead to heightened competition and conflicts over limited vegetal resources. Research by Mustapha *et al*. (2018) and Smith (2018) in northern Nigeria, highlights how disputes over grazing land and water sources have escalated due to perceived disparities in resource allocation. Relative deprivation among herders in Northern Nigeria has been linked to heightened competition and conflicts over limited vegetal resources. The scarcity of suitable grazing land and forage due to population pressure and climate change exacerbates tensions among herding communities. Livelihood vulnerability is one of the consequences of relative deprivation to herders in northern Nigeria. Relative deprivation can render herders more vulnerable to environmental and economic shocks. When herders have limited access to quality grazing land and forage, their livestock's health and

productivity may decline, increasing the risk of economic instability (Nmadu, 2019).

Another consequence of relative deprivation of vegetation to herders is Migration and Displacement of the Herders. In response to relative deprivation, herders may resort to migration in search of better resources, potentially leading to overgrazing and further resource degradation in new areas. This can result in conflicts with local communities and pose challenges to sustainable resource management (Adejuwon & Bello, 2020). Social Tension is another consequence of relative deprivation, Relative deprivation can strain social relations within and between herder communities and with settled agricultural communities. Research by Adamu and Mshelia (2016) discusses the social tensions that arise when resource disparities lead to perceived injustices, this leads to relative difficulty in recognizing the consequences of relative deprivation on herders in Northern Nigeria. This is as well crucial for the development of policies and interventions aimed at addressing resource disparities and promoting sustainable pastoralism. Government and non-governmental organizations should consider these effects when designing programs for conflict resolution, resource management, and economic support for herder communities. The excessive use of limited vegetal resources driven by relative deprivation can contribute to environmental degradation, such as soil erosion and desertification, further exacerbating the challenges faced by herders. Relative deprivation of vegetal resources can threaten the livelihoods of herders in Northern Nigeria, particularly during periods of drought and resource scarcity. It may lead to increased poverty and food insecurity among herding families (Mustapha & Lawal, 2017 and Bello, 2015).

6.0 Consequential Effects of Climate Change and Fodder Degradation in North western Nigeria.

6.1 Herder-Farmers' Conflict and Insecurity

Competition for resources among users existed when communal resources are scares and stretched. Water and grazing lands are the most crucial resources to the herders while arable land on the other hand is more advantageous to the farmers. The two competing and conflicting land uses had driven the users into a dilemma, leading to unpredictable economic, socio-cultural and political uncertainties. Various research findings indicated that violence among farmers and herders is a long historic event that led to destabilisation of many communities and nations.

The root cause of conflict among farmers and herders could be seen in to two forms; the short term and the long term causes. The short term (immediate) are destruction of crops by cattle, contamination of drinking water source, Sexual harassment of women by herders, harassment of herders by host community, cattle rustling, disregard of herders to constituted authority. While long term (remote) causes are ethnic and religious inclination, poverty, climate change effect, land tenure, land use change or land conversion and rapid population growth, Enwelu *et al* (2015). Moreover, Ofuoku and Isife, (2009) reported that conflicts between farmers and herders in north western Nigeria mainly are destruction of crops by livestock, contamination and blockages of water sources, disregard for traditional authority by pastoralists, over-grazing, women harassment by the herders, bush burning, indiscriminate defecation by cattle on roads, theft and cattle rustling. Tonah (2006) on the other hand viewed farmers-herders conflict in some parts of south and western of Nigeria due to the southward movement of pastoralists into the humid and sub-humid zones of the country. This is promoted by the successful diseases control and the widespread availability of veterinary facilities and improved farming system.

It was majorly found and agreed by majority of the researchers in this field that crop destruction is among the major causes of conflict, though other causes existed. For example; the work of Rabi'u *et al,* (2021) on resource use in Gassol Local Government Area of Taraba state indicated that farmland encroachment/crop destruction, stealing of fish and fishing implements were among the major causes of conflict among farmers, fishermen and herders in the area. Moreover, in attempt to make a general statement on the causes of farmer-herder conflict SPARC (2023) report indicated that there are many causes (cultural, economic, political, social and religious) that interplay. However, there appears to be no consistent narrative in the media on the causes of farmer–herder conflict and a lack of robust evidence. A wide range of causes is given by different authors and sometimes within the same publication, resulting in a complex and often confused picture of the whole process. Further reports of (*The Sun*, 2022), (Boateng, 2022) and (Chime, 2021) in SPARC (2023) indicated that more often, herders and their practices are blamed, for example; Deliberate destruction of crops by pastoralists and cattle rustling by bandits; Destruction of farmland and the terrorizing of farmers by non-resident herders who invade the area illegally; and climate-induced scarcity and related migration as well as crop destruction and encroachment on transhumance corridors, using language such as 'climate wars' and transhumance bringing pastoralists into 'collision' with

farming communities. Table 1 provides a comprehensive outlook of the short and long term causes of farmer-herder conflict in Africa.

Table 1: Causes of Farmer-Harder Conflict

Conflict root cause	Operating variables
Environmental scarcity	Resources scarcity, limited resources, degradation and environmental changes
Climate Change	Climate Change and other description of climate
Population growth	Population growth and population displacement
Historical grievances	Historical grievances and colonization
Corruption	Corruption, bribery, groups with interest in corrupt practices, and concealment of stolen funds
Violence and human insecurity	Broader violence unrelated to farmer–pastoralist conflict, cattle raiding, human insecurity, and weapons proliferation
Tenure insecurity	Tenure insecurity, expropriation, blocked or limited access and insecure land rights
Pastoral mismanagement	Management of land, crop destruction, overgrazing, too many livestock and pastoralist and increased migration.
Poor relationship and ethnic bias	Deteriorating relationship, breakdown of trust, lack of respect, animosity, fear, unaddressed grievances, ethnic bias and negative levels.
Weak or exclusive governance	Poor and exclusive governance system, ***Policy***; general problems, biases for or against certain groups, pluralism, ***Institutions;*** weak or biased institution. ***Process;*** changes in the livestock sector, modernization, bias, commercialization and privatization, land use change and effects, absence of accountability, politicization, marginalization, exclusion, inequality and power differentials.

Source: modified from SPARC (2023)

It was presented/deliberated extensively at various international forums that herders and their practices can also be blamed, among the main causes of conflict in many sub-Saharan and other African countries. Mariam A, a member of the United Nations (UN) Permanent Forum on Indigenous Issues, at a conference

organized by United Nations in 2019 on the 'Impact of cross-border transhumance on sustainable peace and development in West Africa and the Sahel' disclosed that conflict arise between farmers and herders due to largely scarce resources and how they are allocated and used. The scarcity of the vegetal and water resources pushed out many herders look for posture for their livestock, and the transhumance characteristics of the herders is a spark in herder–farmer clashes SPARC (2023).

The menace need to be addressed and treated with utmost urgency and importance so as to safeguard the environment and human from degradation. The most disheartening and biased behavior among public is the continuous blame on the herders, however other sectors had also contributed to the problem. To strategically and systematically address the issue, there are key aspects that need to be addressed squarely as reported by SPARC (2023);

> *"The sheer volume of causes saturating the public domain creates a free-for-all interpretation with ample scope for cherry-picking among policy- and decision-makers, as well as groups with potentially vested interests. Causes can easily be selected and tailored to justify particular actions or interventions, such as: 1) Passing grazing bans to restrict the 'indiscriminate grazing' of pastoralists (Olufemi, 2021). 2) Using degradation narratives to 'legitimize and pave the way for agricultural investments and environmental conservation under a "green economy"' (Bergius et al., 2020). 3) Using scarcity narratives and the different interpretations of this narrative to justify decisions taken in terms of using 'underutilized' resources (Mehta et al., 2019; Scoones et al., 2019). 4) Securitizing and politicizing climate change by linking climate-change-driven migration with violence and insecurity (Benjaminsen and Ba, 2021; Wiederkehr et al., 2022). finally, and perhaps most dangerously, extremist groups and politicians using and manipulating farmer–herder grievances to further specific ends (Boas et al., 2020; Cline, 2020; Ugwueze et al., 2022).*

Climate change is among many causes of farmer-herder conflict in north western Nigeria. Many reports indicated that shrinking of grazing lands due to drying of forest reserves and consequent conversion of the land to agricultural lands had pushed herders to the wall of resistivity. Many water sources in most grazing land dried up, leaving the herders with no enough water source for their livestock (Ayansina, 2019).

7.0 Review Findings and Contribution to knowledge

The review made a comprehensive examination of the complex interplay between climate change, environmental degradation, resource access deprivation, and conflict dynamics, particularly within the context of north western Nigeria. The review found out that:

a. Climate change, manifested through rising temperatures, prolonged droughts, and erratic precipitation patterns, this directly affects livestock production and agricultural livelihoods in north western Nigeria. Some of the specific climatic challenges faced by the region, are dwindling pasture availability and reduced fodder quality, the article contributes to a deeper understanding of the localized impacts of climate change on agricultural systems.
b. Through the lens of relative deprivation theory, the review sheds light on how resource scarcity, exacerbated by climate change and population pressures, can lead to heightened competition and conflicts over limited vegetal resources among pastoralist communities. This was so by highlighting the vulnerability of herding communities to environmental and economic shocks, the review underscores the need for targeted interventions to support sustainable pastoralism and mitigate conflict risks.
c. By examining the root causes of farmers-herders conflicts in both the short and long term, the review offers valuable insights into the multifaceted nature of these conflicts. From immediate triggers like crop destruction and water source contamination to deeper structural factors such as land tenure insecurity and historical grievances, the review provides a nuanced understanding of the underlying drivers of conflict in the region.
d. The review underscores the importance of addressing the underlying drivers of conflict through targeted policy interventions and community-based initiatives. By highlighting the potential consequences of resource access deprivation, such as migration, displacement, and social tensions. The review emphasizes the need for comprehensive approaches that address both immediate conflict triggers and long-term structural factors.

e. The decline of forests and grazing lands has severe consequences for livestock production. It leads to reduced availability of quality fodder, decreased livestock productivity, and increased vulnerability to environmental stressors. Livestock farmers face difficulties in maintaining animal health and productivity due to limited access to adequate grazing resources. Additionally, the depletion of forests and grazing lands affects biodiversity, leading to the loss of valuable plant species that serve as natural fodder sources.
f. Overall, the review contributes to knowledge by providing a holistic understanding of the complex interactions between climate change, environmental degradation, resource access deprivation, and conflict dynamics in north western Nigeria. By synthesizing existing research and offering insights into policy implications and intervention strategies, the review offers valuable guidance for policymakers, practitioners, and researchers working to address the challenges faced by pastoralist communities in the region.

8.0 Recommendations based on the review of findings

i. The impact of forest depletion on fodder availability is compounded by the increasing frequency and intensity of extreme weather events. Prolonged droughts, erratic rainfall patterns, and rising temperatures further degrade grazing lands, reducing the quality and quantity of available fodder. Livestock farmers in North western Nigeria must adapt to these changing conditions by implementing sustainable land management practices and exploring alternative fodder sources.
ii. Efforts to mitigate forest and fodder depletion should focus on promoting sustainable land use practices, afforestation, and reforestation initiatives. It is crucial to raise awareness among local communities about the importance of preserving forests and grazing lands for long-term livestock productivity. Additionally, research and development efforts should aim to identify and promote resilient and adaptive fodder species that can thrive in the region's changing climate.
iii. Efforts to improve fodder yield and livestock feeds in the area should focus on several key strategies. Firstly, introducing and promoting drought-resistant forage species can enhance the availability of quality fodder during periods of water scarcity. These species should be selected based on their adaptability to the region's climatic conditions and their nutritional value for livestock.

iv. Implementing sustainable land management practices is crucial for maintaining and improving fodder production. This includes practices such as rotational grazing, which allows pastures to recover and regenerate, and agroforestry, which integrates trees and shrubs into grazing systems to provide additional fodder sources and improve soil health. Sustainable land management practices also help mitigate the impacts of climate change on fodder production by enhancing soil moisture retention and reducing erosion.
v. Additionally, investing in research and development is essential for improving fodder yield and livestock feeds. This involves conducting studies to identify the most suitable forage species for the region, developing innovative farming techniques, and promoting the adoption of best practices among livestock farmers. Collaboration between research institutions, government agencies, and local communities is crucial for the successful implementation of research findings and the dissemination of knowledge.
vi. Furthermore, capacity-building programs for livestock farmers are vital for enhancing their knowledge and skills in fodder production and livestock management. Training programs should focus on sustainable farming practices, efficient feed utilization, and strategies to cope with climate variability. Providing farmers with access to information and resources will empower them to make informed decisions and adopt practices that improve fodder yield and livestock productivity.
vii. Finally, policy support and investment in infrastructure are necessary to create an enabling environment for improving fodder yield and livestock feeds. This includes developing irrigation systems to ensure a reliable water supply for fodder crops, establishing storage facilities for fodder preservation, and promoting market access for livestock products. Policy interventions should also address land tenure issues and provide incentives for sustainable land management practices.
viii. In conclusion, improving fodder yield and livestock feeds in North western Nigeria requires a multi-faceted approach that includes introducing drought-resistant forage species, implementing sustainable land management practices, investing in research and development, capacity-building programs for farmers, and policy support. By adopting these strategies, livestock farmers in the region can enhance their resilience to climate change, improve fodder availability, and ensure sustainable livestock production.

9.0 Conclusion

In conclusion, the intertwined relationship between climate change, fodder degradation, access deprivation, and the resulting farmers-herders conflict in North Western Nigeria underscores the complex challenges facing agricultural communities in the region. Climate change, driven largely by human-induced factors such as greenhouse gas emissions, has led to erratic rainfall patterns, prolonged droughts, and rising temperatures, significantly impacting fodder quality and availability. This, in turn, has disrupted the delicate balance between farmers and herders, exacerbating existing tensions over limited vegetal resources.

The degradation of forests and fodder resources, coupled with competition for land and water, has intensified conflict dynamics, resulting in loss of lives, destruction of crops, and displacement of communities. Relative deprivation among herders, stemming from perceived inequities in resource allocation, further fuels tensions and escalates conflicts over grazing lands and water sources.

10.0 Specific Recommendations

(a) Addressing the root causes of farmers-herders conflict requires a multifaceted approach that incorporates sustainable land management practices, climate adaptation strategies, and conflict resolution mechanisms. Policy interventions aimed at promoting equitable resource allocation, strengthening governance frameworks, and fostering dialogue between stakeholders are crucial for mitigating conflict and enhancing the resilience of agricultural communities.

(b) Moreover, there is a pressing need for increased research and investment in climate-resilient agricultural practices, including the promotion of drought-resistant fodder species and sustainable pasture management techniques. By addressing the underlying drivers of conflict and promoting environmental sustainability, stakeholders can work towards building peaceful and prosperous agricultural landscapes in North Western Nigeria and beyond.

References

Adejuwon, J. O., & Bello, M. A. (2020). Climate change, pastoralists' migration and conflicts in Northern Nigeria. In M. D. B. Idris & M. A. Ahmed (Eds.), *Climate Change and Conflict in Nigeria*, Pp. 177-190). Springer.

Atkinson, J., Salmomnd, C., & Crampton, P. (2014) NZDep2013 index of deprivation. Wellington: Retrieved from http://www.otogo.ac.nz/wellington/otogo069936.pdf

Ayantunde, A. A., Asse, R., Said, M. Y., & Fall, A. (2014). Transhumant pastoralism, sustainable management of natural resources and endemic ruminant livestock in the sub-humid zone of West Africa. *Environment, Development and Sustainability,* 16(5), 1067–1117.

Ayantunde, A. A., de Leeuw, J., Turner, M. D., & Said, M. (2011). Challenges of assessing the sustainability of (agro-) pastoral systems. *Livestock Science*, 139 (1), 30–43.

Ayansina, A., & Stephen, M. O. (2019). Climate change impacts on cattle production: analysis of cattle herders' climate variability/change adaptation strategies in Nigeria. *Change Adaptation Socio-ecol. Syst*., 5, 12–23.

Aydinalp, C., & Cresser, M. S. (2008). The effect of climate change on Agriculture. *Agric, environ. Sci.*, 5, 672–676.

Barbier, E. B. (2000). The economic linkages between rural poverty and land degradation: Some evidence from Africa. *Agric. Ecosyst. Environ*., 82, 355–370.

Bellarby, J., Tirado, R., Leip, A., Weiss, F., & Lesschen, J. P. (2013). Livestock Greenhouse Gas Emissions and Mitigation Potentials in Europe. *Glob. Change Bio*, 19, 3–18.

Bello, M. A. (2015). Pastoralist-farmer conflicts in Northern Nigeria: Reconsidering the role of environmental degradation. **African Security*, 8 (3-4), 221–242.

Benjaminsen, T. A., & Ba, B. (2021). Fulani-Dogon killings in Mali: farmer–herder conflicts as insurgency and counterinsurgency. *African Security*, 14(1), 4–26.

Birendra, K., & Ashisan, T. (2016). Effect and Adaptation of Climate Change on Fodder and Livestock Management. *International Journal of Science, Environment, and Technology,* 5 (3), 1638–1645.

Boateng, J. A. (2022, February 17). Ejura Traditional Council declares war on Fulani herdsmen. Modern Ghana. Retrieved from www.modernghana.com/news/1139726/ejura-traditional-council-declares-war-on-fulani.html

Bøås, M., Cissé, A. W., & Mahamane, L. (2020). Explaining violence in Tillabéri: insurgent appropriation of local grievances? *The International Spectator*, 55(4), 118–132. DOI: 10.1080/03932729.2020.1833567

Bollig, M. (2006). Risk management in a hazardous environment: A comparative study of two pastoral societies (pp. 1–442). New York: Springer.

Bergius, M., Benjaminsen, T., Maganga, F., & Buhaug, H. (2020). Green economy, degradation narratives, and land-use conflicts in Tanzania. World

Development, 129. https://www.sciencedirect.com/science/article/pii/S0305750X19304991

Brunsdon, C., Fotheringham, S., & Charlton, M. (2007). Geographically Weighted Discriminant Analysis. *Geographical Analysis*, 39 (4), 376–396.

Cecchi, F., & Melesse, M. B. (2016). Formal law and customary change: A lab-in-field experiment in Ethiopia. *Journal of Economic Behavior & Organization,* 125, 67–85.

Chime, V. (2021, April 19). From Nigeria's farmer–herder clashes to the Sahel crisis – is climate change worsening conflicts in Africa? The Cable. Retrieved from www.thecable.ng/from-nigerias-farmer-herder-clashes-to-thesahel-crisis-is-climate-change-worsening-conflicts-in-africa

Cline, L. E. (2020). War on the hoof: *Regional security in Africa and livestock conflicts. Small Wars & Insurgencies,* 31 (1), 87–105. DOI: 10.1080/09592318.2020.1672965

Danjuma, N. M., Yakubu, I., & Zakariya, M. (2020). Vegetation cover dynamics in the dryland of Northwestern Nigeria. *Sahel Journal of Geography, Environment and Development,* 1 (1), 1–14.

EIP-AGRI. (2020). Sustainable Livestock Farming Innovation for Farm Resilience and Profitability. Retrieved from http://www.eip-agri.org.

Enwelu, I. A., Dimelu, M. U., & Asadu, A. N. (2015). Farmer-cattle herder conflict: Possible mitigation and mediation strategies in Nigeria. *Nigerian Journal of Rural Sociology*, 16(2), 84–92.

FAO/STAT. (2020). Faostat. Retrieved from http://www.fao.org/faostat/en/.

Food and Agriculture Organization. (2020). Climate-Smart Agriculture Sourcebook. Retrieved from http://www.fao.org/3/a-i5715e.pdf

Gerber, P. J., Steinfield, H., Henderson, B., Motter, A., Opio, C., Dijkman, J., Faccucci, A., & Tempio, G. (2013). Tackling Climate Change through Livestock: A Global Assessment of Emissions and Mitigation Opportunities. Rome: FAO.

Godde, C. M., Mason-D'Croz, D., Mayberry, D. E., & Thornton, P. K. (2021). Impacts of climate change on the livestock food supply chain: a review of the evidence. *Global Food Security,* 28, 100488.

Grace, Z. R., Anosike, F. U., & Oke-Egbodo, B. E. (2016). Climate Variability and Livestock Production in Nigeria: Lessons for Sustainable Livestock Production. *Agricultura Tropica et Subtropica,* 49 (1-4), 30–37.

Gulsah, G. (2020). Farmers' herders conflict in Nigeria: An analysis of the root causes and the effect of the conflict. Retrieved from https://www.researchgate.net/publication/347948827)

Gurr, T. (2010). Why men rebe (40th anniversary Ed.). Boulder, CO: Paradigm.

Hess, T. M., Stephens, W., & Thomas, G. (1996). Modelling NDVI from Decadal Rainfall Data in the North East Arid Zone of Nigeria. *Journal of Environmental Management*, 48, 249–261.

Hopkins, A., & Del Prado, A. (2007). Implications of climate change for grassland in Europe: impacts, adaptations and mitigation options: a review. *Grass Forage Sci*., 62, 118–126.

Ibrahim, S. S., Ozdeser, H., & Cavusoglu, B. (2018). Vulnerability to recurrent shocks and disparities in gendered livelihood diversification in remote areas of Nigeria. *Environmental Science and Pollution Research,* 26 (1), 1–11. https ://doi.org/10.1007/s1135 6-018-3854-5.

IPCC. (2018). Global warming of 1.5°C. Retrieved from https://www.ipcc.ch/sr15/

IPCC. (2013).The physical science basis. In T. F. Stocker et al. (Eds.), Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.

IPCC. (2014). Climate change 2014: impact, adaptation and vulnerability. Part A: global and sectoral aspects. In C. B. Field et al. (Eds.), Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.

IRENA (2019a), *Global Energy Transformation: A Roadmap to 2050 (2019 Edition)*, IRENA, Abu Dhabi

IRENA, IEA and REN21 (2018), *Renewable energy policies in a time of transition*, IRENA, OECD/IEA and REN21, www.irena.org/publications/2018/Apr/Renewableenergy- policies-in-a-time-of-transition.

John, P. O. (2018). Herdsmen/farmers conflict and its effects on socio-economic development in Nigeria. *Journal of peace, security, and development*, 4(1), 143–158.

Kingsley, E. U., & Charles, O. A. (2020). Climate Change and Open Grazing: The Nigeria Perspective. *Nigerian Journal of Food, Drug and Health Law*, 9(1-7).

Macaulay, B. M. (2014). Land degradation in Northern Nigeria: The impacts and implications of human-related and climatic factors. *African Journal of Environmental Science and Technology*, 8 (5), 267–273.

Melissa, M. R.-D., Pouyan, N. A., Timothy, H., & Sean, A. W. (2017). Climate Change and Livestock: Impacts, adaptation and mitigation. *Climate Risk Management*, 16, 145–163.

Merton, R. (1957). Social Theory and Social Structure. Glencoe, IL: The Free Press.

Mehta, L., Huff, A., & Allouche, J. (2019). The new politics and geographies of scarcity. *Geoforum*, 101, 222–230.

Mortimore, M., & Adams, W. M. (1999). Working the Sahel: Environment and Society in Nigeria. London: Routledge.

Mustapha, U. M., & Lawal, A. I. (2017). Herdsmen and farmers' conflict in Nigeria: Causes and consequences. *International Journal of Sociology and Anthropology*, 9(7), 88–96.

Peters, M., Horne, P., Schmidt, A., Holmann, F., Kerridge, P. C., Tarawali, S. A., & Wortmann, C. (2001). The role of forages in reducing poverty and Degradation of natural resources in tropical Production systems. Agricultural Research and Extension Network, Working Paper No. 117.

Olagunju, T. E. (2015). Drought, desertification and the Nigerian environment: A review. *Journal of Ecology and the Natural Environment*, 7 (7), 196–209. DOI: 10.5897/JENE2015.0523

Olufemi, A. (2021, November 28). Horrors on the plateau: inside Nigeria's farmer–herder conflict. Al Jazeera. Retrieved from www.aljazeera.com/features/2021/11/28/horrors-on-the-plateau-inside-Nigerias-farmer-herder-conflict

Ofuoku, A. U. (2009). The role of community development committees in farmer-herder conflicts in central agricultural zone of Delta State, Nigeria. *Journal of Alternative Perspectives in the Social Sciences,* 1 (3), 921–937.

Peter, H., Hugo, V., Mario, H., Michael, O., Erwin, S., & Stefan, F. (2014). Climate change Mitigation through Livestock System Transitions. Retrieved from https://www.pnas.org by 1097.211.63.55 on June 29, 2022 from IP address 197.211.63.55.

Pettigrew, T. (1967). Social Evaluation Theory: Convergences and Applications. Nebraska.

Polley, H. W., Briske, D. D., Morgan, J. A., Wolter, K., Bailey, D. W., & Brown, J. R. (2013). Climate change and North American rangelands: Trends, projections, and implications. *Rangeland Ecol. Manag*., 66, 493–511.

Rabi'u, T., Adamu, G. K., & Ibrahim, A. (2013). Indigenous trees inventory and their multipurpose uses in Dutsin-ma area Katsina state. *European Scientific Journal*, 9 (11), 288–300.

Rabi'u, T., Bashiru, A. L., & Sule, I. D. (2021). Assessment of Resources Conflicts in Gassol Local Government Area Taraba State Nigeria. *Journal of conflict resolution and social issues,* 2 (1), 50–59.

Saifullahi, S. I., Huseyin, O., Behiye, C., & Aminu, A. S. (2021). Rural Migration and Relative Deprivation in Agro-Pastoral Communities under the Threat of Cattle Rustling in Nigeria. *SAGE open*. DOI: 10.1177/2158244020988856

Saifullahi, S. I., Huseyin, O., & Behiye, C. (2019). Testing the impact of environmental hazards and violent conflicts on sustainable pastoral development: micro-level evidence from Nigeria. *Environment, Development and Sustainability*. DOI: https://doi.org/10.1007/s10668-019-00377-6

Scoones, I., Smalley, R., Hall, R., & Tsikata, D (2019). Narratives of scarcity: framing the global land rush. *Geoforum,* 101, 231–241.

Smith, N. (2018). Climate change and conflict in pastoralist regions of Ethiopia and Kenya. *African Security*, 11 (1), 31–55.

Stokes, A. C., Ash, J., & Howden, S. M. (2008). Climate Change Impacts on Australian Rangelands. *Society for Range Management*, 40–45.

Stouffer, S., Suchman, E., DeVinney, L., Starr, S., & Williams, R. (1949). The American Soldier: Adjustment to Army Life, Vol. 1. Princeton, NJ: Princeton University Press.

SPARC. (2023). Report on Causes of Farmer-Herder Conflict in Africa; A systematic scoping review. Retrieved from [https://www.sparc-knowledge.org/sites/default/files/documents/resources/causes-of-farmer-herder conflicts]

Tonah, S. (2006). Managing Farmer-Herder Conflicts in Ghana's Volta Basin, Ibadan. *Journal of Social Sciences,* 4 (1), 33–45.

Theisen, O. M., Gleditsch, N. P., & Buhaug, H. (2013). Is climate change a driver of armed conflict? *Climatic Change*, 117 (3), 613–625.

The Sun. (2022, May 17). Agony of survivors of farmers-herders' crisis in North Central. The Sun. Retrieved from www.sunnewsonline.com/agony-of-survivors-of-farmers-herders-crisis-in-north-central/

Thornton, P. K., & Gerber, P. J. (2010). Climate Change and the Growth of the Livestock Sector in the Developing Countries. *Mitig. Adapt. Strategies Global Change*, 15, 169–184.

Udo, R. K. (1970). Geographical Regions of Nigeria. London: Heinemann.

Ugwueze, M., Omenma, J., & Okwueze, F. (2022). Land related conflicts and the nature of government responses in Africa: the case of farmer–herder crises in Nigeria. *Society*, 59 (3), 240–253.

Wiederkehr, C., Ide, T., Seppelt, R., & Hermans, K. (2022). It's all about politics: migration and resource conflicts in the global south. *World Development*, 157 (2022), 105938

World Bank. (2019). Nigeria: Climate Change Impact and Adaptation Assessment. Retrieved from https://openknowledge.worldbank.org/handle/10986/32652

Zakariya, M., & Muhammed, S. (2018). Vegetation Density and Diversity in the Dryland of Northwestern Nigeria. *Dutse Journal of Pure and Applied Sciences*, 4 (1), 195–208.

Ziervogel, G., Nyong, A., Osman, B., Conde, C., Cortes, S., & Dowing, T. (2006). Climate variability and change: implications for household food security. Assessments of Impacts and Adaptations to Climate Change (AIACC) Working Paper No. 20. Washington, DC: The AIACC Project Office, International START Secretariat.

The Impact of Digital Banking on Financial Inclusion in Nigeria (2000-2022)

[1]OLUSANYA, Samuel Olumuyiwa & [2]EUCHARIA Chibuzo Ume
[1]Department Economics, Faculty of Social Sciences, National Open University of Nigeria,
[2]Department of Business Administration, National Open University of Nigeria, Abuja, Nigeria
https://doi.org/10.57233/gijmss.v7i3.15

Abstract

This paper examines the impact of digital banking on financial inclusion in Nigeria from 2000 to 2022. The objectives of the study focuses on the effects of digital banking adoption, the regulatory environment, internet access, financial literacy, and income levels. The estimation techniques employed include the Johansen co-integration and error correction model. The Johansen co-integration analysis reveals two co-integrating equations at the 5% significance level, indicating long-run relationships between factors influencing financial inclusion in Nigeria, specifically Digital Banking Adoption (DBA), Regulatory Environment (REG), Internet Access (INT), Financial Literacy (FL), and Income Levels (INC). The F-statistic (41.74294) and its significance confirm that the independent variables collectively explain a substantial variation in financial inclusion. The findings show that digital banking adoption, regulatory frameworks, internet access, financial literacy, and income levels significantly influence financial inclusion in Nigeria. The paper concludes that digital banking, supported by regulatory frameworks, internet access, financial literacy, and income levels are essential for enhancing financial inclusion, with a multi-faceted approach needed to foster sustainable economic growth and reduce inequality in Nigeria. Based on the findings, the paper recommends that the government focus on enhancing digital banking, refining regulations, expanding internet access, promoting financial literacy, and addressing income inequality to improve financial inclusion in Nigeria.

Keywords: Digital banking, financial inclusion, Internet access, Financial literacy, Regulatory frameworks
JEL CODE: G21, G28, O16, O33, D14

1. Introduction

Digital banking in Nigeria has transformed significantly due to technological innovations and policy measures to enhance financial access. Between 2000 and 2023, the financial sector experienced substantial growth, driven by the Central Bank of Nigeria's (CBN) initiatives and mobile technology expansion. The 2012 Cashless Policy fostered digital payment systems and electronic banking platforms like mobile banking and online services (CBN, 2012). Mobile money services introduced in 2011, including platforms like Paga, extended financial

services to underserved regions (Ayo et al., 2016). The National Financial Inclusion Strategy (2012) targeted reducing financial exclusion from 46.3% in 2010 to 20% by 2020, emphasizing agent banking and digital wallets for marginalized groups (CBN, 2018). Technological advancements like USSD codes, exemplified by GTBank's 737 service, facilitated affordable banking for non-internet users (Osazevbaru & Yomere, 2020). During the COVID-19 pandemic, digital banking adoption surged due to lockdown measures, with banks like Access Bank reporting increased online transactions (Olaniyi & Olayemi, 2021).

Despite progress, challenges remain. By 2022, 36% of Nigeria's adult population remained unbanked, and financial inclusion disparities persisted across urban-rural and gender divides (EFInA, 2022). Growth in agent banking continues, though rural areas face infrastructural deficits. Cyber-security concerns, with a 50% rise in fraud attempts between 2020 and 2022, also hinder trust (NIBSS, 2022). This study examines digital banking innovations' impact on financial inclusion, addressing regional and demographic disparities. It evaluates policies like the Cashless Policy, quantifies barriers such as digital literacy and income inequality, and highlights strategies to achieve universal financial access in Nigeria.

2. Literature review

2.1. Conceptual review

1. Digital banking

Digital banking has revolutionized financial services by leveraging advanced technologies to improve accessibility, efficiency, and convenience. Olusanya (2024) highlights its ability to facilitate transactions without physical interactions, while Johnson (2023) emphasizes the digitization of banking operations, transforming customer engagement. Scholars such as Bishop (2023) and Nguyen (2023) note the convenience of online platforms for tasks like fund transfers, and Ahmed (2024) underscores the focus on security, scalability, and modern consumer needs.

In Nigeria, digital banking has expanded financial services access through USSD codes, mobile money, and online platforms, addressing infrastructural limitations and enhancing service delivery. These innovations simplify transactions, broaden access to diverse financial products, and promote financial inclusion, particularly

in underserved regions. The focus on secure and user-friendly interfaces further boosts trust and adoption, positioning digital banking as a catalyst for economic development in Nigeria.

2. Financial Inclusion

Financial inclusion ensures affordable and accessible financial products for underserved communities. Adegbola (2024) emphasizes tailored services like savings and credit, while Johnson (2023) focuses on low-income populations engaging with formal financial systems. Aliyu (2023) describes it as a strategy to promote economic growth and poverty reduction, and Okechukwu (2022) underscores affordability for vulnerable groups. Zhang (2023) highlights its role in managing risks and improving economic well-being.

In Nigeria, initiatives like mobile money, agent banking, and digital wallets have significantly improved financial access. These efforts support small businesses, alleviate poverty, and promote financial stability by enabling better risk management and economic participation.

Challenges to Financial Inclusion in Rural Nigeria

Rural financial inclusion faces barriers such as inadequate internet access, low digital literacy, limited infrastructure, and cultural preferences. As of 2022, only 40% of Nigerians had internet access, with rural areas underserved (National Communications Commission, 2022). Limited digital skills and a lack of tailored financial products further hinder adoption (World Bank, 2021; Aliyu, 2023). Poor infrastructure, cultural preferences for informal systems, and security concerns exacerbate the challenges. Addressing these issues is critical to reducing financial exclusion and achieving equitable economic growth in Nigeria.

2.2. Conceptual Framework

The conceptual framework below outlines how digital banking facilitates financial inclusion for underserved populations, particularly in rural Nigeria, through components like accessibility, affordability, trust, and technological advancement.

(i) **Digital Banking Infrastructure:** Technological tools and platforms, such as mobile banking, agent banking, and mobile money services, enable financial transactions without physical branches, bridging geographical gaps. For example, mobile money allows users to save, transfer funds, and access credit via phones in remote areas.

(ii) **Access to Financial Products**: Digital banking provides rural residents access to tailored financial products like microloans, savings accounts, and insurance. For instance, microloan platforms empower low-income individuals to finance businesses or personal needs without relying on traditional banks.

(iii) **Digital Literacy and Financial Education**: Digital literacy is crucial for effectively utilizing digital banking. Financial education delivered via mobile platforms empowers users to manage finances and leverage digital services. For example, text-based programs teach rural populations the safe use of digital tools for saving and borrowing.

(iv) **Trust in Digital Platforms**: Trust is vital for adoption, built through secure and reliable services. Strong encryption and authentication foster confidence in mobile banking platforms, especially in fraud-prone areas.

(v) **Regulatory and Policy Support**: Supportive regulations promote infrastructure growth and consumer protection. For example, policies encouraging agent banking networks and affordable mobile services help extend inclusion to rural communities.

(vi) **Socioeconomic and Cultural Acceptance**: Adoption depends on alignment with local practices and conditions, such as informal savings groups and low-income needs. For example, digital alternatives that reflect traditional savings groups ensure cultural relevance.

2.2.1. Framework Model

The following model represents the relationship between these components:

Digital Banking Infrastructure ↔ Access to Financial Products ↔ Digital Literacy & Financial Education ↔ Trust in Platforms ↔ Regulatory and Policy Support ↔ Socioeconomic Factors & Cultural Acceptance

2.2.2. Impact on Financial Inclusion

By integrating these factors, digital banking can significantly improve financial inclusion by:

(a). Enhancing accessibility to formal financial services, especially in remote and underserved areas.

(b). Providing affordable financial services that meet the needs of low-income and rural populations.

(c). Building trust in the financial system through secure, transparent, and reliable services.

(d). Empowering economic growth by improving access to credit, savings, and insurance, ultimately improving the livelihoods of rural individuals and businesses.

2.2. Theoretical Review

2.2.1. Theories of digital banking

1. Technology Acceptance Model (TAM)

Proposed by Davis (1989), TAM highlights that technology adoption is driven by its perceived ease of use and usefulness**.** In Nigeria, particularly rural areas, digital banking adoption depends on how accessible and beneficial these platforms appear. The regulatory framework also plays a significant role in shaping trust and acceptance.

Application in Nigeria

- **Ease of Use:** User-friendly, intuitive platforms are essential for areas with low digital literacy to encourage adoption.
- **Usefulness:** Digital banking must address specific needs, like money transfers, microloans, and payments, to demonstrate value and increase uptake.
- **Regulatory Support:** Clear regulations, like those by the Central Bank of Nigeria, enhance trust through secure and reliable digital services.

2. Unified Theory of Acceptance and Use of Technology (UTAUT)

Developed by Venkatesh et al. (2003), UTAUT integrates factors like performance expectancy, effort expectancy, social influence, and facilitating conditions to explain technology adoption.

Application in Nigeria

- **Performance Expectancy:** Digital banking must prove its ability to improve access to savings, loans, and payments, especially in underserved areas.
- **Effort Expectancy:** Simplified interfaces and training programs are necessary for populations with limited digital literacy.
- **Facilitating Conditions:** Reliable internet and mobile networks are crucial for effective digital banking adoption, particularly in rural regions.

2.2.2. Theories of Financial inclusion

1. Financial Inclusion: CGAP's Financial Inclusion Framework emphasizes access, usage, and quality of financial services, crucial for assessing how digital

banking can enhance financial inclusion in Nigeria's underserved regions. The framework examines the impact of regulatory environments, infrastructure, financial literacy, and income on access to financial services.

Application in Nigeria

- **Access**: Digital platforms like mobile and agent banking address barriers, but reliable internet and mobile access are vital for success in rural areas.
- **Usage**: Service adoption relies on offerings like mobile money and microloans. Financial literacy and trust require education efforts in underserved regions.
- **Quality**: Digital services must be secure, reliable, and affordable. Despite regulations by the Central Bank of Nigeria, fraud issues call for stronger regulatory frameworks to build trust.

2. Capability Approach: Amartya Sen's Capability Approach emphasizes empowerment, focusing on the ability to effectively use resources to enhance life quality. For financial inclusion in Nigeria, this theory stresses the role of digital banking, supported by financial literacy and regulation, in improving economic well-being.

Application in Nigeria

- **Access to Services**: Digital banking addresses gaps left by traditional banking but may face barriers in low-income areas due to smartphone and data costs.
- **Financial Literacy**: Ensuring individuals can navigate digital platforms is essential, particularly in rural areas with lower literacy rates.
- **Regulatory Conditions**: A solid regulatory framework fosters trust and security, enhancing digital banking inclusivity and reducing fraud risks.

2.2.3. How theoretical framework informs the research design and interpretation of the study variables

Theoretical frameworks guide the study of digital banking and financial inclusion in Nigeria. The Technology Acceptance Model (TAM) focuses on perceived ease of use and usefulness, assessing the user-friendliness of digital banking services. The Unified Theory of Acceptance and Use of Technology (UTAUT) considers social influence, performance expectancy, and facilitating conditions, exploring factors like income, financial literacy, and internet access. The Financial Inclusion Framework examines access, usage, and service quality, evaluating how affordability, accessibility, and regulations influence financial inclusion. The Capability Approach highlights individual freedom to achieve economic well-

being, emphasizing the role of financial literacy, income, and regulations in digital banking.

TAM, developed by Davis (1989), provides insights into digital banking adoption, suggesting that technology adoption increases when it is intuitive and perceived as beneficial. In digital banking, this translates to platforms that facilitate better access to financial services, with regulations influencing user perceptions and adoption. TAM helps identify adoption barriers and recommends strategies to enhance user experience and regulatory practices, promoting financial inclusion in Nigeria (Davis, 1989; Venkatesh et al., 2003). These frameworks collectively offer a comprehensive view of challenges and opportunities for digital banking in financial inclusion.

2.3. Empirical review

Adebayo et al. (2023) used chi-square analysis to study how digital banking promotes financial inclusion among low-income groups, focusing on accessibility and ease of use. However, their study neglected traditional banking's role in areas with limited digital infrastructure, a gap this research addresses by integrating both banking systems and examining regional disparities. It also explores financial literacy and internet access, factors not considered by Adebayo et al.

Okafor and Adebayo (2023) applied the ARDL Bound test to assess the long-term influence of regulations on digital banking adoption but overlooked consumer protection and regional differences. This research expands on their findings by including security concerns, regional disparities, and short-term regulatory effects, along with the role of financial literacy and internet access.

Ike and Olaniyi (2023) established a connection between internet penetration and financial inclusion but did not consider internet service quality. This study builds on their work by examining the impact of internet reliability, particularly in rural areas. Similarly, Dada and Alabi (2023) explored financial literacy through regression analysis but faced limitations in sample size and generalizability. This research broadens the sample and focuses on the demographic impact of literacy.

Key themes such as digital banking, internet access, financial literacy, and regulatory frameworks recur across these studies. This research addresses gaps in security, regional disparities, user satisfaction, and policy implementation,

providing a comprehensive view of factors driving financial inclusion through digital banking in Nigeria.

3.0. Methodology

3.1 Data collection procedure

The study used data from the Federal Bureau of Statistics Bulletin (2023) covering 2000 to 2022, as it was the most finalized and reliable dataset available. Including 2023 and 2024 data was impractical due to potential incompleteness. Secondary data was selected for its accessibility, affordability, and ability to analyze long-term trends. Credible sources, such as government publications and financial institutions, informed the analysis of digital banking's role in financial inclusion. However, limitations, including a lack of regional or demographic detail and potential outdatedness, were noted.

An ex post facto design was employed to analyze historical data, revealing patterns that cross-sectional analysis might overlook. This approach provided valuable insights into the evolution of financial inclusion in Nigeria. Ethical considerations included sourcing data from reputable institutions (Saunders et al., 2019) and ensuring privacy through anonymization or aggregation (Wilmot, 2020). Academic integrity was maintained with proper citation (Smith, 2018), and the data was used responsibly, aligning with research objectives (Bryman, 2016). Despite some limitations, secondary data and an ex post facto design effectively supported the study's exploration of digital banking trends.

3.2 Model Specification

The paper adopts the study of Okereke and Uche (2020) that assessed the impact of the digital banking environment on financial inclusion with structural equation modeling. However, for this paper our model specification for the study is as follows:

To investigate the relationship between financial inclusion (FI) and its determinants—Digital Banking Adoption (DBA), Regulatory Environment (REG), Internet Access (INT), Financial Literacy (FL), and Income Level (INC), a multiple linear regression model was utilized. This model examines how these independent variables collectively impact financial inclusion. Below is an explanation of the model:

1. Model Overview**:** Financial inclusion (FI) is conceptualized as a function of the following independent variables:

DBA: Digital Banking Adoption; REG: Regulatory Environment; INT: Internet Access; FL: Financial Literacy; INC: Income Level;

The relationship can be represented as:

FI=f(DBA, REG, INT, FL, INC) …… (1)

This function indicates that financial inclusion (FI) is influenced by these key factors.

1. Linear Regression Model**:** The relationship is further specified in the regression equation:

$FI = \beta_0 + \beta_1 DBA + \beta_2 REG + \beta_3 INT + \beta_4 FL + \beta_5 INC + \epsilon_t$ …….. (2)

Where:

FI: The dependent variable, representing the extent to which individuals have access to and utilize formal financial services, including bank accounts, loans, and insurance.

DBA: Measures the extent of digital banking services, such as mobile banking or online banking. This is expected to positively influence FI, as it provides broader access to financial services.

REG: Refers to the regulatory framework governing the financial system, which, if strong, can promote trust and thereby increase financial inclusion.

INT: The availability of internet services, crucial for accessing online financial services. A higher availability of internet access is typically associated with greater financial inclusion.

FL: Financial literacy, or the ability to understand and effectively use financial services. Increased literacy generally correlates with higher financial inclusion, as individuals make informed decisions.

INC: The income level, which often correlates with financial inclusion, as those with higher incomes are more likely to engage with formal financial services.

ϵt: The error term, capturing unmeasured factors that influence financial inclusion.

The inclusion of each variable in the model is grounded in both theoretical frameworks and empirical literature that support their relevance to financial inclusion. Below is a brief justification for each variable's inclusion:

Digital Banking Adoption (DBA):
Theoretical Justification: Rogers' (2003) innovation adoption theory highlights how digital banking transcends geographic barriers, enhancing access to financial services.

Empirical Justification: Studies demonstrate that digital banking fosters financial inclusion, especially in remote areas, by reducing transaction costs and expanding financial intermediation (Ghosh & Sharma, 2019; Ozili, 2020).

Regulatory Environment (REG):

Theoretical Justification: Institutional theory (North, 1990) underscores the importance of robust regulations in fostering trust and stability within financial systems, thereby promoting financial inclusion.

Empirical Justification: Strong regulatory frameworks enhance financial inclusion by building consumer confidence and encouraging system participation (Demirguc-Kunt et al., 2018).

Internet Access (INT):

Theoretical Justification: Castells' (1996) technology access theory identifies internet connectivity as a cornerstone for accessing digital financial services.

Empirical Justification: Greater internet penetration is strongly associated with increased financial inclusion by enabling online banking activities like transfers and bill payments (Sarma & Pais, 2011).

Financial Literacy (FL):

Theoretical Justification: Lusardi & Mitchell's (2011) financial literacy theory asserts that financial knowledge empowers informed decision-making, fostering financial inclusion.

Empirical Justification: Research shows that higher financial literacy correlates with greater usage of formal financial services (Atkinson & Messy, 2012).

Income Level (INC):

Theoretical Justification: Economic theories on wealth distribution (Sherraden, 1991) argue that higher income levels facilitate participation in formal financial systems through savings, investments, and credit.

Empirical Justification: Evidence links higher income to broader access to financial services, highlighting income as a critical determinant of financial inclusion (Kempson et al., 2004).

The apriori expectation

Digital Banking Adoption ($\beta_1 > 0$); Regulatory Environment ($\beta_2 > 0$); Internet Access ($\beta_3 > 0$); Financial Literacy ($\beta_4 > 0$); Income Level ($\beta_5 > 0$)

4.0 Result and analysis

4.1. ADF Unit root test

The Augmented Dickey-Fuller (ADF) Unit Root Test is used to assess the stationarity of the time series data. It helps identify whether the data has a stable long-term trend or exhibits random fluctuations, ensuring reliable econometric analysis. Non-stationary data can lead to misleading results in regression models. The ADF test is applied to the annual dataset to verify its suitability for further statistical modeling.

Table 2: Augmented Dickey-Fuller Unit Root test

Variables	Level	1st Diff	Lag(s)	Order of integration
FI	-0.129871	-1.318755	1	I(1)
DBA	-0.981125	-2.578431	1	I(1)
REG	-1.431863	-4.872154	1	I(1)
INT	-2.118544	-5.899722	1	I(1)
FL	-3.854762	-6.571384	1	I(1)
INC	-2.111867	-5.889721	1	I(1)

Note: (*) (**) (***) denotes statistically significant at 1%; 5% and 10% level respectively.
Source: E-views result 2024

The Augmented Dickey-Fuller (ADF) test results indicate that the key variables (FI, DBA, REG, INT, FL, INC) are non-stationary at their level forms, suggesting unit roots and potential spurious correlations. However, after differencing the variables, the test statistics show they become stationary at the first difference (I(1)), indicating long-term trends. This highlights the need for appropriate econometric techniques, such as co-integration analysis, to examine long-run

relationships between the variables and avoid unreliable results when studying financial inclusion and its determinants.

4.2. Johansen's Co-integration test result

Table 3: Johansen Co-integration test

Series	Eigen Value	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No of CE(S)
FL	0.324516	165.6651	159.44	152.11	None**
DBA	0.543489	161.5463	155.77	147.31	At most 1
REG	0.665322	152.6411	144.41	140.52	At most 2
INT	0.711268	147.5788	137.73	135.88	At most 3
FL	0.554831	141.6733	130.22	129.41	At most 3
INC	0.599824	133.5828	122.55	120.64	At most 4

Source: Source: E-views result 2024

*(**) denotes rejection of the null hypothesis at the 5% (1%) level respectively
L.R test indicates 2 co-integrating equation(s) at 5%

The Johansen co-integration test results reveal significant long-run relationships between factors influencing financial inclusion in Nigeria, including Digital Banking Adoption (DBA), Regulatory Environment (REG), Internet Access (INT), Financial Literacy (FL), and Income Levels (INC). While Financial Literacy alone does not show a lasting relationship with financial inclusion, other factors like DBA, REG, INT, and INC demonstrate potential long-term connections with financial inclusion. Strong regulatory frameworks, improved internet access in rural areas, and addressing income inequality are crucial for enhancing financial inclusion. The two cointegrating equations emphasize the need for policies addressing the interdependence of these factors.

4.3. Error correction model

Table 4: Result of error correction model

Variable	Co-efficient	Std. Error	T Statistic	Prob
Constant	0.921576	0.121769	7.568231	0.447
DBA	0.889721	0.811275	1.096694	0.004
REG	0.700982	0.788635	0.888854	0.001
INT	0.800217	0.512996	1.559889	0.003
FL	0.634219	0.721395	0.879156	0.002
INC	0.690083	0.894627	0.771363	0.001
R Squared	0.741786		F Statistics	41.74294
Adjusted R Squared	0.698743			
D/W	2.217481			
ECM (-1)	-0.680441	0.554198	1.227794	0.0000

Source: Authors' computation from E-Views 2024

The Error Correction model results highlight key factors influencing financial inclusion in Nigeria. Positive coefficients for Digital Banking Adoption (DBA), Regulatory Environment (REG), Internet Access (INT), Financial Literacy (FL), and Income Level (INC) suggest that improvements in these areas promote greater financial inclusion. For example, mobile banking in Nigeria has enhanced rural access, akin to Kenya's M-Pesa success. The role of regulatory frameworks, such as those by the Central Bank of Nigeria, is significant, as are financial literacy and internet access programs. With an R-squared value of 0.74, the model explains financial inclusion variability well, and the Durbin-Watson statistic of 2.22 confirms no autocorrelation. The significant error correction term indicates that long-term imbalances self-correct, similar to successful programs like Brazil's Bolsa Família. These findings suggest that such policies could promote financial inclusion in other developing economies.

4.4. Test of Hypotheses

$H0_1$: There is no significant impact of digital banking adoption on financial inclusion in Nigeria.

The error correction model results for hypothesis one show a positive statistically significant relationship between digital banking adoption and financial inclusion in Nigeria. As a result, the null hypothesis, suggesting no significant impact of

digital banking adoption on financial inclusion is rejected. The conclusion is that digital banking adoption significantly influences financial inclusion in Nigeria.

$H0_2$: The regulatory environment has no significant impact on financial inclusion in Nigeria.
The error correction model for hypothesis two shows a positive statistically significant relationship between the regulatory environment and financial inclusion in Nigeria. Consequently, the null hypothesis, which suggests the regulatory environment does not significantly affect financial inclusion is rejected. The conclusion is that the regulatory environment has a significant impact on financial inclusion in Nigeria.

$H0_3$: There is no significant impact of access to the internet on financial inclusion in Nigeria.
The error correction model for hypothesis three reveals a negative, statistically significant relationship between internet access and financial inclusion in Nigeria. As a result, the null hypothesis, which suggests that internet access does not significantly influence financial inclusion is rejected. The conclusion is that internet access has a significant impact on financial inclusion in Nigeria.

$H0_4$: Financial literacy has no significant impact on financial inclusion in Nigeria.
The error correction model for hypothesis four shows a positive, statistically significant relationship between financial literacy and financial inclusion in Nigeria. As a result, the null hypothesis, which suggests that financial literacy does not significantly impact financial inclusion, is rejected. The conclusion is that financial literacy significantly affects financial inclusion in Nigeria.

$H0_5$: Income level has no significant impact on financial inclusion in Nigeria.
The error correction model for hypothesis five reveals a positive, statistically significant relationship between income level and financial inclusion in Nigeria. Therefore, the null hypothesis, which suggests income level does not significantly affect financial inclusion is rejected. The conclusion is that income level has a significant impact on financial inclusion in Nigeria.

4.5. Discussion of major findings

Descriptive statistics show high income levels and financial literacy, but lower financial inclusion and digital banking adoption. Income and financial literacy exhibit significant variability, with strong positive skewness for internet access

and financial literacy. Kurtosis values suggest more pronounced distributions for income and financial literacy. The Jarque-Bera test confirms normal distribution for all variables. The Augmented Dickey-Fuller (ADF) test reveals non-stationarity at original levels but stationarity at first differences, indicating stable long-term trends. The Johansen co-integration test identifies significant long-term relationships among financial literacy, digital banking adoption, regulatory environment, internet access, and income level. Two cointegrating equations highlight their interdependence.

The error correction model shows positive statistically significant coefficients for digital banking adoption, regulatory environment, internet access, financial literacy, and income level, suggesting their role in improving financial inclusion. The model explains much of the dependent variable's variability, with no autocorrelation in residuals. The negative, significant error correction term indicates a long-term equilibrium. The findings confirm that these factors significantly influence financial inclusion, leading to the rejection of all null hypotheses and emphasizing their importance in promoting financial inclusion in Nigeria.

5.0. Conclusion and Recommendations

This study highlights the significant impact of digital banking on financial inclusion in Nigeria from 2000 to 2022. The findings show that digital banking expands access to financial services, particularly for underserved groups, aligning with Afolabi and Ojo (2022). The regulatory environment is crucial for ensuring secure and inclusive digital banking, as emphasized by Ifeoma et al. (2023), while internet access plays a vital role in bridging the digital divide, especially in rural areas (Ojo & Amusa, 2021). Financial literacy is essential for effective engagement with digital banking, helping individuals manage finances and use available tools, as noted by Okeke et al. (2022). Income levels also influence financial inclusion, with higher incomes enhancing participation in the system, as highlighted by Ajayi and Bassey (2023).

The study suggests a multi-faceted approach to improving financial inclusion, focusing on expanding digital banking, creating strong regulations, enhancing internet access, promoting financial literacy, and addressing income disparities. Such a strategy would foster economic growth, improve living standards, and reduce inequality, particularly in rural areas. Addressing the digital divide through

infrastructure investments and promoting financial literacy programs are key steps for achieving sustainable development and reducing inequality in Nigeria.

Based on the study findings, the following recommendations provide actionable strategies for the government to enhance financial inclusion in the country:

1. **Strengthen Digital Banking Adoption**: Expanding digital banking remains essential despite challenges like infrastructure and low financial literacy. Policies should focus on improving mobile banking access, making digital services user-friendly, and extending reach to underserved areas through partnerships with telecom and financial companies.
2. **Improve the Regulatory Environment**: While regulatory impact was not significant, enhancing regulations to support innovation, cybersecurity, and consumer protection is crucial. This includes simplifying processes and ensuring accessibility, with consistent policy implementation through collaboration with stakeholders.
3. **Expand Internet Access**: Increasing internet infrastructure, particularly in rural areas, is key. Policymakers should incentivize private sector investments, offer affordable data plans, and create public access points, focusing on affordability and partnering with telecom providers to extend coverage.
4. **Promote Financial Literacy**: Strengthening financial literacy is vital for effective use of digital banking. Initiatives should target diverse groups, such as students, rural adults, and small business owners. The government and financial institutions should collaborate to design and implement education programs through schools, community centers, and digital platforms.
5. **Address Income Inequality**: Addressing income disparities is critical for improving financial inclusion. Policymakers should focus on poverty alleviation through microcredit, job creation, and empowering rural areas. Effective policy implementation and anti-corruption measures are necessary to ensure equitable resource distribution and reduced income inequality.

References

Adebayo, A., Adetola, T., & Okafor, I. (2023). The role of digital banking adoption in promoting financial inclusion among low-income groups in Nigeria. *International Journal of Financial Inclusion, 18*(3), 45-61.

Adegbola, A. (2024). Financial inclusion and its implications in Nigeria. *Journal of Economic Development, 45*(2), 123-145.

Afolabi, A., & Ojo, T. (2022). The role of digital banking in promoting financial inclusion in Nigeria. *Journal of Financial Innovation, 15*(3), 145–160.

Ahmed, S. (2024). The evolution of digital banking: A focus on security, scalability, and accessibility. *International Journal of Banking Technology, 29*(3), 201-219.

Ajayi, B., & Bassey, E. (2023). Income levels and financial access: A study of digital banking in Nigeria. *African Journal of Economics and Finance, 10*(4), 89–105.

Akanbi, A., Ojo, M., & Eze, B. (2021). Financial literacy and digital banking adoption: The impact of formal and informal education in Nigeria. *International Journal of Economic Studies, 15*(3), 134-148.

Akinyele, S. T., & Akintoye, I. R. (2020). Income inequality and access to financial services in Nigeria: Implications for financial inclusion**.** *Journal of Economics and Business Studies, 8*(1), 35-50.

Akinyemi, O., & Ojo, S. (2020). Income inequality and digital banking adoption in Nigeria. *Journal of Economic Development, 31*(2), 112-127.

Aliyu, I. (2023). Financial inclusion and economic growth: A case study of Nigeria. Nigerian *Journal of Financial Studies, 18*(4), 78-91.

Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study**.** *OECD Working Papers on Finance, Insurance, and Private Pensions, No. 15.* OECD Publishing.

Ayo, C. K., Adewoye, J. O., & Oni, A. A. (2016). The role of mobile money in enhancing financial inclusion in Nigeria. *Journal of Financial Services Marketing, 21*(3), 213-225.

Bishop, T. (2023). Online banking platforms: Improving customer convenience in financial services. *Journal of Digital Finance, 11*(2), 34-47.

Bryman, A. (2016). *Social research methods*. 5th edition. Oxford University Press.

Castells, M. (1996). *The rise of the network* . 1st edition. Blackwell Publishers.

Central Bank of Nigeria (CBN). (2012). *Cashless policy: Implementation strategy*. Central Bank of Nigeria. https://www.cbn.gov.ng

Central Bank of Nigeria (CBN). (2018). *National financial inclusion strategy 2018-2022*. Central Bank of Nigeria. https://www.cbn.gov.ng

Central Bank of Nigeria (CBN). (2020). *Annual report and financial statements***.** Central Bank of Nigeria.

Central Bank of Nigeria (CBN). (2021). *Financial inclusion strategy and implementation report.* Abuja, Nigeria: Central Bank of Nigeria.

Consultative Group to Assist the Poor (CGAP). (2009). *Financial inclusion: The role of digital banking in financial services access*. CGAP. https://www.cgap.org/topics/financial-inclusion

Dada, R., & Alabi, A. (2023). Financial literacy and its role in digital banking adoption in Nigeria: A regression analysis. *Journal of Financial Education, 25*(1), 40-59. https://doi.org/10.1023/jfe.2023.025

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Demirguc-Kunt, A., Beck, T., & Honohan, P. (2018). Finance for all? Policies and pitfalls in expanding access**.** *World Bank Policy Research Report.*

EfInA. (2022). *The 2022 Access to Financial Services in Nigeria survey*. Enhancing Financial Innovation & Access. https://www.efina.org.ng

Fischer, G., & Reinders, M. (2019). Financial literacy and digital banking in emerging markets. *Journal of Digital Banking, 3*(2), 134-146.

Ghosh, S., & Guha, R. (2020). Digital banking and financial inclusion in rural India: Evidence from microfinance institutions. *Journal of Financial Inclusion, 11*(3), 200-218. https://doi.org/10.1093/jfi/jfz022

Ghosh, S., & Sharma, P. (2019). The impact of digital banking on financial inclusion: Evidence from India**.** *International Journal of Bank Marketing, 37*(2), 528-545.

Ifeoma, C., Eze, M., & Okonkwo, P. (2023). Regulatory frameworks and their impact on digital banking adoption in Nigeria. *Journal of Financial Regulation and Policy, 18*(2), 65–82. https://doi.org/10.xxxx/yyyy

Ike, O., & Olaniyi, T. (2023). Internet penetration and financial inclusion in rural Nigeria: The moderating role of internet quality. *African Journal of Digital Banking, 12*(2), 112-128. https://doi.org/10.8899/ajdb.2023.012

Jack, W., & Suri, T. (2011). Mobile money: The economics of M-Pesa. *National Bureau of Economic Research Working Paper No. 16721.* https://doi.org/10.3386/w16721

Johnson, L. (2023). *The digitization of banking services and customer interaction*. Journal of Financial Innovation, 15(1), 56-72.

Kaur, G., & Mehta, S. (2019). Financial literacy and financial inclusion: A study of Indian rural areas. *International Journal of Financial Studies, 7*(3), 44. https://doi.org/10.3390/ijfs7030044

Kempson, E., Whyley, C., & Caskey, J. P. (2004). Inclusion in the financial system: A conceptual framework**.** *Journal of Economic Development, 29*(2), 107-123.

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and retirement planning in the United States**.** *Journal of Pension Economics and Finance, 10*(4), 509-525.

Musa, S., & Alabi, I. (2021). Gender, income, and digital banking adoption in Nigeria: An analysis of socio-economic barriers. *Journal of Gender and Development Studies, 22*(2), 102-117. https://doi.org/10.5609/jgds.2021.022

National Bureau of Statistics (NBS). (2022). *Nigeria financial inclusion survey 2022*. National Bureau of Statistics. https://www.nbs.gov.ng

National Communication Commission. (2022). *Internet usage and connectivity across Nigeria*. NCC Report.

Nguyen, L. (2023). Mobile banking and its role in customer satisfaction and service delivery. *Journal of Mobile Technology, 22*(3), 140-158.

Nigeria Inter-Bank Settlement System (NIBSS). (2022). *Annual report on fraud attempts in digital banking platforms*. Nigeria Inter-Bank Settlement System.

Nigerian Communications Commission. (2021). *Telecommunications infrastructure and its impact on rural financial inclusion*. NCC Annual Report.

North, D. C. (1990). Institutions, institutional change, and economic performance**.** Cambridge University Press.

Nwachukwu, M., & Ojo, T. (2020). Regulatory frameworks and digital banking in Nigeria: An empirical examination. *Financial Policy Journal, 19*(2), 78-90.

Nwankwo, M., Okoro, N., & Uche, F. (2022). Income levels and their effect on financial inclusion in Nigeria: A regional analysis. *Economic Development Review, 32*(5), 78-91.

Ogunbayo, O., Adebayo, A., & Ogundipe, O. (2022). Regulatory frameworks and the promotion of digital banking in Nigeria: Panel data analysis. *Global Finance Journal, 20*(2), 205-220.

Ogunleye, A., & Akinyemi, A. (2020). Internet access and financial inclusion in Nigeria: The cost and availability factors. *Journal of Development Economics, 18*(6), 189-203.

Ogunsanwo, O., & Adeyemo, F. (2022). The effects of mobile banking innovations on financial inclusion in Nigeria: A descriptive statistical approach. *Journal of Digital Financial Services, 8*(3), 122-138.

Ojo, E., & Adetola, K. (2021). The role of internet access in financial inclusion: A correlation analysis in the Nigerian context. *African Journal of Internet Banking, 7*(1), 60-75.

Ojo, T., & Amusa, F. (2021). Bridging the digital divide: Internet access and its role in financial inclusion. *Nigerian Journal of ICT and Development, 9*(1), 112–128.

Okafor, I., & Adebayo, A. (2023). Regulatory frameworks and their impact on digital banking adoption in Nigeria: An ARDL bound test approach. *Journal of Banking Regulation, 15*(4), 230-245.

Okechukwu, E. (2022). Financial inclusion in Nigeria: Barriers to rural access and digital literacy. *International Journal of Rural Development, 30*(5), 86-98.

Okeke, U., Obasi, K., & Anayo, I. (2022). Financial literacy and digital banking participation: Insights from Nigeria. *Journal of African Development Studies, 12*(2), 75–92.

Okereke, C. O., & Uche, O. J. (2020). Assessing the impact of the digital banking environment on financial inclusion: A structural equation modeling approach**.** *Journal of Financial Services Marketing, 24*(3), 192-205.

Okereke, E., & Uche, T. (2020). Digital banking and financial inclusion in Nigeria: A structural equation modeling approach. *Journal of Financial Services Research, 28*(4), 212-225.

Olajide, A. (2017). Regulation and financial inclusion: The role of the Nigerian government. *International Journal of Financial Regulation, 5*(2), 39-52.

Olaniyi, F., & Olayemi, M. O. (2021). Digital banking and the future of financial inclusion in Nigeria: Impact of COVID-19. *Journal of Digital Banking, 5*(1), 27-41.

Olusanya, B. (2024). Digital banking in Nigeria: Enhancing accessibility through technology. *Journal of Banking and Financial Technology, 6*(1), 10-23.

Osazevbaru, I. A., & Yomere, F. D. (2020). The role of mobile money and USSD platforms in financial inclusion in Nigeria. *International Journal of Banking and Finance, 12*(2), 45-58.

Owolabi, O. (2020). Digital banking and financial inclusion in Nigeria: An empirical perspective. *Journal of African Financial Studies, 12*(2), 89–105.

Rogers, E. M. (2003). *Diffusion of innovations*. 5th edition. Free Press.

Sarma, M., & Pais, J. (2011). Financial inclusion and development**.** *Journal of International Development, 23*(7), 813-831.

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students*. 8th edition. Pearson Education.

Sen, A. (1999). *Development as freedom*. Alfred A. Knopf.

Sherraden, M. (1991). *Assets and the poor: A new American welfare policy***.** 1st edition, M.E. Sharpe.

Smith, P. (2018). Academic integrity and the responsible use of secondary data**.** *Journal of Business Ethics, 154*(1), 123-136.

Soares, S., Ribas, R., & Osório, R. G. (2010). Evaluating the impact of Brazil's Bolsa Família: Cash transfer programs in comparative perspective. *Latin American Research Review, 45*(2), 173–190.

Sulaimon, A. A., & Olayemi, A. T. (2019). Financial literacy and its impact on the use of digital banking services in Nigeria**.** *International Journal of Banking and Finance, 10*(2), 142-160.

Udo, O., & Eze, N. (2020). Financial literacy and digital banking adoption in Nigeria: A qualitative approach. *African Journal of Banking and Finance, 14*(1), 34-46.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). *User acceptance of information technology: Toward a unified view*. MIS Quarterly, 27(3), 425–478.

Wilmott, J. (2020). Ethical considerations in secondary data research**.** *Ethics and Information Technology, 22*(3), 229-240.

World Bank. (2021). *Digital financial inclusion: Opportunities and challenges for emerging markets*. World Bank Publications.

World Bank. (2021). *Digital literacy and financial inclusion in Nigeria's rural areas*. World Bank Report.

Zhang, W. (2023). *Financial inclusion and risk management in developing economies*. Financial Development Review, 9(4), 214-227.