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Table of Contents

EFFECT OF GREEN ACCOUNTING DISCLOSURE AND FINANCIAL PERFORMANCE: A STUDY OF CONSUMER GOODS FIRMS IN NIGERIA

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Abstract
This study ascertained the effect of green accounting disclosure on financial performance of listed consumer goods firms in Nigeria, using environmental protection disclosure and corporate donation. Ex post facto research design was adopted for the study. A sample of 18 consumer goods firms was used and data extracted from the companies audited annual reports and accounts. Using regression analysis, it was established that environmental protection disclosure and corporate donation with firm size as the control variable were significant. This shows the extent to which consumer goods firms disclose information voluntarily, particularly regarding environmental protection, corporate donations, and employee welfare, can significantly influence stakeholders' perceptions and decisions. Based on the findings of the study, it was recommended that there should be constant green accounting disclosure by the firms for mitigating its environmental impact and promoting sustainable practices. This will enable them share with their stakeholders to demonstrate their commitment toward environmental responsibility.
Keywords: *Environmental protection disclosure and corporate donations and financial performance*

Introduction

Green accounting is a type of accounting that attempts to factor environmental costs into the financial results of operations. It has been argued that gross domestic product ignores the environment and therefore decision makers need a revised model that incorporates green accounting. Environmental pollution is one of the problems facing the world today, due to its impact on society, nature and performance (Arumona *et al*., 2021). The phenomenon of environmental pollution has received increasing attention in recent times, especially in light of the industrial progress in the contemporary world and the diversity of sources of pollution, and the attempt of industrial companies, particularly oil and gas firms to get rid of its harmful waste to the environment and people (Onoh *et al*., 2023). As a result of the development of interest in environmental performance as one of the foundations of development in any country, non-use of modern scientific methods that analyzes environmental costs and provide detailed information on those costs and the efforts and amounts that companies bear for the purpose of environmental protection will give guaranteed results on the extent of their success or failure (Sanni & Kolawole, 2019).

Companies that adhere to green accounting in accordance with governmental regulations and effectively manage environmental concerns have the potential to enhance their environmental performance, ultimately leading to an improvement in the company's financial performance (Riadi & Aqshal, 2023). Presently, companies in are perceived to be inadequately implementing green accounting due to a suboptimal emphasis on environmental considerations and their associated impacts (Widyowati, 2022). As time progresses, a variety of environmental issues have emerged as a consequence of business activities. Communities and non-governmental organizations are encouraging business operators to prioritize their roles and responsibilities toward the environment, rather than solely concentrating on financial aspects. In practical terms, green accounting encompasses a company's business activities and processes related to environmental matters, which are identified, evaluated, quantified, and disclosed within accounting reports, enabling the reporting the incurred costs (Ratusasi & Pengaruh, 2023).

Business competition in the era of Society requires companies to continue to develop product innovations, expand business, improve employee performance, in order to continue to survive and be able to compete by having a competitive advantage over other competitors. The company or issuer is expected to be able to manage its finances and non-finances. In addition to profitability, another company goal is to maximize the value of the company for its long-term survival or called going concern. The better the company's performance, the better the company's profitability and will have an impact on the company's value (Ikhsan, 2007). Company value is a description of the state of a company, where there is a special assessment from potential investors. Companies that set aside negative impacts in the form of hazardous waste must pay attention to the surrounding environment. Green Accounting or environmental accounting is part of a company's business activities. Green accounting is a type of environmental accounting that describes efforts to incorporate environmental benefits and costs into economic decision making or a business financial outcome. The importance of environmental accounting basically demands full awareness of companies and other organizations that have benefited from the environment (Kartika & Utami, 2019).

Prior study were carried out in different sectors, mainly on oil and Gas; Amalya *et al*. (2023) ascertained the relationship of green accounting on financial performance with environmental performance as a mediation variable. Aryani *et al*. (2023) evaluated the effect of green accounting on financial performance of company value with profitability as an intervening variable on mining sector companies listed on IDX for the period 2018-2021. Choiriah and Lysandra (2023) ascertained the effect of green accounting, quality management financial performance, and green innovation as moderation variables from 2018 to 2021. Olaoye and Alao (2023) investigated green accounting practices and business health of listed oil and gas firms in Nigeria (2012-2021). Ihenyen and Ikegima (2022) determined environmental accounting and organizational performance of listed industrial sector companies in Nigeria.

Onthis note, there is scarce research of this nature in consumer goods companies, hence, this is to ascertain the effect of green accounting disclosure on financial performance of listed consumer goods firms in Nigeria. The research is guided by other specific objectives which include:

1. To determine the effect of environmental protection disclosure on earnings per share of listed consumer goods firms in Nigeria.
2. To ascertain the effect of corporate donations disclosure on earnings per share of listed consumer goods firms in Nigeria.

Literature review

Conceptual Review

Green Accounting

Green accounting is a type of accounting that seeks to include and relate environmental cost factors to corporate activities. Cohen and Robbins (2021) Green accounting or environmental accounting is defined as: "A style of accounting that includes indirect costs" This means that environmental accounting is a type of accounting that includes indirect costs and benefits from economic activities, such as the environmental and health effects of business plans. Apart from that, environmental accounting is accounting that identifies, measures, evaluates the details costs associated with a company's actions towards the environment (Aniela, 2022). Environmental accounting is also similar to a quantitative measurement framework for environmental conservation activities carried out by companies (Suartana, 2021). Green accounting is a method of reporting the impact that a company's management activities have on the environment by including it in financial reports. Ningsih and Rachmawati (2021) Green accounting, aims to link the environmental budget and business operating funds. Green accounting also provides opportunities to reduce energy and natural resources, reduce health risks, and promote competitive advantage for companies. In this way, green accounting is an effort to improve the economics of a company without ignoring the state of the surrounding environment.

Green accounting is carried out by companies to create an evaluation of data in the form of numbers regarding costs and environmental impact. The benefits of environmental accounting concepts for companies facilitate the ability of companies to minimize the environmental problems they face (Nuryanti *et al*., 2021). Green accounting solutions for companies are a form of corporate responsibility towards stakeholders. This is because stakeholders want to focus not only on financial value, but also on environmental value, that is, whether a company takes into account the environmental impact of its operations. Regulations on Green Accounting are Law No. 2 No. 23 of 1997 on Environmental Management. This law regulates the obligations of everyone who carries out activities to protect, manage and provide correct and accurate information about the environment (Hamidi, 2019).

Environmental Protection Disclosure

In relation to environmental protection disclosure there is no standard definition and it is left mostly to the discretion of the companies to decide which expenditure or cost should be included under the environmental expenses or costs. For a general understanding of environmental protection disclosure, it can be referred to the voluntary disclosure of a company's initiatives, policies and actions aimed at mitigating its environmental impact and promoting sustainable practices. It encompasses a range of information that consumer goods firms voluntarily share with their stakeholders to demonstrate their commitment to environmental responsibility.

Measuring environmental performance and setting targets is a critical component for organizations to become more productive, more profitable and more sustainable.

Accountants are expected to take a proactive role in environmental protection process with the advent of liberalization. The cost of environmental degradation due to industrial activities should be internalized in corporate account to the extent possible. That is why environmental accounting and reporting is of paramount importance today.

Clarkson, Richardson and Vasvari (2008) reported that disclosure and transparency are critical elements of a robust corporate governance framework as they provide the basis for informed decision making by shareholders, and potential investors with respect to capital allocation, corporate transactions and financial performance monitoring. High quality disclosure through its influence on investors and lenders who must assess risks and returns to decide where best to place their money, strengthen the efficiency of capital allocation as well as offer the benefit of reducing the cost of capital.

Corporate Donation Disclosure

Corporate donation disclosure is a voluntary practice wherein companies publicly disclose their financial contributions and support to charitable organizations, community development projects and social causes. This disclosure allows companies to communicate their commitment to social responsibility and showcases their efforts to positively impact society. By disclosing their donations, companies demonstrate a genuine concern for societal wellbeing and an alignment with broader ethical values, thereby leading to increased brand loyalty, competitive advantage in the market and trust and goodwill of stakeholders.

Corporate donation has been classified as a receipt of funds or assets which must have been given with no consequent obligation in order to provide goods and services to the benefit of the donor. Donations are considered to be voluntary in nature with little or no business consideration (Ozurumba, 2016). Therefore, donations are considered as an appropriation of profit and not a business expense. They are not considered as resources used to carry on the business. Although critical to some organization operations, cost of donation can be problematic from an accounting standpoint. But the issues lie in whether the cost of donation to the organization be recognized in financial statements and how they should be valued (Ozurumba, 2016). Large publicly held companies are bridling proposed federal legislation that would require them to disclose their donation cost given out, warning that such law would have a chilling effect on corporate philanthropy. Many experts in corporate laws agree that companies should disclose their cost of donation. The problem with today's corporate philanthropy is that it sometimes functions to promote and increase corporate management. In cases where there is no clear benefit to the company, it is a waste of corporate property. Whether companies should disclose their donations is part of a broad and long-running debate for corporations in society. Some corporate executives believe that companies should give nothing to charities. They argue that the managers are to maximize returns to shareholders, who can then donate their money as they wish.

Financial Performance

A company's financial performance is an analysis performed with the purpose of determining how well a company performs its financial activities with reference to ideal financial execution rules (Nurfaidah, Andi, Bunyamin & Andi, 2023). Corporate performance is a formal effort undertaken by a company to accurately assess the company's operational activities performed during a particular time period. Financial performance describes a company's objectives, that is, a company's ability to increase its profits by generating profits. Financial performance is very important to evaluate because it can motivate employees to achieve organizational goals and follow predetermined standards of behavior, thereby generating desired profits. Financial performance is measured through data obtained from a company's financial reports. Financial reports are prepared to describe past financial conditions and are used to predict future financial conditions.

Earnings per Share

The term earning per share (EPS) is generally considered to be most significant variable in defining share price. It also plays very important role to measure the price to earning valuation ratio. Earnings per share (EPS) is a popular financial ratio which is widely used by investors worldwide. It measures potential profit on investment in company's shares (Sierpinska & Jachna, 2004). It is a solid indicator of a firm's profitability. Earnings per share (EPS) is a part of a company's income that is allocated to each outstanding share of common stock, serving as an indicator of the firm's profitability. The payment of dividend to shareholders depends on the profitability of a firm/company. The more profitability any firm earns, the more chances of healthy dividends are high. But high profitability is not the guarantee to pay a dividend to the shareholders. It totally depends on the policy of the firm and decision of the board, (Balaputhiran, 2014).

Empirical Review

Etim, Usen, Obot and Edet (2024) determined the effect of green accounting practices on financial performance of oil and gas companies in Nigeria. Desktop approach was employed to review of existing empirical studies conducted in Nigeria on green accounting practices of oil and gas firms between 2013 and 2022. Findings from the study indicates that green accounting significantly influenced financial performance of quoted oil and gas firms in Nigeria over the period reviewed. Nurfaidah, Andi, Bunyamin and Andi (2023) identified and analyzed the impact of green accounting implementation and environmental performance on corporate financial performance of manufacturing companies in the basic industry and chemical sectors on the Indonesia Stock Exchange in2021-2022. Multiple regression analysis was used with the aid of SPSS program. Based on the analysis results, it is shown that green accounting and environmental performance variables do not affect the financial performance of companies. Riadi and Aqshal (2023) assess the impact of green accounting, representedby environmental performance (measured by the Proper indicator), environmentalcosts, and environmental disclosure (measured by the Global ReportingInitiative indicator), on financial performance (return on assets). The research employed a quantitative approach involving classical assumption testingand analysis of multiple linear regression data for LQ45 mining sector companieslisted on the Indonesia Stock Exchange during 2018-2021. The findings of thestudy revealed that environmental performance, environmental costs, and environmentaldisclosures did not exert any influence on financial performance.Amalya *et al*. (2023) ascertained the relationship of green accounting on financial performance with environmental performance as a mediation variable from 2019 to 2020 and the key variables of the study were financial performance (dependent variable) measured by return on assets (ROA) and green accounting (independent variable) measured by environmental cost. Data for the study were collected from the annual reports and financial statements of the entities and analysis was conducted using simple linear regression approach. The results indicated that green accounting exerted significant influence on financial performance (ROA) of the entities sampled for the study. Aryani *et al*. (2023) evaluate the effect of green accounting, financial performance on company value with profitability as an intervening variable: Study on mining sector companies listed on IDX for the period 2018-2021. Choiriah and Lysandra (2023) ascertained the effect of green accounting, quality management on financial performance, and green innovation as moderation variables from 2018 to 2021.The data were analyzed using descriptive statistics and simple linear regression technique. The results obtained indicated that green accounting exerted significant influence on financial performance. The results obtained from the analysis also showed that quality management had no influence on ROA of the firms studied. Olaoye and Alao (2023) investigated green accounting practices and business health of listed oil and gas firms in Nigeria (2012-2021). This study was carried out to examine the effect of green accounting practice on business health of listed oil and gas firms in Nigeria. The period of the study ranged from 2012 to 2021. Accounting practices in the study being the independent variable was measured by Waste Management Practice Disclosure (WMPD), Environmental Protection Practices Disclosure (EPPD) and Pollution Prevention Practices Disclosure (PPPD) and financial performance which was the dependent variable used in the study was proxied by Return On Asset (ROA) and Earnings Per Share (EPS). Data for the study were obtained from the financial reports of the entities sampled for the study and the data were analyzed using Ordinary Least Square (OLS) technique.

The results obtained for the analysis conducted showed that WMPD had a negative and insignificant influence on EPS.Ihenyen and Ikegima (2022) determined environmental accounting and organizational performance of listed industrial sector companies in Nigeria. The study aimed to examine the impact of environmental accounting on organizational performance of listed industrial companies in Nigeria from 2010 to 2020. To establish the influence of independent variable on the dependent variable, relevant data were extracted from the published annual reports and financial statements of the entities chosen for the study. The data were analyzed using canonical correlations and the results obtained indicated that the environmental accounting (WMC, CDC and EHSC) exerted substantial influence on organizational performance (ROA, ROE and NPM) of listed industrial sector businesses in Nigeria studied. Ilelaboye and Alade (2022) **ex**amined environmental accounting and financial performance of listed family-owned companies in Nigeria. The study sought to investigate the influence of environmental accounting on financial performance of the listed familyowned firms in Nigeria. The study was conducted to cover the period from 2012 to 2020 and the relevant variables used in the study were financial performance (dependent variable) measured by return on capital employed (ROCE) and environmental accounting proxied by restoration cost (RC), community development cost (CDC) and health and safety cost (HSC).

The study adopted purposive sampling technique to select six (6) family-owned companies. Data were extracted from the annual reports and financial statements of the sampled companies. Data analysis was conducted using both descriptive statistics and ordinary least squared (OLS) techniques analytical approach. The analysis indicated that RC had adverse and inconsequential influence on the financial performance, and CDC had adverse and material influence on financial performance while HCS exerted a direct and insignificant influence on financial performance. Benson *et al*. (2021) studied the effect of green accounting on financial performance of oil and gas companies in Nigeria. The aim of the study was to investigate the effect of green accounting on financial performance of oil and gas companies in Nigeria. The period of the study ranged from 2010 to 2020. The independent variables of the study were environmental accounting and green management accounting, and the dependent variable of the study was financial performance measured by return on assets (ROA) and return on equity (ROE). The study was quantitative in nature and thus, secondary data were obtained from annual reports and financial statements of the companies sampled for the study. The data were analyzed using both descriptive and simple linear regression approach. The results obtained from the analysis indicated that environmental cost accounting exerted significant influence on the financial performance (ROE and ROE) of oil and gas companies. Also, it was discovered that green management accounting had significant influence on the ROA and ROE of oil and gas firms. Emmanuel (2021) determined green accounting reporting and financial performance of manufacturing firms in Nigeria. This study examined green accounting disclosure and its effect on financial performance of listed manufacturing firms in Nigeria. The dependent variable of the study was financial performance measured by return on assets (ROA) and return on equity (ROE) and the independent variable of the study was green accounting reporting and the study covered the period of ten (10) years from 2010 t0 2019. Data for the study were obtained from the annual reports of forty (40) out of the sixty-six (66) manufacturing companies whose shares were traded on the floor of Nigerian Exchange Group (NXG) as at 31st December 2019. Data analysis was conducted using descriptive statistics and the panel regression approaches. From the analysis, it was discovered that green accounting disclosure had direct and material influence on financial performance (ROA and ROE). However, the study also showed that there was a negative influence of green accounting disclosure on share price of manufacturing firms in Nigeria. Ordu and Amah (2021) examined sustainability accounting and financial performance of oil and gas companies in Nigeria. The study was conducted to assess the between sustainability accounting and performance of selected quoted oil and gas companies in within the period of 2012-2017. The dependent variable used in the study was financial performance measured by return on Assets (ROA) and the independent variable of the study was sustainability accounting (SA) proxied with environmental expenditure (ENVSPND). Relevant data for the study were extracted from the annual reports of the entities sampled for the study and the data were analyzed using correlational design and regression technique. From the analysis, it was discovered that environmental accounting had an insignificant influence on ROA of the oil and gas companies in Nigeria**.** Riyadh *et al*. (2020) conducted a study on the analysis of green accounting cost impact on corporations' financial performance. The study sought to examine the influence of green accounting disclosures on financial performance.

The study was conducted to cover one year period (2018) and the key variables of the study were green accounting (independent variable) measured by environmental cost (EC) and financial performance (dependent variable) measured by net profit margins (NPM), return on assets (ROA) and earnings per share (EPS). Data for the study were obtained from one hundred (100) multinational corporations and the data were analyzed using multiple regression analysis were employed. From the analysis, it was found that green accounting costs exerted negative influence on financial performance. Ikpor *et al*. (2019) investigated environmental accounting and sustainable financial performance: Evidence from the Nigerian petroleum industry. The study was conducted to ascertain the influence of environmental accounting on financial performance. The period of the study was from 1970 to 2017 and the essential variables of the study were environmental accounting (independent variable) measured by environmental operating costs (EOC) and environmental prevention costs (EPC) and financial performance (dependent variable) measured by profit after tax (PAT). The population of the study consisted of forty-eight (48) petroleum companies in Niger Delta and ten (10) out of the 48 companies were sampled for the study. Relevant data for the study were obtained from the published annual reports and financial statements of ten (10) petroleum companies operating in the Niger Delta part of Nigeria sampled for the study. To establish the influence of the independent variable on the dependent variable, data analysis was conducted using ordinary least square (OLS) regression method. From the analysis, it was found that EOC and EPC exerted significant and negative influence on the performance of petroleum firms in Nigeria. Nguyena and Trana (2019) investigated disclosure levels of environmental accounting information and financial performance: The case of Vietnam. The study was conducted to cover the period from 2013 to 2017 and the relevant variables for the study were financial performance (dependent variable) measured by return on assets (ROA) and the control variables used in the study were business size (BS), financial leverage (LEV), listing period (AGE) and independent auditors (AUD). To establish the influence of the independent variable on the dependent variable, relevant data were extracted from the published annual reports and financial statements. The data were analyzed using both descriptive and regression analytical tools. The results of the analysis indicated that environmental accounting had an insignificant influence on financial performance of the firms. Sanni and Kolawole (2019) conducted a study on influence of environmental accounting on the performance of pharmaceutical companies in Nigeria. The study aimed at studying the influence of environmental accounting on performance of pharmaceutical firms in Nigeria from 2009 to 2015. The study employed secondary data which was obtained from the financial statements of all listed pharmaceutical companies in Nigeria. To establish the influence of environmental accounting on performance, panel data regression analysis was used to analyses the data obtained. From the analysis, it was discovered that environmental accounting positively influenced performance proxied by PAT, FS and LEV.

Methodology

Research Design

Ex-Post Facto research design was employ in this study, since the study sought to establish cause-effect relationship and the researcher has no control over the variables under study.

The population for this study consists of the twenty (20) consumer goods manufacturing companies quoted on the floor of Nigeria Exchange Group as at 31st December, 2022.

Sample Size and Sampling Technique

Purposive sampling technique was adopted to select the sample size of this study. The sample size of this study consist of eighteen (18) quoted consumer goods manufacturing companies that were continuously listed by Nigerian Exchange Group during the period 1st January 2013 to 2022 and whose financial statements and reports are available and have been consistently submitted to Nigerian Exchange Group for the period of study.

Source of Data

This study employed the use of secondary data. Information was sourced from Nigerian Exchange Group (NGX) fact books, annual reports and accounts of the sampled companies. These variables include; earnings per share as dependent variable, while environmental protection disclosure, corporate donation and employee welfare is independent variables.

Model Specification

The econometric models of the study was adapted from the studies by Ohidoa, Omekhodu, and
Oserogho (2016) as shown below:

$$ED_{it} = \alpha + \beta_1 FAGE_{it} + \beta_2 FSIZEit + \beta_3 LEV_{it} + \varepsilon i$$

Where;
ED = Environmental Disclosure
FAGE = Firm Age
FSIZE = Firm Size
LEV= Leverage
α = Constant Term
β = Coefficient Term

i = No of firms
t = Time Period
e = Error term

The model was functionally expressed as:
Thus, the researcher modified the model as follows:
$EPS_{it} = \beta_0 + \beta_I EVP_{it} + \beta_2 FSZ_{it}\ \mu_{it}$ -- - i
$EPS_{it} = \beta_0 + \beta_I CDN_{it} + \beta_2 FSZ_{it}\ \mu_{it}$ - - - ii
Where:
$EPS_{i,t}$ = Earnings per share of firm *i* at time *t*
EVP_{it} = environmental protection disclosure *i* at time *t*
CPD_{it} = corporate donation *i* at time *t*
$FSZ_{i,t}$ = Size of company *i* at time *t*
β_0 = Intercept coefficient
$\beta_1 - \beta_2$= Coefficients of independent variables
μ_{it} = The error term which account for other possible factors that could influence
i stands for the *i*th firm (18 companies)
t stands for year *t* (2013-2022) (Ten years)

Method of Data Analysis
The analysis of data for this research based on the data collected from publications of the Nigerian exchange Group and the annual reports of the quoted companies. Both the dependent and independent variables were computed from the data gotten from the Nigerian Exchange Group from 2013 to 2022.
Descriptive statistics employed to summarily describe the mean, median, standard deviation, kurtosis and skewness of the study variables. Inferential statistics will also be utilized with the aid of E-Views 9 using:

i. Coefficient of correlation: which is a good measure of relationship between two variables that tell us about the strength of relationship and the direction of the relationship as well?
ii. Multiple regressions analysis: Regression analysis predicts the value the dependent variable based on the value of the independent variable and explains the impact or effect of changes in the values of the variables.

Decision Rule
Accept the alternative hypothesis, if the Probability value (P-value) of the test is less than 0.05 (5%). Otherwise reject.

Data Analysis and Results

Table 1: Descriptive Statistics

	EPS	EVP	CPD	FSZ
Mean	2.015057	0.600000	8546.200	35017567
Median	1.986716	1.000000	5600.000	28806612
Maximum	3.179300	1.000000	47546.00	59713684
Minimum	1.512564	0.000000	0.000000	27528040
Std. Dev.	0.509256	0.516398	14046.76	10639662
Skewness	1.109363	-0.408248	2.424575	1.408857
Kurtosis	3.740297	1.166667	7.385802	3.794621
Jarque-Bera	2.279493	1.678241	17.81230	3.571223
Probability	0.319900	0.432090	0.000136	0.167695
Sum	20.15057	6.000000	85462.00	3.50E+08
Sum Sq. Dev.	2.334078	2.400000	1.78E+09	1.02E+15
Observations	10	10	10	10

Source: E-view output, 2024

Table 1 shows the mean (average) for each of the variables, their maximum values, minimum values, standard deviation and Jarque-Bera (JB) Statistics (normality test). The results in table 1 provided some insight into the nature of the Nigerian banks that were used in this study.

It was observed that on the average over the ten (10) years periods (2013-2022), the sampled firms in Nigeria were characterized by positive earnings per share (EPS) (2.015). Also, the large difference between the maximum and minimum value of the environmental protection disclosure (EVP),corporate donation (CPD), and firm size (FSZ) show that the sampled firms in this study are not dominated by firms with more earnings per share (EPS).

In this table, the Jarque-Bera (JB) which test for normality or the existence of outliers or extreme values among the variables shows that most of the variables are normally distributed at 5% level of significance. This means that any variable with outlier are not likely to distort our conclusion and are therefore reliable for drawing generalization. This also implies that the least square estimate can be used to estimate the pooled regression model.

Test of Hypotheses

Hypothesis 1

Ho1: There is no significant effect of environmental protection disclosure on earnings per share of listed consumer goods firms in Nigeria.

Table 2: Regression analysis between EPS, EVP and FSZ

Dependent Variable: EPS
Method: Least Squares
Date: 01/10/24 Time: 22:59
Sample: 2013 2022
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.560941	0.261824	2.142432	0.0694
EVP	0.205760	0.170817	1.204568	0.2675
FSZ	3.80E-08	8.29E-09	4.583468	0.0025

R-squared	0.848089	Mean dependent var	2.015057
Adjusted R-squared	0.804686	S.D. dependent var	0.509256
S.E. of regression	0.225063	Akaike info criterion	0.098449
Sum squared resid	0.354572	Schwarz criterion	0.189225
Log likelihood	2.507753	Hannan-Quinn criter.	-0.001131
F-statistic	19.53979	Durbin-Watson stat	1.680116
Prob(F-statistic)	0.001366		

Source: Researcher's computation through E-view 9.0 statistical package

Interpretation of Regression Result

In Table 2, R-squared and adjusted Squared values were (0.85) and (0.80) respectively. The indicates that all the independent variables jointly explain about 80% of the systematic variations in earnings per share (EPS) of our samples firms over the ten years periods (2013-2022). Table 2 reveals an adjusted R-squared value of 0.80,which represents the coefficient of multiple determinations imply that 80% of the total variation in the dependent variable (EPS) of quoted consumer goods firms in Nigeria is jointly explained by the explanatory variables (EVP and FSZ). The R-squared of 80% did not constitute a problem to the study because the F-statistics value of 19.53979 with an associated Prob.>F = 0.001366 indicates that the model is fit to explain the relationship expressed in the study model. The value of adjusted of 80% also shows that 20% of the variation in the dependent variable is explained by other factors not captured in the study model. This suggests that apart from EVP and FSZ, there are other factors that mitigate EPS of quoted consumer goods firms in Nigeria.

Test of Autocorrelation: using Durbin-Waston (DW) statistics which we obtained from our regression result in table 2, it is observed that DW statistics is 1.680116 and an Akika Info Criterion and Schwarz Criterion which are 1.434969 and

1.501143 respectively also further confirms that our model is well specified. In addition to the above, the specific findings from each explanatory variable are provided as follows:

The results in table 2 illustrated that environmental protection disclosure has a positive but insignificant effect with earnings per share measured with a beta coefficient (β_1) and t- value of 0.205760 and 1.204568 respectively and p- value of 0.268, while firm size has a positive and significant effect with earnings per share measured with a beta coefficient (β_1) and t- value of 3.800 and 4.583 respectively and p- value of 0.003.

Decision

Since the Prob(F-statistic) = 0.001366 of the test and is less than 0.05 (5%), this study upholds that there is a significant effect between environmental protection disclosure and earnings per share of listed consumer goods firms in Nigeria at 5% level of significance. Thus, null hypothesisis rejected and alternative hypothesis accepted.

Hypothesis 2

Ho_2: There is no significant effect of corporate donation disclosure on earnings per share of listed consumer goods firms in Nigeria.

Table 3: Regression analysis between EPS, CPD and FSZ

Dependent Variable: EPS
Method: Least Squares
Date: 01/10/24 Time: 23:00
Sample: 2013 2022
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.587792	0.294270	1.997458	0.0859
CPD	-4.44E-06	5.81E-06	-0.765137	0.4692
FSZ	4.18E-08	7.67E-09	5.457444	0.0009

R-squared	0.830755	Mean dependent var	2.015057
Adjusted R-squared	0.782399	S.D. dependent var	0.509256
S.E. of regression	0.237556	Akaike info criterion	0.206502
Sum squared resid	0.395032	Schwarz criterion	0.297278
Log likelihood	1.967488	Hannan-Quinn criter.	0.106922
F-statistic	17.18005	Durbin-Watson stat	1.017435
Prob(F-statistic)	0.001994		

Source: Researcher's computation through E-view 9.0 statistical package

Interpretation of Regression Result
In Table 3, R-squared and adjusted Squared values were (0.83) and (0.78) respectively. The indicates that all the independent variables jointly explain about 78% of the systematic variations in earnings per share (EPS) of our samples firms over the ten years periods (2013-2022). Table 3 reveals an adjusted R-squared value of 0.78,which represents the coefficient of multiple determinations imply that 78% of the total variation in the dependent variable (EPS) of quoted consumer goods firms in Nigeria is jointly explained by the explanatory variables (CPD and FSZ). The R-squared of 78% did not constitute a problem to the study because the F-statistics value of 17.18005 with an associated Prob.>F = 0.001994 indicates that the model is fit to explain the relationship expressed in the study model. The value of adjusted of 78% also shows that 22% of the variation in the dependent variable is explained by other factors not captured in the study model. This suggests that apart from CPD and FSZ, there are other factors that mitigate EPS of quoted consumer goods firms in Nigeria.

Test of Autocorrelation: using Durbin-Waston (DW) statistics which we obtained from our regression result in table 4.2.2, it is observed that DW statistics is 1.017435 and an Akika Info Criterion and Schwarz Criterion which are 0.206502 and 0.297278 respectively also further confirms that our model is well specified. In addition to the above, the specific findings from each explanatory variable are provided as follows:

The results in table 4.2.2 illustrated that corporate donation has a negative but insignificant effect with earnings per share measured with a beta coefficient (β_1) and t- value of -4.440 and -0.765 respectively and p- value of 0.469, while firm size has a positive and significant effect with earnings per share measured with a beta coefficient (β_1) and t- value of 4.180 and 5.457 respectively and p- value of 0.001.

Decision
Since the Prob(F-statistic) = 0.001994 of the test and is less than 0.05 (5%), this study upholds that there is a significant effect between corporate donation and earnings per share of listed consumer goods firms in Nigeria at 5% level of significance. Thus, null hypothesisis rejected and alternative hypothesis accepted.

Conclusion and Recommendations
This study ascertained the effect of voluntary disclosure on financial performance of listed consumer goods firms in Nigeria, using environmental protection disclosure, corporate donation as the independent variables while earnings per share was used as a proxy for financial performance.. Ex post facto research design was adopted for the study. A sample of 18 consumer goods firms was used and data extracted from the companies audited annual reports and accounts.

From the result, it was established that environmental protection disclosure, corporate donation and employee welfare will firm size as the control variable were significant. This shows the extent to which consumer goods firms disclose information voluntarily, particularly regarding environmental protection, corporate donations, can significantly influence stakeholders' perceptions and decisions. Therefore, the study concludes that voluntary disclosure has significant effect on financial performance of listed consumer goods firms in Nigeria.

Based on the findings of the study, it was recommended as followings;

1. There should be constant environmental disclosure by the firms for mitigating its environmental impact and promoting sustainable practices. This will enable them share with their stakeholders to demonstrate their commitment toward environmental responsibility.

2. Firms should be encouraged in disclosing their donations, as this will demonstrate a genuine concern for societal wellbeing and an alignment with broader ethical values, thereby leading to competitive advantage in the market

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Appendix

The companies are stated below

S/N	Consumer Goods Companies
1	Dn Tyre & Rubber Plc[Mrs]
2	Guinness Nig Plc[Cg+]
3	P Z Cussons Nigeria Plc.[Cg+]
4	Nigerian Brew. Plc.[Cg+]
5	Unilever Nigeria Plc.[Cg+]
6	Cadbury Nigeria Plc.
7	Golden Guinea Brew. Plc.[Brs]
8	Nothern Nigeria Flour Mill Plc
9	Vitafoam Nig Plc.
10	Flour Mills Nig. Plc.[Cg+]
11	Nestle Nigeria Plc.[Cg+]
12	Nigerian Enamelware Plc.
13	Champion Brew. Plc.[Bls]
14	Nascon Allied Industries Plc
15	Union Dicon Salt Plc.[Brs]
16	International Breweries Plc.[Bls]
17	Dangote Sugar Refinery Plc[Cg+]
18	Honeywell Flour Mill Plc[Cg+]
19	Mcnichols Plc
20	Multi-Trex Integrated Foods Plc[Bmr]

EFFECT OF E-COMMERCE UTILIZATION ON SMES PERFORMANCE IN ANAMBRA STATE

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Abstract
This study examined the effect of e-commerce utilization on the operational efficiency of small and medium-sized enterprises (SMEs) in Anambra State, Nigeria, by deploying the Vector Autoregression (VAR) model. The analysis focused on the impact of online sales, digital marketing, e-payment systems, website quality, and social media engagement on operational efficiency. Data were collected from a representative sample of SMEs across Anambra State and analysed using econometric regression techniques. The empirical results indicated that online sales ($\beta = 0.28$, $p < 0.01$) and digital marketing ($\beta = 0.33$, $p < 0.01$) have a statistically significant positive impact on operational efficiency, highlighting their critical role in enhancing SME performance. E-payment systems also exhibited a positive effect ($\beta = 0.21$, $p < 0.05$), emphasizing the importance of efficient transaction processes. Website quality was positively correlated with operational efficiency ($\beta = 0.25$, $p < 0.05$), suggesting that a user-friendly online presence is essential for operational success. However, social media engagement showed a complex relationship ($\beta = 0.12$, $p > 0.05$), indicating that while beneficial for brand awareness, its direct impact on operational efficiency may be mediated by other factors. The VAR model also revealed significant dynamic interactions among the variables, with Granger causality tests confirming that changes in online sales and digital marketing significantly predict future changes in operational efficiency. Impulse response functions further demonstrated that shocks to online sales and digital marketing have lasting positive effects on operational efficiency over time. These findings provided valuable insights for SME owners, policymakers, and stakeholders in Anambra State. They underscored the necessity for continuous investment in e-commerce infrastructure and strategic utilization of online sales and digital marketing to sustain and enhance operational efficiency. The study concluded that targeted e-commerce practices were instrumental in driving SME performance in the digital economy.
Keywords*: E-commerce, SMEs, Operational Efficiency, Vector Autoregression (VAR), Online Sales, Digital Marketing, E-Payment Systems, Website Quality, Social Media Engagement.*

Introduction
E-commerce has revolutionized business operations worldwide, providing numerous opportunities for small and medium-sized enterprises (SMEs) to enhance their performance. This transformative technology enables SMEs to overcome traditional market limitations, streamline operations, and access new customer bases (Laudon&Traver, 2020). In developing economies like Nigeria, where SMEs are pivotal to economic growth and employment, e-commerce adoption is crucial for

improving business outcomes and competitiveness (Adeleke *et al.*, 2018). Arguably, the Nigerian economy heavily relies on SMEs, which constitute about 96% of businesses, 84% of employment, and 48% of the national GDP (SMEDAN & NBS, 2021). Despite their significance, Nigerian SMEs face numerous challenges, including limited access to finance, inadequate infrastructure, and intense competition (Edoko, Agbasi, & Ezeanolue, 2018; Anigbogu, Okoli & Nwakoby, 2015). E-commerce thus offers a potential solution by providing platforms for SMEs to enhance their market reach and operational efficiency. However, the adoption of e-commerce among Nigerian SMEs remains relatively low, necessitating a deeper understanding of its impact on business performance (Oyelaran-Oyeyinka & Lal, 2016).

E-commerce utilization encompasses various components, such as online sales, digital marketing, and e-payment systems. Online sales platforms allow SMEs to reach a broader customer base beyond their immediate geographic location, increasing sales volume and revenue (Zwass, 2016). Digital marketing strategies, including social media marketing, search engine optimization, and email marketing, provide cost-effective means to promote products and services, enhancing market visibility and customer engagement (Chaffey & Ellis-Chadwick, 2019). E-payment systems facilitate seamless and secure financial transactions, reducing the reliance on cash and minimizing transaction costs and time (Turban *et al.,* 2018).Website quality also plays a critical role in e-commerce success. A user-friendly, well-designed website attracts and retains customers, facilitates smoother transactions, and enhances overall operational efficiency (Gefen *et al.,* 2003). Additionally, social media engagement helps SMEs build brand awareness, engage with customers, and gather valuable market insights (Kaplan & Haenlein, 2010). Understanding the impact of these e-commerce components on SMEs' performance is essential for developing effective strategies to enhance business outcomes.

This study focuses on SMEs in Anambra State, a region with a vibrant entrepreneurial ecosystem but significant infrastructural and economic challenges. Anambra State's strategic location and dynamic business environment make it a critical area for examining the impact of e-commerce on SMEs (Nwagwu, 2018). By investigating how different e-commerce practices affect operational efficiency, this study aims to provide insights that can help SMEs in Anambra State and similar regions leverage digital technologies for growth and competitiveness. Empirical evidence suggests that online sales and digital marketing significantly enhance operational efficiency. For instance, a study by Karakaya and Shea (2008) found that online sales platforms enable businesses to increase revenue and reduce operational costs. Similarly, digital marketing has been shown to improve market reach and customer engagement, leading to better business performance (Bala&Verma, 2018).

These findings highlight the importance of adopting robust online sales and digital marketing strategies for SMEs aiming to optimize their operations.

E-payment systems also positively impact operational efficiency by streamlining transaction processes. Research by Laudon and Traver (2020) indicates that efficient e-payment systems reduce transaction costs, improve cash flow management, and enhance customer satisfaction. This study's findings are expected to corroborate these results, emphasizing the need for SMEs to invest in reliable e-payment solutions to optimize their business operations.Website quality and social media engagement are additional factors influencing e-commerce success. A high-quality website not only improves customer experience but also supports effective e-commerce operations (Gefen *et al.*, 2003). While social media engagement primarily enhances brand awareness and customer interaction, its direct impact on operational efficiency may be mediated by other factors, such as customer loyalty and feedback (Kaplan & Haenlein, 2010). Understanding these dynamics is crucial for developing comprehensive e-commerce strategies that address various aspects of business performance. This study aims to provide a detailed analysis of the effect of e-commerce utilization on SMEs' performance in Anambra State, Nigeria. By examining the impact of online sales, digital marketing, e-payment systems, website quality, and social media engagement on operational efficiency, the research seeks to offer actionable insights for SME owners and policymakers. The study is expected to underscore the necessity for continuous investment in e-commerce infrastructure and strategic utilization of digital tools to sustain and enhance SME performance in the digital economy.

Statement of the Problem

The rapid growth of e-commerce globally has revolutionized business operations, offering unprecedented opportunities for SMEs to enhance their performance through increased market reach, operational efficiency, and cost reduction (Laudon&Traver, 2020). However, in Nigeria, particularly in Anambra State, the adoption and effective utilization of e-commerce by SMEs remain significantly low (Oyelaran-Oyeyinka & Lal, 2016). Despite the potential benefits, many SMEs struggle to integrate e-commerce into their business models, thereby limiting their competitive edge and growth prospects in an increasingly digital economy (Aremu & Adeyemi, 2011).One major problem facing SMEs in Anambra State is the lack of infrastructure and technological know-how required to implement effective e-commerce solutions. This digital divide hinders many SMEs from capitalizing on the advantages of e-commerce, such as expanded customer bases and streamlined operations (Adeleke *et al.*, 2018). The absence of reliable internet access, inadequate technical support, and insufficient knowledge about digital tools create significant barriers to e-commerce adoption, exacerbating the challenges faced by these enterprises in improving their performance and sustainability (Adebayo, 2019).

Moreover, SMEs in Anambra State often face financial constraints that impede their ability to invest in necessary e-commerce infrastructure and training. Access to finance is a persistent challenge for SMEs in Nigeria, making it difficult for them to acquire the technologies and expertise needed to leverage e-commerce effectively (Aremu & Adeyemi, 2011). Without adequate financial resources, SMEs cannot develop or maintain high-quality websites, implement secure e-payment systems, or engage in robust digital marketing strategies, all of which are critical components of successful e-commerce operations (Kehinde & Abiodun, 2018). Additionally, there is a considerable gap in the understanding of how specific e-commerce practices impact the performance of SMEs in the local context of Anambra State. While studies have shown the positive effects of e-commerce on business performance in developed countries, there is a lack of empirical evidence on how these benefits translate to SMEs in developing regions (Oyelaran-Oyeyinka & Lal, 2016). This gap in knowledge makes it difficult for policymakers and business owners to develop targeted strategies that address the unique challenges and opportunities presented by e-commerce in Anambra State (Nwagwu, 2018). Furthermore, the regulatory environment in Nigeria poses significant challenges for SMEs attempting to adopt e-commerce. Issues such as cyber security, data privacy, and lack of supportive legal frameworks deter many businesses from fully embracing digital platforms (Adebayo, 2019). The absence of clear regulations and policies to protect online transactions and consumer rights adds to the risk and uncertainty faced by SMEs, further inhibiting their ability to leverage e-commerce for performance enhancement (Laudon &Traver, 2020).The complexity of integrating various e-commerce components, such as online sales, digital marketing, and e-payment systems, also presents a significant challenge. SMEs need to adopt a holistic approach to e-commerce, ensuring that all elements work synergistically to improve operational efficiency and business outcomes (Gefen *et al.,* 2003).

However, many SMEs lack the strategic vision and operational capabilities to implement such an integrated approach, resulting in suboptimal utilization of e-commerce technologies (Bala &Verma, 2018).The underutilization of e-commerce by SMEs in Anambra State stems from a combination of infrastructural deficiencies, financial constraints, regulatory challenges, and knowledge gaps. Addressing these issues is critical for enabling SMEs to harness the full potential of e-commerce to enhance their performance and competitiveness. This study aims to fill the empirical gap by examining the specific effects of e-commerce utilization on SMEs' performance in Anambra State, providing actionable insights for policymakers and business owners to foster a more conducive environment for digital transformation.

Objectives of the Study

The broad objective of the study is to examine the effect of e-commerce utilization on SMEs performance in Anambra State. The specific objectives are to:

i. Ascertain the effect ofonline sales on operational efficiency of SMEs in Anambra State.
ii. Determine the effect of digital marketing on operational efficiency of SMEs in Anambra State.
iii. Examine the effect ofe-payment systems on operational efficiency of SMEs in Anambra State.
iv. Ascertain the effect ofwebsite quality on operational efficiency of SMEs in Anambra
v. Determine the effect ofsocial media engagement on operational efficiency of SMEs in Anambra

Research Questions

i. What is the effect of online sales on operational efficiency of SMEs in Anambra State.
ii. What is the effect of digital marketing on operational efficiency of SMEs in Anambra State.
iii. What is the effect of e-payment systems on operational efficiency of SMEs in Anambra State.
iv. What is the effect ofwebsite quality on operational efficiency of SMEs in Anambra.
v. What is the effect ofsocial media engagement on operational efficiency of SMEs in Anambra

Research Hypotheses

Ho₁: Online sales has no significant effect on operational efficiency of SMEs in Anambra State

Ho₂: Digital marketing has no significant effect on operational efficiency of SMEs in Anambra State

Ho₃: E-payment systems has no significant effect on operational efficiency of SMEs in Anambra State

Ho₄: Website quality has no significant effect on operational efficiency of SMEs in Anambra

Ho₅: Social media engagement has no significant effect on operational efficiency of SMEs in Anambra

Review of Related Literature

E-commerce has revolutionized business operations globally, providing new avenues for sales, marketing, and customer engagement. In Nigeria, particularly in Anambra State, SMEs are increasingly leveraging e-commerce to enhance their operational efficiency. This literature review examines the impact of online sales, digital marketing, e-payment systems, website quality, and social media engagement on the operational efficiency of SMEs in Anambra State.

Online Sales

Online sales platforms enable SMEs to reach a broader customer base, reduce operational costs, and streamline the sales process. According to Tarek (2020), SMEs that adopt online sales platforms experience increased sales volumes and reduced transaction costs, which significantly enhance their operational efficiency. In Nigeria, Odukoya and Ogunnaike (2019) found that SMEs utilizing online sales channels report improved inventory management and customer satisfaction, leading to overall operational efficiency.

Digital Marketing

Digital marketing, including search engine optimization (SEO), pay-per-click (PPC) advertising, and email marketing, allows SMEs to target specific audiences more effectively. Kotler *et al*. (2021) argue that digital marketing strategies enable SMEs to achieve better market penetration and customer retention. In Anambra State, Eze and Nwankwo (2018) highlight that SMEs employing digital marketing strategies see a notable increase in brand visibility and customer engagement, which translates to improved operational efficiency.

E-payment Systems

E-payment systems provide a secure and efficient method for handling transactions. According to Laudon and Traver (2022), the adoption of e-payment systems reduces transaction time and enhances cash flow management. In Nigeria, Alabi and Oyewole (2020) observed that SMEs using e-payment systems benefit from reduced transaction costs and improved financial record-keeping, contributing to enhanced operational efficiency.

Website Quality

The quality of an SME’s website, including its design, user-friendliness, and functionality, plays a crucial role in attracting and retaining customers. Zeithaml *et al*. (2020) emphasize that high-quality websites enhance customer experience and trust. In Anambra State, Nwachukwu and Okoye (2019) found that SMEs with well-designed websites experience higher customer engagement and conversion rates, which boost operational efficiency.

Social Media Engagement

Social media platforms offer SMEs a cost-effective means to engage with customers, promote products, and gather feedback. Kaplan and Haenlein (2021) state that active social media engagement can significantly enhance customer relationships and brand loyalty. In Nigeria, Adeoye and Elegunde (2020) reported that SMEs leveraging social media for customer engagement see improved customer satisfaction and operational efficiency.

The utilization of e-commerce tools, including online sales, digital marketing, e-payment systems, high-quality websites, and social media engagement, significantly impacts the operational efficiency of SMEs in Anambra State, Nigeria. Empirical studies indicate that these tools enhance various aspects of business operations, leading to increased sales, improved customer satisfaction, and reduced operational costs.

Theoretical Framework

This study is anchored by Technology Acceptance Model (TAM) and the Resource-Based View (RBV) as our theoretical lenses.

Technology Acceptance Model (TAM)

Proponents of the Theory

The Technology Acceptance Model (TAM) was proposed by Davis (1989) and later expanded by Venkatesh and Davis (2000).

Tenets and Assumptions of the Theory

Perceived Usefulness (PU): The degree to which a person believes that using a particular system would enhance their job performance.

Perceived Ease of Use (PEOU): The degree to which a person believes that using a particular system would be free of effort.

Behavioural Intention to Use (BI): The extent to which a person intends to use a system, influenced by PU and PEOU.

Actual System Use: The real utilization of the technology.

Users' perceptions of usefulness and ease of use influence their attitudes toward using the technology. Positive attitudes lead to higher intention to use and actual adoption of the technology.

Applications of the Theory to the Study

TAM helps explain why SMEs in Anambra State adopt e-commerce technologies based on perceived benefits and ease of use. Understanding the factors influencing technology acceptance can guide interventions to increase e-commerce adoption, thus enhancing operational efficiency.

Resource-Based View (RBV)

Proponents of the Theory

The Resource-Based View (RBV) was articulated by Wernerfelt (1984) and further developed by Barney (1991).

Tenets and Assumptions of the Theory

Resource Heterogeneity: Firms possess unique resources and capabilities that are not evenly distributed across firms.

Resource Immobility: Resources cannot be easily transferred from one firm to another and are difficult to replicate.

Valuable, Rare, Inimitable, and Non-substitutable (VRIN): For a resource to provide a competitive advantage, it must be valuable, rare, inimitable, and non-substitutable. The heterogeneity and immobility of resources are central to gaining and sustaining a competitive advantage. Firms must leverage their unique resources and capabilities to improve operational efficiency and achieve better performance.

Applications of the Theory to the Study

RBV helps identify how e-commerce tools (resources) can be leveraged by SMEs to gain a competitive advantage and enhance operational efficiency.

By focusing on unique resources such as website quality, digital marketing capabilities, and social media engagement, SMEs can improve their operational processes and market position.

Integration of TAM and RBV

Integrating TAM and RBV provides a comprehensive framework for understanding the adoption and impact of e-commerce on SMEs' operational efficiency. TAM explains the initial acceptance and usage of e-commerce technologies, while RBV focuses on how these technologies, as unique resources, can be utilized to enhance operational efficiency and competitive advantage.

The Technology Acceptance Model (TAM) and the Resource-Based View (RBV) offer valuable insights into the factors influencing the adoption of e-commerce and its impact on operational efficiency. TAM addresses the psychological and behavioral aspects of technology acceptance, while RBV emphasizes the strategic utilization of unique resources. Together, they provide a robust framework for analyzing the effect of e-commerce utilization on the operational efficiency of SMEs in Anambra State, Nigeria.

Methodology

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EFFECT OF EXCHANGE RATE FLUCTUATION AND ECONOMIC GROWTH IN NIGERIA: 2001 - 2022

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Abstract
This research work examined the effect of exchange rate fluctuation on the economic growth in Nigeria. In specific term, the effect of exchange rate fluctuation on nominal GDP, inflation, and balance of payment was ascertained. The study employed Ordinary Least Square (OLS) regression and the Granger Causality test. The ordinary least square regression method was used to examine the nature of the relationship between the independent and dependent variables. On the other hand, the Granger Causality test examines the effect of one variable on another. This study used secondary time series data from 2001 to 2022. Data on exchange rate, inflation rate, balance of payment, and real gross domestic product were sourced variables have significant impact on each other. However, inflation rate is not impacted by exchange rate fluctuations in Nigeria. The monetary authority should adopt exchange rate policies that regulate the movements of the nominal exchange rate in line with the prevailing target for economic growth. Exchange rate depreciations should also be backed up by other stabilization policies to ensure that it from CBN Statistical Bulletin. The result revealed that exchange rate fluctuation has a positive and significant relationship with nominal GDP and it also has a significant impact on nominal GDP; exchange rate fluctuation has a positive and insignificant relationship with inflation rate in Nigeria; and exchange rate fluctuation has a negative and significant relationship with balance of payment in Nigeria and both has a positive impact on the Nigerian economy. The monetary authorities should unify the foreign exchange market rates to ensure that inflationary targeting is more accurately attained through exchange rate policies and other monetary policies. Such policies could include raising interest rates, unifying exchange rates across all windows, and the adequate supply of forex backed-up with restrictions on its use.
Keywords*: Exchange rate fluctuation, nominal GDP, inflation, balance of payment.*

Introduction

The Nigeria economy has been programmed to become a developed economy in the world by the year 2050. An important route to achieving this vision is to pursue a quick and sustained economic growth and development through a well-managed exchange rate policy. An efficient exchange rate policy is a stimulus for boosting economy position (Obi, 2016). Fluctuation in exchange rate is a crucial factor that influences economic performance, this is because of its impact on macroeconomic variables such as inflation rate, export prices, imports, interest rate and outputs (Adeniran, Yusuf & Adeyemi, 2014). The persistent depreciation in the exchange rate has led to a shortage in foreign exchange for the importation of essential inputs for the industrial sector which has led to high costs of production in the economy. The appraisal of fluctuation in foreign exchange as well as its management has in the course of time particularly after the collapse of the Breton Woods agreement in 1973 pulled very significant momentum cause by academics and policy makers; foreign exchange which describes the conversion of a country's currency to another at a certain rate or the specific value of currency that can buy an amount of another currency. Over the years, Nigeria has undergone different exchange rate policies, either depreciation or appreciation, depending on the policy thrust of the government of the day. Aliyu (2011) noted that appreciation of exchange rate results in increased imports and reduced exports, while depreciation expands exports and discourages imports. Also, depreciation of exchange rate tends to cause a shift from foreign goods to domestic goods. Thus, it leads to diversion of income from importing countries to countries exporting, through a shift in terms of trade, and this tends to have impact on the exporting and importing countries' economic balance of trade and growth. Although, a number of exchange rate reforms have been carried out by successive governments, the extent to which these policies have been effective in promoting exports has remained unascertained. This is because despite government efforts, the performance of the Nigerian economy remains very slow.

In Nigeria, the currency rate regime has shifted from controlled to deregulate throughout time. Ewa (2011) acknowledged that the naira's exchange rate was very steady from 1973 to 1979, when the country was experiencing an oil boom and agricultural products contributed to more than 70% of the country's gross domestic product (GDP). When the Federal government adopted the Structural Adjustment Policy (SAP) in 1986, the country transitioned from a peg to a flexible exchange rate regime in which the exchange rate is not entirely determined by market forces, but rather the prevailing system is the managed float, in which monetary authorities intervene periodically in the foreign exchange market to achieve some strategic objectives (Mordi, 2006). The choice and management of an effective exchange rate regime is vital to attain macroeconomic stability, growth and development. An ill-managed exchange rate policy could have a negative effect on economic growth and development. Omojimite and Akpokodje (2010) asserted that high volatility in exchange rate usually has negative effect on price discovery, export performance and sustainability of current account balance. This is possible for a country like Nigeria, in which the economy is subjected to the vicissitudes and vagaries of the oil market such that shocks in international oil prices were immediately felt in the domestic economy. Owolabi and Adegbite (2013) stated that Nigeria's exchange rate volatility tends to affect valuation of the Naira. This in turn encourages imports and discourages exports and over-dependence on imported inputs. This movement of the exchange rate along the path of depreciation since 1986 has raised a lot of questions on the impact of exchange rate policies on the Nigerian economy. Knowing the extent of effect this rise in exchange rate has on microeconomic variables such as real gross domestic product, inflation rate and balance of payment is the answer that this work seeks to provide.

Literature Review

Central Bank of Nigeria (2016) defined exchange rate as the current price market price for which one national currency can be exchanged for another. It is normally expressed as the number of units of a domestic currency that will purchase one unit of a foreign currency or the number of units of a foreign currency that will purchase the unit of a domestic currency. Exchange rate is the rate at which a currency is exchanged for another currency. It can also be said to be the price of one country’s currency in relation to another country (Eyung, 2021). It represents the amount of one currency that can be exchanged for a unit of another currency. Simply put, it represents the amount of one currency that can be exchanged for a unit of another currency. It is referred to as the ratio at which a unit of currency of one country is expressed in terms of another currency. Exchange rate is the price of one unit of a country’s currency quoted in terms of another country’s currency. The price of one country's currency represented in terms of another currency is known as the exchange rate. It is the exchange rate between a foreign currency and the currency of the home country. It also specifies the value of one currency in terms of another. It determines the relative prices of domestic and foreign goods, as well as the strength of external sector participation in international trade.

This study is pursed within the premises of the Purchasing Power Parity (PPP). Purchasing Power Parity (PPP) theory of exchange rate was developed by Gustav Cassel, a Swedish economist, in the early 20th century. Cassel introduced this theory in 1918 to better understand and explain the relationship between exchange rates and relative price level of different countries. The purchasing power parity theory is an important concept in the field of international economic and exchange rate determination. It provides a framework for understanding how relative prices and inflation rates influence exchange rates between countries. The purchasing power parity theory is based on the idea that in the long run, exchange rate should equalize the purchasing power of different countries. In other words, a unit of currency should have the same value in terms of purchasing goods and services across different countries. To better understand the purchasing power parity theory, we need to look at its main forms: Absolute PPP and Relative PPP. Absolute PPP states that the exchange rate between two countries should be equal to the ratio of the price levels of a basket of goods in those countries. For example, if the price level in country A is twice as high as that in country B, according to absolute PPP, the exchange rate should be 2:1. Relative PPP, on the other hand, focuses on changes in the price levels and inflation rates between countries. It argues that exchange rate changes should reflect the differential changes in the prices over time. If the rate in country A is higher than that in country B, the currency of country A should depreciate relative to the currency of country B.The implications of the PPP theory are significant for exchange rate forecasting, trade, and investment decisions. By examining whether a currency is overvalued or undervalued according to PPP, investors and businesses can potentially take advantage of discrepancies in exchange rate. If a currency is estimated to be undervalued according to PPP, one might consider purchasing assets denominated in that currency, as it is expected to appreciate in the future. However, it is worth noting that PPP is not a flawless theory and has its limitations. In the short run, exchange rates can deviate significantly from their PPP values due to factors such as speculative activities, capital flows, government interventions, and market inefficiencies. Moreover, PPP assumes the absence of trade barriers, transportation costs, and other factors that can influence relative prices.

Empirically, Bala *et al* (2016) examined the impact of exchange rate fluctuation on the Nigeria's economic growth from 1986 to 2015. The main type of data used in this study is secondary; sourced from Central Bank of Nigeria Statistical Bulletin of various issues. From 1986 being the year the Nigerian monetary authority changed from fixed exchange rate system to flexible exchange rate system. The correlation and regression analysis of the ordinary least square (OLS) were used to analyse the data. The result revealed that exchange rate has positive impact but, not significant with (co-efficient =0.01275, t = 1.35) and this affirms previous studies that developing countries are relatively better off in the choice of flexible exchange rate regimes. The result also indicated that interest rate has positive impact but, not significant with (co-efficient =0.1353, t = 0.26), while rate of inflation have negative impact on economic growth, but not significant with (co-efficient = -0.1363, t = -0.69).

Isola, Oluwafunke, andAhmed (2016) investigated the impact of exchange rate fluctuation on economic growth in Nigeria within the context of four profound theories: purchasing power parity; monetary model of exchange rates; the portfolio balance approach; and the optimal currency area theory. Data was collected from the CBN statistical bulletin in Nigeria from 2003– 2013 and the Autoregressive Distributed Lag (ARDL) model was employed to estimate the model. In the model, real GDP (RGDP) was used as the proxy for economic growth while Inflation rate (IF), Exchange rate (EXC), Interest rate (INT) and Money Supply(M2) as proxies for other macroeconomic variables. The empirical results showed that exchange rate fluctuation has no effect on economic growth in the long run, though a short run relationship exists between the two. Based on these findings, this paper recommended that the Central bank for policy purposes should ensure that stern foreign exchange control policies are put in place in order to help in appropriate determination of the value of the exchange rate. This will in the long run help to strengthen the value of the Naira.

Iyeli and Utting (2017) reviewed the effect of exchange rate volatility on Economic Growth in Nigeria from 1970 to 2011. The model formulated depicts Real GDP as the dependent variable while Exchange Rate (EXR), Balance of Payment (BOP) Oil Revenue (OREV) and inflation (INF) are independent variables. These data were sourced and extracted from CBN Statistical Bulletin. We employ the Johansen Co-integration estimation techniques to test for the short and long runs effect of the variables used. The ADF test reveals that all the variables are stationary. From the parsimonious model, the results show that OREV and EXR are positively related to GDP. Further findings reveal that there exist two equations at 5% level in both trace and Max – Eigen statistic. This implies that exchange rate volatility and oil revenue contributes positively to GDP in the long run.

Achuoak, Ousama, andMuorad (2018) studied the impact of exchange rate volatility on economic growth. An empirical investigation based on a sample of 45 developing and emerging countries over the period of 1985~2015 is conducted using the difference and system generalized method of moments estimators. Findings suggest that the generalized autoregressive conditional heteroskedasticity-based measure of nominal and real exchange rate volatility has a negative impact on economic growth. Also, the effect of exchange rate volatility depends on the exchange rate regimes and financial openness, that is, volatility is more harmful when countries adopt flexible exchange rate regimes and financial openness. Dabwor, *et al*. (2018) examined the effect of exchange rates on balance of payments in Nigeria between 1999 and 2016 using Autoregressive Distributed Lag (ARDL) approach. Findings from the study revealed that nominal exchanges rate have a significant effect on Nigeria's balance of payment. The implication of this is that exchange rate liberalization had a significant effect on Nigeria's overall balance of payments between 1999 and 2016. The empirical findings further showed that there is a causal link between Nigeria's balance of payment and exchange rates. The study thus recommends that effort be made to increase the consumption of made in Nigeria goods, which includes the usage of raw material that can be sourced locally by Nigerian industries in order to increase foreign exchange earnings. Appropriate macro-economic policy mix should be enacted to ensure stable foreign exchange earnings that will further enhance Nigeria's balance of payment positions. Ufoeze *et al* (2018) investigated the effect of exchange rate fluctuations on Nigerian economy. The fixed and floating exchange eras were compared to know the exchange rate system in which the economy has fairly better. The time period covered was 1970 to 2012. The study employed the ordinary least square (OLS) multiple regression technique for the analysis. The coefficient of determination (R2), F-test, t-test, beta and Durbin-Watson were used in the interpretation of the results. The resulted revealed that about 85% of the changes in macroeconomic indicators are explained in the fixed exchange era. In the floating exchange era, 99% was explained while the whole periods has 73% explanatory power, hence the floating exchange era (1986 to date) is more effective in explaining economic trends in Nigeria. Also, exchange rate has significant positive effect on GDP during the fixed exchange rate era and negative effect during the eras floating and all-time; inflation has insignificant negative effect on GDP during the fixed exchange era; significant effect in floating era and significant negative effect in the all-time period; money supply has insignificant negative effect on GDP during the fixed exchange era; and significant positive effect during the floating and all-time period; and oil revenue has significant positive effect on the GDP in all the exchange rate regimes (floating, fixed and all-time) in Nigeria. The study thus concludes that exchange rate movement is a good indicator for monitoring Nigerian economic growth. So far, exchange rate has always been a key economic indicator for Nigeria. The floating exchange period has outperformed the fixed exchange rate in terms of contribution inflation, money supply and oil revenue to economic growth. This indicates that the floating exchange rate has been a better economic regime for sustainable economic growth in Nigeria. From the findings, it is evident that oil revenue has positive effect in Nigeria and has remained the mainstay of the economy.

Jonathan and Rosemary (2019) reviewed the effects of exchange rate fluctuation on economic growth in Nigeria from 1981-2018 using non-experimental research design. Autoregressive Distributed Lag Model (ARDL) model was used for data analysis, dependent variable for the study is Real Gross Domestic Product (RGDP) which is used as a proxy for Economic Growth and the independent variables are Import (IMPO), Export (EXP), Exchange rate (EXR), government capital expenditure (GOCEXP) and Inflation rate (INFR). The findings of the study revealed that exchange rate, export, government capital expenditure have positive impact on RGDP both in the long-run and short-run however IMP has a negative impact on RGDP both in the short-run and long-run meanwhile INFR has a negative and statistically significant impact on RGDP in the short run.

Kanu and Nwadiubu (2020) investigated the impact of exchange rate volatilities on international trade in Nigeria. The study made use of Secondary data from 1996 to 2018. Econometric tools were used to ascertain relationships. The VAR model estimates indicate an inverse relationship between Export, Import and REER in current periods. A unit increase in export and import in a particular year leads to about 0.9% and 0.4% decrease in REER respectively. Variance decomposition analysis suggests that the shocks partially explain fluctuations in REER, as well as exports and imports. The Impulse response analysis indicates a negative association between export and real effective exchange rate while it was majorly positive for imports throughout the ten periods. The causal effect reveals that import causes exports but that exports do not granger cause imports. This could have serious implications for growth in Nigeria, as a reduction in the growth of exports could reduce the foreign exchange earnings available for the financing of developmental projects. At the same time, a decline in imports could affect domestic production and consumption. It could also impinge negatively on the balance of payment positions for Nigeria.

Nwobia, Ogbonnaya-Udo, and Okoye (2020) studied the effect of exchange rate fluctuation on Nigeria external trade from 2000 to 2019. The study opined that the Nigerian economy relies so much on imported goods for its survival. There are four refineries in Nigeria but none of them is functional thereby forcing the government to equally import refined oil even when Nigeria is the highest oil producing country in Africa. The penchant for consuming imported goods makes the exchange rate to fluctuate rapidly and uncontrollably in some cases. The study made use of secondary data sourced from central bank of Nigeria statistical bulletin of various issues from 2000 being the year of monetary authority regime of flexible exchange rate to 2019. The correlation and regression analysis of the Ordinary Least Square (OLS) were used to analyse the data. The result shows that the three variables; exchange rate, balance of payment, and inflation rate have significant effect on the Gross Domestic Product (GDP) and external trade of Nigeria; Exchange rate has a negative effect on the GDP because as it increases, the external trade is negatively affected.

Akinwolere (2021) examined the impact of exchange rate volatility on economic growth in Nigeria. The study covers the period of 1986 to 2019. Using time series data, the methodology adopted is the Vector Error Correction Mechanism to explore the impact of exchange rate volatility on the selected macroeconomic variables. The result indicated that exchange rate volatility has a significant impact on economic growth; specifically it has a positive impact on inflation, unemployment and balance of trade. On the other hand it has a negative impact on economic growth and investment. Ani and Udeh (2021) carried out an investigation on the effect of exchange rate on the economic growth of Nigeria. It specifically looked at effect of exchange rate on gross domestic product (GDP), gross national product (GNP) and unemployment. Secondary data from the Central Bank of Nigeria Statistical Bulletin were collected for a period of ten years, 2009 to 2018. Ex-post facto research design was utilized. While some diagnostic tests were carried out to confirm the integrity of the data and their relatedness in both short and long term basis, Ordinary Least Square technique was employed in the analysis of hypotheses. It was found that while exchange rate had significant effect on GDP and GNP, it was non-significant on unemployment. This implies that micro economic indices of GDP and GNP could be used to consciously adjust standard of living of the citizens.
Eyung, Agbor and Orajekwe (2021) carried out an investigation on the effect of exchange rate fluctuation on economic growth of Nigeria: 1996 – 2016. The research adopted Rudi Dornbusch Exchange rate overshooting model as the main theoretical framework. The investigation used variables such as economic growth (GDP) as dependent variable and exchange rate, interest rate, and inflation rate as independent variables. The study employed multiple regression analysis with Ordinary Least

Square (OLS) econometric technique to examine the effect of exchange rate fluctuation on the economic growth in Nigeria.

The result showed that exchange rate has significant positive effect on economic growth in Nigeria. Iheanachor and Ozegbe (2021) investigated the effects of persistent exchange rate fluctuations on Nigeria's economic performance. It was motivated by the quest to ascertain why concerted efforts of the monetary authorities in Nigeria to pursue internal and external balances yielded little or no positive results in recent periods. The study employed the autoregressive distribution lag (ARDL) technique to test the short-run and long-run effects of exchange rate fluctuations on economic growth using annual time series data from 1986 to 2019. The empirical result revealed that the exchange rate, net foreign direct investments, and inflation rate had a significant adverse impact on Nigeria's economic growth in the long run. By implication, the net effect of this study established that excessive exchange rate fluctuations are detrimental to Nigeria's economic growth.

Ewubare and Ushie (2022) reviewed the relationship between exchange rate and economic growth in Nigeria between 1981 and 2020. The specific objectives are to determine the effects of exchange rate, inflation and interest rate on gross domestic product (GDP). The data on the variables were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and World Development Indicators, and analysed using descriptive statistics, unit root as well as bounds co integration tests and ARDL model. The unit root test results showed that the variables are mixed integrated. While inflation is stationary at levels, the other variables in the model were stationary at first difference. The bounds co integration test showed that long run relationship exists between GDP growth and the underlying explanatory variables. The findings showed that exchange rate and inflation negatively impacted on economic growth. This finding indicates that increase in exchange rate and price level is detrimental to the growth of the Nigerian economy. There is evidence of a significant positive effect of interest rate on GDP growth. This finding explains the reality in Nigeria, where businesses and households tend to borrow even as interest rate increases, but tend to cut corners by reducing the quality of their products and services or pass-on the increased costs of borrowing to consumers by increasing prices.

Ijirshar *et al* (2022) explored the impact of exchange rate on trade flow in Nigeria from 1986 to 2021. The study utilises linear and nonlinear autoregressive distributed lag (ARDL and NARDL) models to test the J-Curve hypothesis and the Marshall-Lerner condition in Nigeria. The study found symmetric effects of exchange rate on trade balance, exports, and imports. The findings also show that real exchange rate depreciation has a strong negative influence on trade balance and exports in the short run but positive in the long run, exhibiting the shape typology of the J-curve. Furthermore, the study reveals evidence of the Marshall-Lerner condition since the sum of the elasticity of export and import is greater than unity. Thus, there is room for long run net trade improvement.

Okosu (2022) examined the impact of exchange rate volatility on economic growth in Nigeria from the year 1981 to the year 2020. The study adopted secondary data (i.e. time series) obtained from World Bank National Account data and Central Bank of Nigeria Annual Statistical Bulletins, subjecting them to statistical analysis for relevant inferences to be made. The study made use of variables such as; Growth Rate of Gross Domestic Product (GRGDP), Exchange Rate Volatility (EXRV), Balance of Trade (BOT), Oil Price (OILP) and Inflation (INF) Rate. The variables were subjected to unit root test and they were stationary at different order of I(0) and I(1). Since the Variables were not all stationary at level but a mixed series, the ARDL bound test of co-integration was used to test for co-integration among them. Using the bound test, the variables were found to be co-integrated at 1% level of significance. The ARDL result indicated that; Exchange rate volatility has a significant impact on economic growth, with the impact being negative. In addition, other economic variable such as inflation has a negative and significant impact on economic growth while oil price have a positive and significant impact on economic growth. On the other hand, BOT has a positive effect on growth but the impact was significant at the 10 percent level.

Ukangwa and Ikechi (2022) explored the effect of Nigeria's exchange rate on the economic growth of Nigeria. It is focused on establishing the extent to which Naira rate have influenced economic growth from using data spanning between 1987 and 2018; and the extent to which the Naira rate has influenced inflation in Nigeria within the same time frame. This study however employed Ordinary Least Squares technique of analysis to construct a regression model to test stated hypotheses. Findings revealed that the Naira rate has no significant impact on economic growth in Nigeria and that the Naira rate has a significant influence on inflation rate in Naira. The study, therefore, recommends that the export base of Nigeria should be strengthened to ensure a sustainable impact and that local manufacturing should be fully encouraged. Umaimah and Aliyu (2022) carried out an investigation on the Effects of Exchange Rate on Food Inflation in Nigeria: A Non-Linear ARDL Approach from 2008 to 2020. The investigation opined that over the years, exchange rate has been unstable in the Nigerian economy, despite the stabilization policies introduced by successive governments in the country. This has consequently affected the prices of food products in the country. The study employed the Non-Linear ARDL model to examine the asymmetric effects of exchange rate on food inflation in Nigeria, using quarterly data from 2008Q1 to 2020Q4. The results of bounds testing to Co-integration indicate that there is a long-run relationship between exchange rate and food inflation along with GDP. In addition, both in the long-run and short-run, there is a significant and asymmetric positive relationship between exchange rate and food inflation. GDP is found to be negative and significant relationship on food inflation.

Ajayi and Ajayi (2023) evaluated the effect of foreign exchange fluctuations on economic growth in Nigeria. Specifically, examined the relationship between exchange rate and economic growth in Nigeria; investigated the effect of balance of payment on economic growth in Nigeria and evaluated the effect of trade openness on economic growth in Nigeria. The quantitative and qualitative research design was adopted in the study. Secondary time series data spanning thirty -one years (1989-2020) was gathered in the study. Data gathered in the study was estimated using descriptive statistics, unit root analysis, Autoregressive Distributed Lag (ARDL) analysis, parsimonious error correction model and other post estimation tests. Findings from the study established that Balance of payment exerts negative insignificant effect on economic growth in Nigeria both in the long and short run with coefficient estimate of -1.163405 ($p=0.8400<0.05$) and -3.223405 ($p=0.0535>0.05$) respectively; exchange rate affects economic growth in Nigeria positively and significantly both in the short and long run with coefficient estimate of 76.64195 ($p=0.0000<0.05$) and -57.92612 ($p=0.0000>0.05$) respectively; trade openness exerts negative significant effect on economic growth in Nigeria in the short and long run with coefficient estimate of -110.2135 ($p=0.0086<0.05$) and -32.10217 ($p=0.0087<0.05$) respectively and inflation rate exerts positive significant effect on economic growth in Nigeria in the long run and positive insignificant effect in the short run with coefficient estimate of 84.76427 ($p=0.0350<0.05$) and 19.95149 ($p=0.0858>0.05$) respectively.

Eroglu and Olayiwola (2023) assessed the impact of exchange rate on Nigeria's economic growth (1981-2020) by decomposing it into positive and negative components. The study made use of variables such as exchange rate, capital stock, knowledge stock, and inflation rate. The study utilized annual time series data from 1981 to 2020 on real GDP as a measure of economic growth and the US$ to naira exchange rate as a measure of exchange rate. A non-linear ARDL model was used to decompose the effect of exchange rate on economic growth. Also, asymmetric effects test was use d to measure the effects of changes in the value of the naira. The findings showed that in the short run, when the Naira depreciates against the US dollar, economic growth tends to decline, while when it appreciates, economic growth tends to increase. In the long run, these effects work in the opposite direction. In addition, the test for asymmetric effects shows that the way in which the appreciation of the naira affects economic growth differs significantly from that of its depreciation. Miftahu and Isaac (2023) examined the impact of exchange rate fluctuations on economic growth in Nigeria. The main type of data used in the study is secondary; sourced from Central Bank of Nigeria Statistical Bulletin of various issues. From 1986 being the year the monetary authority shifted from fixed exchange rate regime to flexible exchange rate regime to 2019. The correlation and regression analysis of the ordinary least square (OLS) were used to analyze the data. The result revealed that exchange rate has positive effect but not significant with (â=0.014, t = 1.783, Pns) this affirms previous studies that developing countries are relatively better off in the choice of flexible exchange rate regimes. The result also indicated that interest rate and rate of inflation have negative effect on economic growth but not significant with (â = 0.002, t = 0.015, Pns) and (â = 0.023, t = 0.716, Pns) respectively.

Methodology

Research Design and Sources of Data

The researcher adopts the *ex-post facto* research design. The term *ex-post facto* translates to the phrase "after the fact". Thus, this research design involves drawing inferences and making generalizations about relationships among economic variables based on the analysis of historical data or past trends. This study employs the secondary time series data from 2001 to 2022 on the variables of the study. Data on exchange rate, inflation rate, balance of payment, and real gross domestic product were sourced from CBN Statistical Bulletin. The data were analysed using the Ordinary Least Square (OLS) regression and the Granger Causality test. The ordinary least square regression method was used to examine the nature of the relationship between the independent and dependent variables. On the other hand, the Granger Causality test examines the effect of one variable on another.

Model Specification

The study adopts a similar model to the model of Iyeli and Utting (2017). In the study of Iyeli and Utting (2017), Real GDP is expressed as a function of Exchange Rate (EXR), Inflation Rate (INF), Balance of Payment (BOP) and Oil Revenue (OREV). The model of their study is stated as;

$$ROA = \square_{\square}\square\square\square\square_{\square}EXR + \square_{2}INF + \square_{3}BOP + \square_{4}OREV + \square$$

However, this study models Nominal GDP, Balance of Payments (BOP), and Inflation Rate (INF) as functions of Exchange Rate Fluctuation (EXR). The functional model is stated thus;

$$NGDP = f(EXR) \qquad 3.3$$

$$INF = f(EXR) \qquad 3.4$$

$$BOP = f(EXR) \qquad 3.5$$

The functional models are restated in econometric terms to account for econometric properties in the functional models. The econometric models are therefore stated as;

NGDP = □□□□□□□EXR + □ 3.7

INF = □□□□□□□EXR + □ 3.8

BOP = □□□□□□□EXR + □ 3.9

Where □□□is the constant term, □□ IS the regression coefficient and □ is the error term of the regression.

1. **Results And Discussion**

Descriptive Statistics

The descriptive statistics shown in Table 4.2 reveals that nominal GDP in Nigeria averaged ₦76,607.76bn per year over the reviewed period while balance of payment averaged ₦608.84bn. within the period under review, exchange rate has floated over an average of N207.02/$ with a standard deviation of N109.16/$ indicating high volatility of the exchange rate in Nigeria. The probability of the Jarque-Bera test statistic shows that except for balance of payment which has a Jarque-Bera p-value less than 0.05, all the variables are normally distributed (p>0.05).

Table 4.1: Descriptive Statistics

	EXR	NGDP	INFR	BOP
Mean	207.0272	76607.76	12.83545	608.8492
Median	154.0417	67347.15	12.55000	853.1628
Maximum	459.5000	199336.0	18.87000	5822.590
Minimum	112.0252	8234.494	5.380000	-13136.46
Std. Dev.	109.1622	55915.01	3.693514	4594.731
Skewness	1.150469	0.617979	-0.057841	-1.301763
Kurtosis	2.955687	2.361861	2.266185	4.630814
Jarque-Bera	4.854924	1.773577	0.505877	8.651407
Probability	0.088261	0.411977	0.776516	0.013224
Sum	4554.599	1685371.	282.3800	13394.68
Sum Sq. Dev.	250244.1	6.57E+10	286.4829	4.43E+08
Observations	22	22	22	22

Source: E-views 11.0 Descriptive Statistic Output, 2022

Ordinary Least Square Regression

The regression coefficients shown in Table 4.2, (485.28) reveal that the fluctuation of exchange rate positively relates to (predicts) the nominal GDP in Nigeria. It follows that every naira increase in the exchange rate (depreciation) will likely coincide in an increase of 485 billion naira in the nominal GDP of Nigeria. The probability value of 0.0000 is less than 0.05 indicating that this prediction is significant. The R-squared value of 0.8975 shows that about 89.8% of the trend of NGDP is explained by exchange rate fluctuations.

Table 4.2: OLS Regression for EXR and NGDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	485.2770	36.65725	13.23823	0.0000
C	-23857.78	8536.890	-2.794669	0.0112
R-squared	0.897568	Mean dependent var		76607.76
Adjusted R-squared	0.892446	S.D. dependent var		55915.01
S.E. of regression	18337.57	Akaike info criterion		22.55780
Sum squared resid	6.73E+09	Schwarz criterion		22.65699
Log likelihood	-246.1358	Hannan-Quinn criter.		22.58116
F-statistic	175.2506	Durbin-Watson stat		0.441246
Prob (F-statistic)	0.000000			

Source: *E-views 11.0 OLS Regression Output, 2023*

The regression coefficients shown in Table 4.3 (0.013438) reveal that the fluctuation of exchange rate positively relates to (predicts) the inflation rate in Nigeria. It follows that every naira increase in the exchange rate (depreciation) will likely coincide in an increase of 0.01% in the inflation rate of Nigeria. The probability value of 0.0672 is greater than 0.05 indicating that this prediction is insignificant. The R-squared value of 0.157744 shows that only about 15.8% of the trend of inflation rate in Nigeria is explained by exchange rate fluctuations.

Table 4.3: OLS Regression for EXR and INFR

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFR	0.013438	0.006943	1.935393	0.0672
C	10.05336	1.617016	6.217232	0.0000
R-squared	0.157744	Mean dependent var		12.83545
Adjusted R-squared	0.115631	S.D. dependent var		3.693514
S.E. of regression	3.473413	Akaike info criterion		5.414661
Sum squared resid	241.2920	Schwarz criterion		5.513846
Log likelihood	-57.56127	Hannan-Quinn criter.		5.438026
F-statistic	3.745745	Durbin-Watson stat		1.172129
Prob (F-statistic)	0.067209			

Source: *E-views 11.0 OLS Regression Output, 2023*

The regression coefficients shown in Table 4.4 (-27.88577) reveals that the fluctuation of exchange rate negatively relates to (predicts) the balance of payment in Nigeria. It follows that every naira increase in the exchange rate (depreciation) will likely coincide in a decrease of 27.89 billion naira in the balance of payment in Nigeria. The probability value of 0.0008 is less than 0.05 indicating that this prediction is significant. The R-squared value of 0.4389 shows that about 43.89% of the trend of BOP is explained by exchange rate fluctuations.

Table 4.4: OLS Regression for EXR and BOP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BOP	-27.88577	7.049909	-3.955480	0.0008
C	6381.963	1641.812	3.887147	0.0009
R-squared	0.438924	Mean dependent var		608.8492
Adjusted R-squared	0.410871	S.D. dependent var		4594.731
S.E. of regression	3526.675	Akaike info criterion		19.26061
Sum squared resid	2.49E+08	Schwarz criterion		19.35979
Log likelihood	-209.8667	Hannan-Quinn criter.		19.28397
F-statistic	15.64582	Durbin-Watson stat		2.363436
Prob (F-statistic)	0.000781			

Source: E-views 11.0 OLS Regression Output, 2023

The result of the Granger Causality test shown in Table 4.5 reveals that the F-statistic is significant in the first case ($p<0.05$) and insignificant in the second case ($p>0.05$). Therefore, unidirectional causal relationship exists flowing from EXR to NGDP in Nigeria. This indicates that EXR causes changes in NGDP but NGDP does not cause changes in EXR.

Table 4.5: Granger Causality Test for EXR and NGDP

Null Hypothesis:	Obs	F-Statistic	Prob.
EXR does not Granger Cause NGDP	21	10.1808	0.0051
NGDP does not Granger Cause EXR		4.31650	0.0523

Source: E-views 11.0 Granger Causality Output, 2023

The result of the Granger Causality test shown in Table 4.6 reveals that the F-statistic is insignificant in both cases ($p<0.05$). Therefore, no causal relationship exists between EXR and BOP in Nigeria. This indicates that EXR does not cause changes in Inflation rate and neither does inflation rate cause fluctuations in exchange rate.

Table 4.6: Granger Causality Test for EXR and INFR

Null Hypothesis:	Obs	F-Statistic	Prob.
EXR does not Granger Cause INFR	21	3.90862	0.0636
INFR does not Granger Cause EXR		0.83287	0.3735

Source: E-views 11.0 Granger Causality Output, 2023

The result of the Granger Causality test shown in Table 4.7 reveals that the F-statistic is significant in the first case ($p<0.05$) and also significant in the second case ($p<0.05$). Therefore, a bidirectional causal relationship exists between EXR and balance of payments in Nigeria. This indicates that exchange rate fluctuation cause changes in balance of payments, and in turn, balance of payments cause fluctuations in exchange rate.

Table 4.7: Granger Causality Test for EXR and BOP

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
EXR does not Granger Cause BOP	21	12.3276	0.0025
BOP does not Granger Cause EXR		6.38406	0.0211

Source: E-views 11.0 Granger Causality Output, 2023

Discussion of the Findings

The study examined the impact of exchange rate fluctuations on economic growth of Nigeria. Exchange rate fluctuation was measured in terms of the appreciations and depreciations of nominal exchange rate in Nigeria, while economic growth measures were made to include nominal GDP, Inflation rate and Balance of Payment. The data were analysed using the ordinary least square regression method and the Granger causality test. The findings of the study revealed that exchange rate fluctuations had a positive and significant relationship with the nominal GDP in Nigeria. The finding of the Granger Causality test also revealed that exchange rate fluctuations have a significant impact on the Nominal GDP in Nigeria. The combinations of the OLS regression and the Granger Causality test indicate that every time the exchange rate depreciates, it causes the value of nominal GDP to increase and each time the exchange rate appreciates, nominal GDP falls significantly. This finding is contrary to the expectation of the researcher. It also fails to confirm the theoretical position of The Exchange Rate Volatility Theory which posits that volatility increases risk of trade and therefore depresses trade flows. It also disproves the findings of the study of Achuoak *et al*. (2018) which revealed that nominal and real exchange rate volatility has a negative impact on economic growth. This findings however is consistent with the findings of Bala *et al*. (2016) which found that exchange rate fluctuations has positive impact on economic growth in Nigeria. Iyeli and Utting (2017) also found that exchange rate volatility contributes positively to the growth of the Nigerian economy on the long run.

The findings of the study also showed that exchange rate fluctuation has a positive and insignificant relationship with inflation rate in Nigeria. This finding goes against the researcher's prior expectation. It also negates the theoretical positions of the Exchange Rate Volatility Theory which suggests that exchange rate volatility should cause a decline in demand and ultimately a reduction in prices. The granger causality test further showed that exchange rate did not have significant impact on the inflation rate in Nigeria. As a result, it is difficult to predict how inflation reacts to appreciations or depreciations in the exchange rate in Nigeria. This finding is consistent with the outcomes of Akinwolere (2021) who found that exchange rate volatility has a positive impact on inflation rate in Nigeria.

Thirdly, the findings of the study showed that exchange rate fluctuation has a negative and significant relationship with Balance of Payments in Nigeria. This is in line with the priori expectation of the researcher. It confirms the positions of the Exchange Rate Volatility Theory which asserts that exchange rate volatility distorts economic predictions and therefore discourages trade flows between investors and other economic agents. The Granger causality test showed that exchange rate fluctuation does have a significant impact on balance of payments in Nigeria and in turn, balance of payment also causes fluctuations in the nominal exchange rate. This shows that as exchange rate fluctuates, it affects the international trade decisions between Nigeria and the rest of the world. Resultantly, as Balance of Payment increases or depreciates, it indicates the flow of trade between Nigeria and other countries and this affects the demand and supply of Naira relative to other countries' currencies. This then impacts the exchange rate in Nigeria. This finding also concurs with the finding of Kanu and Nwadiubu (2020) who found that exchange rate depreciations has negative impact on the imports and this affects domestic production and impinge negatively on the balance of payment position for Nigeria. Ijirshar *et al.*, (2022) also revealed that that real exchange rate depreciation has a strong negative influence on trade balance and exports in the short run.

Conclusion and Recommendations

This research work examined the effect of exchange rate fluctuation on the economic growth in Nigeria. Based on the findings of the study, the researcher therefore comes to a conclusion that exchange rate fluctuation has significant impact on economic growth in Nigeria. This indicates the slow pace of economic growth in Nigeria can be attributed to the fluctuating exchange rate which continues to create uncertainty for investors and other economic agents. Furthermore, the exchange rate fluctuation can also be blamed for the poor balance of payment positions which Nigeria has recorded in recent times. The study concludes that in times of exchange rate depreciations which is characterized by an increase in the nominal exchange rate quotation, the balance of payment position of Nigeria has been worse off. The alarming rate of inflation in Nigeria however cannot be pinned on the fluctuations in the nominal exchange rate. Apparently, there are other factors that better explain or impact the rate of inflation in Nigeria other than inflation rate.

The monetary authority should adopt exchange rate policies that regulate the movements of the nominal exchange rate in line with the prevailing target for economic growth. Exchange rate depreciations should also be backed up by other stabilization policies to ensure that it has a positive impact on the Nigerian economy. The monetary authorities should unify the foreign exchange market rates to ensure that inflationary targeting is more accurately attained through, exchange rate policies and other monetary policies. Such policies could include raising interest rates, unifying exchange rates across all windows, and the adequate supply of forex backed-up with restrictions on its use. In times of high volatility of the exchange rate, the monetary and fiscal authority should apply strict trade policies (embargoes on unnecessary imports, higher import duties, import quotas) to ensure that volatility of the exchange rate does not bastardize the balance of payment position of Nigeria. Exportation should be highly encouraged and importations should be heavily regulated.

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INFLUENCE OF COOPERATIVE SOCIETIES IN PROMOTING FINANCIAL INCLUSION IN THE PREVAILING ECONOMIC HARDSHIP IN NIGERIA

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Abstract
The study investigated the influence of cooperative societies in promoting financial inclusion in the prevailing economic hardship in Nigeria. Two hypotheses were formulated and tested at 0.05 level of significance. The Research design adopted for the study was correlational research design. The population of the study comprised members of cooperative societies in Anambra State. The sample of the study comprised 200 members of cooperative societies in Anambra State which was arrived at through multistage sampling technique. The instruments for data collection were two standardized questionnaires. The data collected from the pilot test was tested using Cronbach Alpha. This yielded a reliability coefficient of 0.87 for the first instrument while the second instrument yielded a reliability co-efficient value of 0.85.Pearson Product Moment correlation was used to test the hypotheses. Finding of the study revealed that cooperative societies promotefinancial literacy and digital literacy for financial inclusion among members in the prevailing economic hardship in Nigeria. The researcher therefore recommended among others that Government should provide increased support to cooperative societies through funding, technical assistance, and capacity-building programmes.
Keywords: *Cooperative Societies, Financial Inclusion, Financial Literacy, Digital Literacy, Economic Hardship*

Introduction

Nigeria is a country blessed with enormous human and natural resources. But in spite of its abundant natural resources, the nation has severe economic challenges that have a big impact on its supply chain and overall growth. Currently, Nigeria is struggling with inflation (Adeleye, 2024). The president of Nigeria, Bola Ahmed Tinubu was reported to have acknowledged the economic hardship in the country and has accepted full responsibility for the economic hardship (Angbulu, 2024). The cost of living has significantly increased as a result of inflationary pressures, making it harder for average Nigerians to pay for needs like food, housing, and healthcare. The nation's poverty and inequality have gotten worse due to the growing cost of living, which has reduced individuals' purchasing power. Nigerians' economic hardships, which range from sociopolitical obstacles to infrastructure constraints, have a knock-on impact on the effectiveness and stability of the supply chain, making matters worse for both enterprises and consumers.Vulnerable families find it difficult to create a safety net against these dangers for a variety of reasons, including low savings rates and weaknesses in the insurance and credit markets (Gash & Grey, 2016). Access to resources, such as reasonably priced and well-designed financial services, is therefore seen to contribute to the development of resilience against economic vulnerabilities. However, not every family has the same level of access to financial services. Economically vulnerable populations face numerous barriers to financial inclusion and are most at risk, often relying on coping mechanisms that lead to long-term financial insecurities and negative developmental outcomes (Gash & Gray 2016). This has increased the need for a solution that would help foster financial inclusion among individuals in the country.

Financial inclusion has developed into a potent framework that reduces risks and acts as a buffer against adversity to help people build financial resilience. Approximately 1.7 billion adults do not currently have access to formal financial services, according to the World Bank (Demirgüç-Kunt *et al.* 2018). With over 75% of the adult population living in developing nations, mostly in South Asia and Sub-Saharan Africa including Nigeria, these financially excluded people are mostly found in these regions. Gash and Grey (2016) stated that more inclusive financial institutions, according to policy makers and other stakeholders, enable people, particularly the most disadvantaged, to save, borrow, accumulate assets, mitigate risk, and subsequently create resilience. Cooperative societies have been suggested to be an effective means for mitigating the pressures of prevailing economic hardship in Nigeria. According to Attah *et al.* (2018), cooperative societies are efficient means of raising members' standards of life by using their limited resources to increase output and foster community development.Cooperative societies, which are based on the ideas of self-help, mutual aid, and democratic governance, are essential for promoting resilience in communities and economic empowerment (Musa & Bello, 2023). These cooperatives give people a place to combine their resources, share risks, and carry out economic activity as a group. Cooperative societies improve the financial well-being of their members. The need to enhance digital financial literacy is on the rise because it is thought to mediate the relationship between financial inclusion and literacy and enhance the efficacy of both (Lyons *et al.*, 2020; Morgan *et al*., 2019). Vogels and Anderson (2019) suggested that it is imperative that individuals possess the information and abilities necessary to conduct digital financial transactions and to use digital devices like tablets, smartphones, and cellphones in order to engage in the digital economy. It is unclear if cooperative societies could offer these training for its member given the fact that Nigeria is presently grappling with economic uncertainties. It is therefore against this backdrop that the researcher conducts this study to determine the influence of cooperative societies on financial inclusion in prevailing economic hardship in Nigeria.

Statement of the Problem

Nigeria is currently experiencing significant economic hardship, characterised by high inflation rates, unemployment, and a depreciating currency. These economic challenges have severely impacted the cost of living, reducing the purchasing power of Nigerian households. As prices for essential goods and services continue to rise, many Nigerians find it increasingly difficult to afford basic necessities. The economic hardship is worsened by extreme high rates of unemployment, high rates of maternal and child mortality, high levels of illiteracy, poor access to sanitary conditions and healthcare facilities, and a lack of resources (Enwa, 2022). This situation has led to many families skipping meals. Consequently, a large number of people have resorted to borrowing money to meet their daily needs. This trend has led to a vicious cycle of debt, further exacerbating the economic hardship faced by many families.The high cost of living, driven by persistent inflation, has left many Nigerians with diminished financial stability. The decline in purchasing power means that even those with regular incomes struggle to maintain their standard of living. The widespread economic hardship has highlighted the urgent need for effective financial solutions to support vulnerable populations.Cooperative societies have a significant role to play in alleviating the economic condition of citizens. These societies can promote financial inclusion by providing access to credit, savings, and other financial services to those who are often excluded from traditional banking systems. However, these assertions are merely theoretical and have not been empirically ascertained. It is this gap that the study filled by conducting an empirical study on the influence of cooperative societies on financial inclusion in prevailing economic hardship in Nigeria.

Aim and Objectives of the Study

The study is aimed at investigating the influence of cooperative societies on financial inclusion in prevailing economic hardship in Nigeria. Specifically, the study:

1. Ascertained the influence of cooperative societies in promoting financial literacy for financial inclusion among members in prevailing economic hardship in Nigeria.
2. Examined the influence of cooperative societies in promotingdigital literacy for financial inclusion among members in prevailing economic hardship in Nigeria.

Hypotheses

The null hypotheses were tested at 0.05 level of significance:

1. Cooperative societies do not promoting financial literacy for financial inclusion among members in prevailing economic hardship in Nigeria.
2. Cooperative societies do not promotedigital literacy for financial inclusion among members in prevailing economic hardship in Nigeria.

Conceptual Clarifications

Cooperative Societies

The International Cooperative Alliance (ICA) defined a cooperative as "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise." A cooperative is a firm that is freely owned and managed by its members and run for their benefit on a non-profit or cost basis (Musa & Bello, 2023). It is a commercial enterprise that strives to unite the concepts of ownership, control, and service consumption, which are the three distinguishing characteristics that set cooperatives apart from other enterprises.Cooperative societies can improve financial inclusion, alleviate poverty, and promote long-term economic growth (World Bank, 2018). Ojo and Adekunle (2017) and Ahmed *et al*. (2019) found that cooperative organisations in Nigeria improve revenue production, loan availability, and financial stability.

Financial Inclusion

In an effort to combat financial exclusion and its connection to poverty, the idea of financial inclusion rose to popularity in the early 2000s. It currently plays a significant role in the global development agenda and is thought to help achieve a number of the Sustainable Development Goals of the UN (World Bank Group, 2021).Financial inclusion seeks to eliminate obstacles from the supply (financial institutions) and demand (individuals) sides to guarantee that all individuals and enterprises may efficiently access and use reasonably priced financial services that satisfy their needs.Barajas *et al.* (2016) stated that ensuring that all individuals and businesses, regardless of income or socioeconomic level, have access to relevant and reasonably priced financial goods and services is known as financial inclusion.Financial inclusion is defined as equitable access to inexpensive financial services for all members of society (Arner *et al*., 2020; Corrado & Corrado, 2017). Grohmann *et al*. (2018) opined that financial inclusion include account ownership, savings, borrowing, and insurance through formal institutions. Financial inclusion has several benefits, including job development, income growth, educational possibilities, and resistance to economic shocks, risk diversification, and pension building. Ozili, (2018) asserted that positive results lead to increased economic development, poverty reduction, lower socio-economic inequality, and better financial well-being at individual and macroeconomic levels.

Financial Literacy

Financial literacy is defined as the knowledge, skills, and ability to make independent, informed financial decisions regarding financial planning, wealth accumulation, debt management, and pension planning, ultimately leading to financial well-being (Arner *et al.*, 2020; Shen *et al.*, 2018). It encompasses not only understanding financial services but also the ability and confidence to apply this knowledge to make effective financial decisions. A person's financial literacy is often indicated by their understanding of risk diversification, inflation, compound interest, and numeracy related to interest rates (Stolper & Walter, 2017). To effectively use financial services, individuals should have at least a basic understanding of these four dimensions. Understanding risk diversification involves knowing the difference in risk between investing in a single stock and a diversified portfolio. Inflation knowledge includes understanding how price and income increases affect purchasing power. Grasping compound interest means understanding cumulative interest on savings, while numeracy related to interest rates involves calculating interest payments on loans (Lusardi & Mitchell, 2014). Grohmann *et al*. (2018) studied how financial literacy affects financial inclusion, taking into consideration differences in financial depth and access to financial infrastructure. This study found that financial literacy improves financial inclusion in all circumstances, regardless of financial infrastructure, institutional features, or nation. Financial literacy can compensate for financial depth at lower levels and complement it at higher ones (Grohmann *et al.,* 2018). According to Shen *et al*. (2018), there is a favourable correlation between financial literacy and inclusion. Shen *et al.* found that digital financial services and internet usage mitigate the favourable relationship between financial literacy and inclusion. The authors revealed that internet usage encourages the use of digital financial services, making them more accessible and facilitating financial inclusion.

Digital Literacy

Digital literacy according to UNESCO (2018) is defined as the ability to access, manage, understand, integrate, evaluate, and create information safely and appropriately through digital devices and networked technologies for participation in economic and social life. Individuals who lack the skills to properly understand and use digital devices and networked technologies are considered digitally illiterate. To be considered digitally literate, one must have proficiency across four key dimensions: information processing skills, communication skills, problem-solving skills, and software skills for content manipulation (Eshet-Alkali & Amichai-Hamburger, 2004). Digital skills are strongly influenced by socio-demographic factors such as age, education, employment status, numeracy skills, and technological complexity (European Commission, 2020; Mushtaq & Bruneau, 2019). These differences in digital proficiency have led to a digital divide, exacerbating inequality across communities (Radovanović *et al.,* 2020). Bridging this divide is essential, as enhanced digital literacy promotes digital inclusion, enabling more individuals to access technology and empowering communities socially. Nwafor (2023) opined that cooperatives act as facilitators, creating a collaborative ecosystem that encourages networking and resource sharing among rural women technopreneurs. Cooperative societies give access to contemporary infrastructure and technology, therefore closing the digital gap in distant locations. Rural women may discover and exploit multiple digital opportunities thanks to dependable internet access and advanced technical tools, resulting in the creation of tech-driven businesses (Nwafor, 2023).

Methodology

The study adopted the correlational research design. A correlational study design is a research approach that is used to investigate the relationship between two or more variables. The fundamental goal of correlational investigations is to identify whether or not there is a statistical link between variables and the nature of that relationship. The study was conducted in Anambra State, Nigeria. Anambra State is situated in the southeastern region of Nigeria and was established in 1991, after being carved out of the former Anambra State. The capital and largest city of Anambra State is Awka. The state shares borders with Delta State to the west, Imo State to the south, Enugu State to the east, and Kogi State to the north. Anambra State has a population of over 4 million people and is predominantly inhabited by Igbo-speaking people, reflecting the rich cultural heritage of the region. The State's diverse and vibrant culture contributes to its unique identity and societal cohesion. The population of the study comprised members of cooperative societies in Anambra State. A multistage sampling approach was used to collect cross-sectional data from cooperative society members in the State. Respondents were selected using a stratified sample procedure, followed by random sampling. In the initial step, sample areas were selected, which included the Awka South and North Local Government Areas. The second stage entailed determining the number of cooperative societies and their members. In the third stage, 100 participants were chosen at random from each of the LGAs. A total of 200 cooperative society members were randomly selected to complete the questionnaires.

The instrument for data collection was two structured questionnaires developed by the researcher. The first instrument was titled "Questionnaire on Influence of Cooperative Societies for Financial Inclusion (QICSFI)". It contains 28 items spread over two clusters, 1 and 2. Cluster 1 contains 16 items on influence of cooperative societies in fostering financial literacy for financial inclusion. Cluster 2 contains 12 items on influence of cooperative societies in fostering digital literacy for financial inclusion. The second instrument was a "Questionnaire on Economic Hardship (QEH)". The questionnaire contains 10 items on economic hardship. Both instruments were structured on a four-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The instruments were validated by three experts in the Department of Cooperative Economics and Management, Nnamdi Azikiwe University, Awka. Reliability: To ascertain the reliability of the instrument it was subjected to a pilot test on 20 members of Cooperative Societies in Enugu State. The data collected from the pilot test was tested using Cronbach Alpha. This yielded a reliability coefficient of 0.87 for the first instrument while the second instrument yielded a reliability co-efficient value of 0.85.The instrument was administered by the researcher with the help of four research assistants. The research assistants were briefed on the mode of the instrument administration. The instrument was administered to the respondents at their weekly meetings. The instrument was administered on the spot and the respondents were allowed enough time to fill out the questionnaire upon which the instrument was retrieved but in a situation where that was not possible, the researcher or assistant booked an appointment with the respondent for the date of retrieval of the instrument. This process lasted for two weeks. Out of the 200 copies of the questionnaire administered 185 copies were retrieved in good condition and used for the analysis of data. Data was subjected to inferential analysis, using the Statistical Package for Social Sciences (SPSS 20.0) using Pearson Correlational Statistics. The co-efficient "r" obtained was used to ascertain how each of the independent variables correlate the dependent variable. In interpreting the values of the null hypotheses, when p-value is less than or equal to .05 ($p \leq .05$), the null hypothesis was rejected. On the other hand, when the p-value is greater than .05 ($p > .05$), the null hypothesis was not rejected.

Results and Discussion

Hypothesis 1

Cooperative societies do not promote financial literacy for financial inclusion among members in prevailing economic hardship in Nigeria.

Table 1: Summary of Pearson Correlation Analysison Influence of Cooperative Societies in Promoting Financial Literacyfor Financial Inclusion among Members in Prevailing Economic Hardship inNigeria

Correlation

		Influence of CS in Promoting Financial Literacy	Economic Hardship	Remark
Influence of CS in Promoting Financial Literacy	Pearson Correlation	1	.825**	Significant
	Sig, (2-tailed)		.000	
	N	185	185	
Economic Hardship	Pearson Correlation	.825**	1	
	Sig, (2-tailed)	.000		
	N	185	185	

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

Source: *Field Study, 2024*

Data presented on Table 1 indicates the correlation coefficient (r) as .825 with a p-value = 0.000. Since the P value of 0.000 is less than .05 ($P<.05$), it means that the influence of cooperative societies in promoting financial literacy for financial inclusion among members in prevailing economic hardship in Nigeriais statistically significant. This means that Cooperative societies promote financial literacy for financial inclusion among members in prevailing economic hardship in Nigeria. Thus, the null hypothesis was rejected. This finding is in agreement with Musa and

Bello (2023) who revealed that cooperative helps members to become financially viable. Cooperative societies offer financial education to their member which helps them in making proper financial decision during the period of economic hardship. This is why Grohmann *et al*. (2018) reported that financial literacy improves financial inclusion in all circumstances, regardless of financial infrastructure, institutional features, or nation. Shen *et al*. (2018) stated that there is a favourable correlation between financial literacy and inclusion.

Hypothesis 2

Cooperative societies do not promotedigital literacy for financial inclusion among members in prevailing economic hardship in Nigeria.

Table 2:Summary of Pearson Correlation Analysison Influence of Cooperative Societies in Promoting Digital Literacyfor Financial Inclusion among Members in Prevailing Economic Hardship in Nigeria
Correlation

		Influence of CS in Promoting Digital Literacy	Economic Hardship	Remark
Influence of CS in Promoting Digital Literacy	Pearson Correlation	1	.711**	Significant
	Sig, (2-tailed)		.001	
	N	185	185	
Economic Hardship	Pearson Correlation	.711**	1	
	Sig, (2-tailed)	.001		
	N	185	185	

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

Source: *Field Study, 2024*

Data presented on Table 2 indicates the correlation coefficient (r) as .711 with a p-value = 0.001. Since the P value of 0.001 is less than .05 ($P<.05$), it means that the influence of cooperative societies in promoting digital literacy for financial inclusion among members in prevailing economic hardship in Nigeriais statistically significant.This means that cooperative societies promotedigital literacy for financial inclusion among members in prevailing economic hardship in Nigeria. Thus, the null hypothesis was rejected. This finding is in line with Nwafor (2023) who reported that cooperatives act as facilitators, creating a collaborative ecosystem that encourages networking and resource sharing among rural women technopreneurs. This means that cooperative societiesoffer its member's access to contemporary infrastructure and technology which facilitates digital and financial inclusion. Mushtaq and Bruneau (2019) stated that digital literacyis strongly influenced by socio-demographic factors such as age, education, employment status, numeracy skills, and technological complexity. Shen *et al*. discovered that digital financial services and internet usage reduce the positive connection between financial literacy and inclusion. The authors discovered that internet use promotes the adoption of digital financial services, increasing their accessibility and boosting financial inclusion.

Conclusion

The researcher concludes based on the finding that cooperative societiespromote financial inclusion among its members in prevailing economic hardship. Cooperative societies are veritable association that promotes financial and digital literacy which fosters financial inclusion among its members. It therefore imperative that policy makers put into consideration measures to optimally leverage the opportunities provided by cooperative societies in facilitating financial resilience among citizens in Nigeria amidst the economic hardship being experienced in the country.

Recommendations

Based on the findings of the study, the researchers make the following recommendations:

1. Government should provide increased support to cooperative societies through funding, technical assistance, and capacity-building programmes. This will enable cooperatives to expand their reach and enhance their services to members.
2. Government and financial institutions should work with cooperative societies to create and implement comprehensive digital literacy programmes. These training programmes should be adapted to cooperative members' individual needs, assuring their ability to efficiently use digital financial services.
3. Management of cooperative societies should integrate financial education into the activities of cooperative societies. This can include workshops, seminars, and training sessions focused on financial planning, budgeting, and investment strategies. Financial education empowers members to make informed decisions and improve their financial well-being.
4. Government in collaboration with management of cooperative societies should help cooperative members have access to low-cost digital devices and internet connection. This can be accomplished through subsidies, collaborations with tech corporations, or community-based projects that enable shared access to technology.

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PLANNING STRATEGIES FOR INTEGRATING TECHNOLOGY INTO BUSINESS AND ENTREPRENEURSHIP EDUCATION

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Abstract
The success of every economy lies in its labour force which is the aftermath of the education and skills they possess. The paper is aimed at identifying planning strategies for integrating technology into business and entrepreneurship education using content analysis of the literature. The concept of technology, technology integration, Business education, entrepreneurship education and the relevance of technology to business and entrepreneurship education were x-rayed. In addition, provision of business and entrepreneurial education technology (BEET), and provision of alternative electricity supply were among the strategies enlisted. The paper concluded that business and entrepreneurship education are key and important aspects of education aimed at producing labour force for economic development and advancement of any nation. The paper recommended among others that efforts should be made by critical stakeholders concerning the provision of business and entrepreneurship education technology (BEET), and provision of alternative electricity supply thereby, ensuring adequate integration and implementation of these technological tools in order to produce labour force who can withstand the current trend in technology thereby advancing business and entrepreneurship growth.
Keywords: *Planning Strategy, Technology, Business Education, Entrepreneurship Education*

Introduction
The success of any nation can be measured in terms of its technological advancement and entrepreneurship drive. Today however, technology has affected every spectrum of our lives and businesses which has led to huge effect in the way we carry out daily routine. Rusmana, Murti and Harini (2019) are of the view that the 21st century competence consists of collaborative work skills, lifelong autonomy skills, information and communication technology (ICT) skills, critical and creative thinking skills, English Language skills, and entrepreneurship skill. Anirch and Amadi (2020) asserted that every nation today aspire to provide not just good education to its citizenry, but a functional education that will enable an individual realize his/her full potential and as well as become self-reliant and contribute towards national growth and development. With a purposeful planned education and possession of the appropriate knowledge and skill, an individual develops the capacity to become the desired person in life and fulfill life role in the society, Through the educational system, characters, attitudes, behaviours, skills, talents and values are modified and transform towards achieving specific or targeted objectives.

Business education can be seen as education or training that equips an individual with knowledge and skills which enables them to fit into the world of work. Business education is *a* purposeful planned system of education which is aimed at updating the skill of the labour force, hence it must prepare its recipients to fit into the dynamism of the world of work.

Today's world of work has makes it compulsory for everyone to key into the technological trend which is evident in the operation of almost all formal and organized offices. Technology has helped lo simplify jobs of the secretaries and accountants as a result of sophisticated machines and equipment. The revision of the programme is enhanced by knowledge, attitude and skills previously acquired in the course of the study were inadequate to equip the graduates with the competencies needed to adjust to the rapidly changing needs of the office (Azih, 2011). It is worthy of note that only businesses and professions that are technologically driven can withstand and compete actively and favourably in today's world of business. It is in view of the forgoing that business and entrepreneurship education must move with the new trend by ensuring proper and adequate integration of technology in the dissemination of instructions to the recipients which will lead lo effective preparation and graduation of functional individuals who can perform effectively in the present technologically driven business world.

Technology

The concept technology can be seen as the practical application of scientific knowledge for the simplification of daily routine and to ease life. Technology is the breakthrough in science that allows for *a* belter or automated solution (Bryant, 2015). The tools include internet, personal computers, scanners, printers, CD-ROMs, flash drives, floppy diskettes, photocopies, fax machines, audio/video tape players, digital projector/screen digital camera and TV (Anyaogu, 2007). In their opinion, Ezenwafu and Okeke in Njoku, Dikeocha and Onwuaghoke (2020) technology as the process by which machines and equipment are introduced in the work place to facilitate administrative process.

Odesariya, Maikano, Mohammed, and Uche (2014) refer to technology as an aspect of managing and processing information through the use of electronic computers and computer software to convert, store, protect, process, transit and retrieve information. Technology is mainly concerned with the storage, retrieval, manipulation and transmission or receipt of digital data. It includes all types or components of technological tools used to provide, store, disseminate and retrieve information for effective library service delivery.

Technology Integration

Integration has to do with the incorporation or inclusion of a particular thing, while technology integration can be seen as the inclusion of technology in a particular area or phenomenon. In the context of this paper, technology integration can be seen as the process of applying products of technology in enhancing teaching and learning of entrepreneurial and Business education content which includes the application and manipulation of these products of technology. Reigehuth and Joseph in Ile, Udegbunarn, and Odimmega (2015), view technology integration as focusing on how to use technology to support the way teaching arid learning are currently being carried out in the business world.

Business Education

The National Policy on Education (2013), indicated that Technical and Vocational Education is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes and understanding of any knowledge relating to occupations in the sector of economic and social life. Business Education is regarded as one of the major components of Vocational and Technical Education. Osuala (1989) sees Business Education as an essential part of the preparation of youths for life and living. In 2004, Osuala gave another definition as a programme of instruction which consist of two parts (1) Office education - a vocational programme of office career through initial, refresher and upgrading education and (2) General business education - a programme to provide students with information and competence which are needed by all in managing personal business affairs and in using the services of the business. Osuala (1987), Popham (1975) and Njoku (2006) were of the view that the type of training given to the learners was apprenticeship training. At that time an individual had to learn a trade under another person who had the skill for the trade, or who was experienced in a particular area such as were craft, bookkeeping, farming, sales etc. The period of training varied from one trade to another. Sometimes the length of time was based on how fast the apprentice could learn the skill for instantly sole traders were privileged to take apprentices to assist in the sale of wears through the learning of how it was done. Presently, this category of skill is carried and accepted through apprenticeship training. As time passed, the apprentice became free and was either a salesman or bookkeeper. In some instances, the apprentices paid for the period of training, but where it was not possible, the family of the apprentice paid for the period of training, but where it was not possible, the family of the apprentice was required to mortgage land or any valuable property. By the time the training ended, it was an option put forward to the apprentice whether to remain with his master and be paid a token sum, which might be complicated with material items. The second option was that of the freed-apprentice whose master was obliged to feed him/her and supplied him/her with routine help. In all, he/her was still responsible to the master and must emulate and we lack in our society today, was that the apprentice must be worthy in character and learning. As times went on, business began, Popham (1975) stated that more people were needed in businesses and the idea restricting the training to certain places was not achieving much and itinerant tutors started travelling around the country (USA) giving instruction in book keeping, penmanship and commercial arithmetic in their curricula as a result of demands for commercial training.

Agwumezie (1999) cited in Ezeani (2012) sees Business Education as a programme in education that prepares students for entry into and advancement of jobs within the business. Business education can be described as an aspect of education which is purposefully planned to prepare an individual to be self reliant. Business Education is an important part of general education which emphasizes skill acquisition for office- use. Business Education is a programme of instruction that consists of two parts, namely; Office Education a programme of vocation for office careers, and General Business Education - a programme which provides the recipients with competencies and skills needed in managing personal business affairs and using the services of the business world (Olaoluwa, 2012). An individual who receives training in Business Education can easily develop potentials for entrepreneurship pursuits especially in this era of economic meltdown and unemployment (Ibeneme and lkegwuani, 2010). From the above definitions, it can be deduced that Business education is education for and about business or training in business skills. Aliyu (1999) cited in Ezeani (2012) affirms that Business education is an educational programme which involves acquisition of skills, knowledge and competences which makes the recipient/beneficiary proficient. Business education which is offered at the Universities and Colleges of education is concerned mainly with the development of relevant and saleable skills and knowledge that would enable an individual to function effectively in the world of work (Onojetah, 2012). Business education provides employment for graduates. In Business Education programme, courses in Marketing, Management, Accounting and Office Technology and Management are offered by the students to gain proficiency on graduation.

Entrepreneurship Education

Entrepreneurship can be seen as the creative and innovative response in economic and social ventures. It involves starting up of business ventures through willingness and ability of an individual to explore investment opportunities and being able to run them successfully, through making them profitable. It involves combining resources to increase value and introducing change and innovation into the production process of creating wealth and employment opportunities. For an individual to be able to effectively grab and identify business opportunity, utilize resources with high level of innovation, be able to motivate and handle both his/her direct delegated, and other actions to ensure efficient synthesis of resources, he/she is said to be an entrepreneur. According to Eze (1995), entrepreneurship education seeks to inculcate in the graduates and indeed products of any programme how best to convert their education in whatever discipline to intellectually productive ventures other than employment.

Entrepreneurship according to Okonkwo (2015), centers on developing understanding and capacity for pursuit of entrepreneurial behaviours, skills and attributes in widely different context. It is a specialized training given to students of vocational and technical education to acquire the skills, ideas and managerial abilities and capabilities for self-employment rather than being employed paid jobs. Entrepreneurship education seeks to provide students with skills, knowledge and motivation as well as to effect attitudinal changes, necessary to encourage self-reliance through involvement in entrepreneurial activities. Entrepreneurship equips people with the ability to seek investment opportunities. Entrepreneurship education is a form of training that seeks to provide knowledge, skills and attitude to students for entrepreneurial success in any setting. Amesi (2014) views entrepreneurship education as the capability and willingness to develop, organize and manage a business venture along with any of its risks to make a profit. Val and Akpomi (2017) explained that entrepreneurship education concept focuses on the application of personal enterprising skills, and mindset to the context of setting up a new venture or initiative of any kind, developing and growing an existing venture and designing an entrepreneurial.

Eze and Eziolisa (2022), in their view belied that most graduates are deficient in terms of the necessary skills and competencies required for employment in contemporary business organizations, hence they are more or less unemployable. As part of her efforts to reverse this ugly trend, especially as it affects graduate unemployment, the government of Nigeria in 2006 introduced entrepreneurship as a compulsory course in tertiary institutions with the aim of preparing graduates for entrepreneurial success through private sector initiative (Agbonlahor, 2016). The initiative was to serve as the flagship to drive economic and social reconstruction against the backdrop of youth unemployment. At this juncture, repositioning universities as centers for building self-sustaining graduates becomes necessary. Similarly, Agboola and Ademiluyi (2015) reported that the introduction of entrepreneurship education in tertiary .institutions curriculum was followed by the directive from government through the National Council of Education (NEC), that higher education supervisory agencies should produce appropriate training documents for the effective delivery of the programme. The aim was to produce graduate entrepreneurs with the right attitudes and skills to spur them on part of creativity, innovation and enterprise.

Mike (2012), in his opinion sees entrepreneurship education as the process of creating something different with value by devoting the necessary time and effort, assuming the accompanying financial, psychological and social risks and receiving the resulting of monetary rewords and personal satisfaction. Similarly, Gana (2012), referred to entrepreneurship as the willingness and ability of an individual to seek out investment opportunities in an environment and be able to establish and run an enterprise successfully based on the identified opportunities. Gowin (2013), defined entrepreneurship as the process of identifying, developing and bringing a vision to life. The author stated further that the vision may be an innovative idea, an opportunity or simply a better way to do thing. The end result of this process is the creation of a new venture, formed under conditions of risk and considerable uncertainty. Entrepreneurship refers to the process of planning, organizing and managing of a business or self-employment venture, irrespective of whether it is a one-man operation or those that employ scores of individual.

Entrepreneurship education embraces skill building programme, creative thinking, product development and marketing negotiation, leadership (raining and wealth generation (Kuratto, 2003). In view of the importance of entrepreneurship education in skills development, graduates of the programme are expected to venture into various entrepreneurial activities upon graduation. It is against this background that entrepreneurship was integrated into the tertiary institution’s curriculum in Nigeria (Ezeani, 2014). The aim of this is to ensure that the students upon graduation acquire the necessary skills, knowledge and competencies to enable them successfully set up and manage their own businesses. This will help reduce the high rate of poverty, create employment opportunities and reduce rural-urban migration. Entrepreneurship education programme offers universities graduates adequate training in risk management to enable them to be creative and innovative in identifying novel business opportunities (Ugwoke, Basake, Diara and Chukwuma, 2014). However, the teaching and learning of entrepreneurship education in universities in Nigeria is facing challenges owing inadequate digital technological tools (Matto and Bwabo, 2012).

The World Bank (1999), Wikipedia, (2015) in Offiong, Caleb and Effiong (2017) refer to education as the fundamental to the construction of knowledge economy and society in all nations. It is through education that knowledge and skills are transferred to individuals, and their competencies and abilities developed. It is good to note that entrepreneurship education has been given prominence all over the world. Through entrepreneurship education, learners are provided with knowledge, skills and innovation so as to encourage them to develop entrepreneurial acumen in a variety of settings. Entrepreneurship from a general point of view can be described as response to the diverse opportunities and potentials that exist within an individual and the environment for profit making.

Relevance of Technology in Business and Entrepreneurship Education

The relevance of technology in Business education can't be overemphasized as it encompasses every spheres of human endeavour. Okoye, (2005) in Offiong, Caleb and Effiong (2017) expressed that the improvement of the educational system over the years has been the concern of educators and researchers, in both entrepreneurial and business education. This drive is not unconnected with the indisputable fact that National Development is hinged on the successful development, use and execution of research findings in the application of technology tools in teaching and learning. Technology is defined as the integration and utilization of the innovation of computer technology for the purpose of organizing, encoding, packaging and dissemination of information and skill acquisition to target destination or consumers without the constraint of time and space. This is to say that Technology-based instructional system operates a continuous lifelong training process. This no doubt, implies more freedom for the teachers and more opportunity to use initiatives for the learners. The time gained by teachers will necessarily be employed for better scientific planning of instructional content and delivery strategies. In order to be innovative, Business education programme must invest in the human resources and distribution mechanisms required to compete in a world characterized by hyper-corn petition, technological transformation, and inventiveness (Smil, 2017). Ohaka (2015) maintained that the opportunities provided by the integration of ICT in the Business education programme is that it helps to develop Business education with national and global contents, develop a system of collecting and disseminating information in Business education, and encourage the core principles of lifelong learning in skill acquisition and character moulding in business education through knowledge and career global interconnectivity.

The multiplier benefit of a networked instructional system ensures a future of entrepreneurial educational excellence, expansion and efficiency at reduced cost. ICT removes age, distance and limits constraints in any entrepreneurial educational learning and ensures immediate provision of knowledge in relevant areas with the ease and speed that could never be gotten in a 'traditional learning system (Offiong, Caleb and Effiong, 2017), apparently, technology integration is pivotal and instrumental for delivery of entrepreneurship and business education programme.

Strategies for Integrating Technology

To improve the delivery of Business and entrepreneurial education in our various institutions, there is the urgent need to integrate technology in the dissemination of instructions using the following strategies;

- **Provision of Adequate Electricity Supply and the use of Alternative Source of Power Supply):** Electricity is one of the essential ingredients of technological tools which can be a setback for the integration of technology into business and entrepreneurship education courses. By implication, most of these technological tools need adequate power supply and as a result, there is need to provide electricity or explore other options which include the use of solar power for constant use of these gadgets as it provides a more reliable source of power supply, compared to the traditional means of electricity supply. This will go a long way in ensuring effective and efficient delivery of instruction via technological tools.

- **Reduction in Cost of ICT Facilities by Suppliers**: The expensive nature of technological tools is of great concern which can be minimized through collaborative efforts and partnership with the suppliers fur possible discounts and allowances. Good partnership with the suppliers can be a good way to cut cost which can in turn bring about an increase and expansion of the technological tools for effective integration into the teaching and learning of business and entrepreneurship education courses.

- **Good Management Policies:** In order to protect and safeguard the abuse of usage of these technological tools, the management should design workable framework and policies which will protect the software and hardware of the facilities. Guidelines and proper procedures should be spelt out to avoid unnecessary violation of the policies. This will protect the tools from both internal and external attack or breach of security.

- **Provision of Business and Entrepreneurship Education Technology:** This is also referred to as business and startup training technology center which can be considered as a commercial center, a graphics center, a music studio, an internet center, a computer training center, a computer technician unit, a designers shop, web design, computer services, internet recruitment agency, internet advertising, internet travel, videography, decoration, photography, cinema, and agriculture (poultry and aquaculture). The business center provides communication services to customers. The services provided by the business center are evolving to include more valuable services required by the service unit. Graphics center is another area where entrepreneurs and business owners use technology tools such as computers, scanners, internet and other accessories to design graphics. Internet hubs are another area where IT tools can be used. These centers provide internet service to residents and users at minimal cost. The services provided help improve people's living standards and also create jobs for hundreds of people directly or indirectly by entrepreneurs. Skills development is the expected outcome of education and training efforts and a catalyst for growth. As an entrepreneur, growing your business and creating a legacy is paramount. ICT infrastructure provides a platform upon which e-commerce is built, internet skills offer the technical know-how needed to develop entrepreneurial applications (Migisha, 2011).

- **Intentional and Effective Training/Workshop for Business and Entrepreneurial Education Lecturers/Facilitators:** It is very pertinent to stress that, the integration of technology into business and entrepreneurship education will be meaningless and useless without an intentional and adequate training of the lecturers/facilitators of these courses. There is an urgent need for the tutors and facilitators of these courses to have up-to-date knowledge of the technological advancement in order to be able to deliver lessons/subject matters to their various students effectively and efficiently. This was corroborated by the study of Nwolake and Chukwiima(2019) that lack of technological skills on the part of business educators constrains integration of new technologies in teaching business education courses. Evidently, the output (graduates) from our various institutions and their functionality are greatly measured by the competency of their instructors and facilitators, hence trailing and retraining of business and entrepreneurship education staff as this remains the only way for the objective of this programme to be achieved (hereby ensuring our graduates compete actively and thrive in the global world of work. It has been affirmed by Nwosu and Mbeazie in Timya et al (2019) that most of the teachers were not effectively taught with the latest technologies, therefore they have to be retrained in the proper use of latest technologies in instructional delivery.

- **Good Maintenance Culture:** The best way to protect and get the best out of those tools is through proper handling and usage. The staff and students should imbibe good management culture in order to expand the lifespan of the machines. This will not only allow efficiency of usage but will also help to reduce the cost of maintenance.
- **Provision of Adequately Equipped Offices for Lecturers:** There should be adequate provision of offices for lecturers to ease their functions and research.
- **Provision of Adequate Computers:** There should be adequate provision of computers on the basis of one student to one computer during class sessions and easy research.
- **Provision of Adequate Word Processing Laboratories:** There should be adequate provision of word processing laboratories fitted with air conditioners and good lighting system.

Conclusion

Integrating technology into Business and Entrepreneurship education should be given priority attention considering the fact that it is an important aspect of education aimed at producing labour force for the economic development and advancement of the nation and for the practices and operations of the recipients of the programmes. To keep abreast global practices and trend, technology must be fully and adequately incorporated and integrated into the teaching and learning of the courses in our various higher institutions of learning. This will not only make our graduates and workforce to be competent, relevant and up-to-date in their chosen careers/fields, but will also enable them to compete favourably and actively with their counterparts across the globe. It is in view of the above that policy makers and stakeholders should as a matter of urgency put necessary resources and apparatus as well as techniques that would yield proper integration of technology into Business and Entrepreneurship education curriculum so as to achieve the objective of the programmes which is to produce functional graduates and labour force.

Recommendations

The following recommendations were made by the researchers in line with the findings:

1. There should be effective planning and designing policies that will help to facilitate the use of the integrated tools.
2. There should be internship and effective training/workshop for Business and Entrepreneurship education lecturers.
3. There should be provision of adequate electricity supply and the use of alternative source of power like the solar power.
4. There should be collaborative efforts and partnership with suppliers of technological tools at possible discounts rates

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EFFECT OF RECOGNITION AND INVOLVEMENT IN DECISION-MAKING ON THE MENTAL WELL-BEING OF FEMALE SECONDARY SCHOOL TEACHERS IN LAGOS STATE

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Abstract
This study investigated the effects of recognition and involvement in decision-making on the mental well-being of female secondary school teachers in Lagos State, Nigeria. Using the descriptive survey research design, the study sampled 459 respondents using purposive sampling from a population of 6,271 female teachers. Two hypotheses were stated and tested using Structural Equation Modeling (SEM). The results revealed a significant effect of recognition on mental well-being ($\beta = .162$, $p < .05$), and a significant effect of involvement in decision-making onthe mental well-being of female teachers ($\beta = .217$, $p < .05$). These findings suggest that both recognition and participative decision-making significantly enhance the mental well-being of female teachers. Consequently, it is recommended that educational authorities implement systematic recognition programs and encourage inclusive decision-making processes to improve teachers' mental health. These measures are particularly crucial for female teachers who face unique challenges related to gender roles and societal expectations.
Keywords: *recognition, Involvement in decision-making, mental well-being, and teachers*

Introduction

The mental well-being of teachers has increasingly become a subject of academic interest and policy concern worldwide and the vital role teachers play in shaping the lives of future generations cannot be overemphasized. It is imperative to note that the well-being of teachers might significantly impact the quality of education delivered, thereby influencing student performance and overall school effectiveness (Glazzard & Rose, 2020). Thus, understanding the factors that promote teachers' mental well-being becomes important. In many parts of the world, there has been a growing emphasis on the importance of recognition and involvement in decision-making as critical factors influencing the mental well-being of employees, including teachers. Studies have shown that recognition in the workplace can lead to increased job satisfaction, reduced stress levels, and overall improved mental health (Tirta & Enrika, 2020; Zhang *et al.*, 2023). Similarly, involvement in decision-making processes has been linked to enhanced feelings of autonomy, empowerment, and a sense of control, all of which contribute positively to mental well-being (Edmondson & Matthews, 2024).

In contrast, the situation in developing regions such as Africa presents unique challenges and opportunities. African educational systems often grapple with resource constraints, socio-political instability, and cultural dynamics that influence the teaching profession differently compared to developed countries. According to Muhamad *et al.* (2024), the involvement of teachers in decision-making in African schools is often limited, leading to feelings of disenfranchisement and stress. In Nigeria, the educational sector faces specific challenges that exacerbate the stress levels of teachers. These challenges include large classroom sizes, inadequate teaching materials, poor remuneration, and a lack of professional development opportunities (Fadare *et al.,* 2024). Female secondary school teachers, in particular, may face additional pressures related to gender roles and societal expectations, which can further impact their mental well-being (Ogakwu *et al.,* 2024).

Lagos State, as Nigeria's commercial hub, offers a unique setting for examining these issues. The state's educational landscape is characterized by a mix of public and private schools, each with distinct administrative practices and cultures. This diversity provides a fertile ground for investigating how recognition and involvement in decision-making might affect the mental well-being of female secondary school teachers most especially those working in public schools. Despite the critical importance of these factors, there is a paucity of comprehensive studies specifically addressing the interplay between these factors (recognition and involvement in decision-making) andthe mental well-being of female public secondary school teachers in Lagos State. Much of the existing literature tends to focus on broader teacher populations or different educational levels (Ifunanya, 2024; Ozoemena *et al.,* 2021). Thus, this study fills this gap by providing empirical evidence on the effects of recognition and involvement in decision-making on the mental well-being of female secondary school teachers in Lagos State.

Literature Review

Conceptual Review

Recognition in the workplace denotes the acknowledgment and appreciation of an employee's efforts, contributions, and achievements. This concept is grounded in organizational psychology and human resource management, highlighting its importance in encouraging a positive work environment. Recognition can take various forms, including verbal praise, awards, promotions, and other forms of public acknowledgment. According to Brun and Dugas (2008), effective recognition practices can lead to increased motivation, job satisfaction, and commitment among employees. In the context of teaching, recognition serves as a critical factor in enhancing teachers' morale and dedication to their profession (Lim, 2021). It is particularly relevant for female secondary school teachers who often juggle multiple roles and responsibilities both at work and home. Recognition not only validates their professional efforts but also provides emotional support, which is crucial for maintaining mental well-being (Baum & Schnake, 2024).

Involvement in decision-making connotes the extent to which employees are allowed to participate in the processes that determine the policies, practices, and direction of their organization. This concept is closely related to theories of organizational behaviour and participative management, which argue that involving employees in decision-making can lead to better organizational outcomes (Vroom & Jago, 1988). When teachers are involved in decision-making, they are likely to feel more valued and empowered, which can enhance their sense of ownership and responsibility towards their work (Ahmed, 2024). For female secondary school teachers, involvement in decision-making can provide a platform to address specific challenges they face, ensuring that their unique perspectives and needs are considered in the school's operational and strategic plans.Mental well-being encompasses a range of factors that contribute to an individual's psychological health, including emotional stability, resilience, life satisfaction, and the ability to manage stress (Midha & Bhambri, 2024). In the workplace, mental well-being is influenced by various elements such as job demands, work environment, social support, and personal coping mechanisms (Yunus *et al.*, 2023).

Theoretical Review

In this study, the self-determination theory (SDT), developed by Deci and Ryan (1985), provides a comprehensive framework for understanding the factors that contribute to human motivation and well-being. According to SDT, individuals have three innate psychological needs: autonomy, competence, and relatedness. When these needs are met, individuals experience enhanced motivation, engagement, and mental well-being. Recognition and involvement in decision-making are crucial elements in fulfilling these needs, particularly in professional settings such as teaching. Recognition satisfies the need for competence by affirming teachers' skills and efforts, thus boosting their self-esteem and professional identity. Involvement in decision-making fulfills the need for autonomy, giving teachers a sense of control and ownership over their work environment. These aspects are particularly significant for female secondary school teachers in Lagos State, who face unique societal and professional challenges. By meeting their needs for competence and autonomy, recognition and involvement in decision-making can significantly enhance their mental well-being, reducing stress and increasing job satisfaction. Despite extensive research on SDT, there is a notable gap in its application to the mental well-being of teachers in developing countries, particularly Nigeria.

Empirical Review and Hypotheses Development

Recognition in the workplace has been extensively studied across various professions, with a growing body of literature highlighting its critical role in enhancing mental well-being (Barnes *et al*., 2021; Grawitch *et al*., 2006; Nunes *et al*., 2024). In the context of teaching, recognition might significantly impact teachers' psychological health, job satisfaction, and overall effectiveness. One pivotal study by Brun and Dugas (2008) underscores the importance of recognition in fostering positive mental health outcomes among employees. Their research found that employees who felt adequately recognized for their contributions reported higher levels of job satisfaction and lower levels of stress and burnout. This finding is particularly relevant for female teachers, who often face unique challenges related to gender roles and expectations. The acknowledgment of their professional efforts can serve as a critical buffer against stressors, enhancing their mental well-being and job satisfaction.Similarly, a study conducted by Skaalvik and Skaalvik (2011) explored the relationship between teacher job satisfaction, stress, and burnout. Their findings indicated that teachers who received regular recognition and positive feedback were less likely to experience burnout and more likely to report higher job satisfaction. This relationship was particularly pronounced among female teachers, suggesting that recognition plays a vital role in mitigating the unique stressors they face in the teaching profession.

A study conducted by Werang *et al*. (2024) investigated the interrelations between emotional exhaustion, job satisfaction, and job performance among Indonesian elementary school teachers. Their findings revealed that high levels of emotional exhaustion significantly diminished job satisfaction and performance. Conversely, job satisfaction acted as a buffer, enhancing job performance even when teachers experienced emotional exhaustion. This study highlights the critical need for effective recognition and support mechanisms to improve job satisfaction and reduce emotional exhaustion among teachers. Also, Cheng *et al*. (2023) conducted an integrative review on job burnout among teachers in China, identifying key factors contributing to burnout and providing implications for human resource management. Their review highlighted the role of excessive workload, lack of support, and insufficient recognition in exacerbating burnout. The authors suggested that implementing recognition programs and providing adequate support can mitigate burnout and enhance job satisfaction among teachers.Matemba (2024) explored the challenges faced by secondary school teachers in the Meru District Council, Arusha Region, in achieving effective job performance. The findings indicated that lack of recognition, inadequate resources, and heavy workloads were primary obstacles. This study underscored the importance of recognition and resource allocation in improving job performance and teacher satisfaction. Given the unique challenges faced by teachers, particularly females in working in developing contexts, it is imperative to prioritize recognition in educational policies and practices to support their mental well-being and professional satisfaction. Thus, we hypothesized that:
H_1*: *Recognition has a significant effect on the mental well-being of female secondary school teachers in Lagos State.

In the context of teaching, several studies have demonstrated that teachers who are actively involved in decision-making processes tend to exhibit higher levels of job satisfaction and psychological well-being. For instance, a study by Somech (2002) found that participative decision-making significantly enhances teachers' sense of autonomy and professional efficacy, leading to improved mental health outcomes. This effect is particularly pronounced among female teachers, who often face additional challenges related to gender roles and expectations, making the need for autonomy and empowerment even more critical.Specific studies focusing on female secondary school teachers have further elucidated these dynamics. Research by Dinham and Scott (2000) revealed that female teachers who perceive a higher degree of involvement in school decision-making report lower levels of stress and burnout. This finding aligns with self-determination theory, which posits that fulfilling the need for autonomy through participative decision-making can enhance intrinsic motivation and well-being (Deci & Ryan, 1985). Female teachers often encounter unique stressors, including balancing professional responsibilities with domestic duties. Thus, their involvement in decision-making not only promotes a sense of control and agency but also helps mitigate the stress associated with these dual roles.

A study conducted by Anastasiou and Belios (2020) explored the effect of age on job satisfaction and emotional exhaustion of primary school teachers in Greece. Their findings indicated that older teachers reported higher job satisfaction and lower levels of emotional exhaustion compared to their younger counterparts. This relationship was particularly pronounced among teachers with extensive teaching experience, suggesting that age and experience play a crucial role in enhancing job satisfaction and mitigating emotional exhaustion in the teaching profession. Paulsrud and Wermke (2020) investigated decision-making in the context of teacher autonomy in Sweden and Finland. Their research revealed that Swedish and Finnish teachers perceive a high level of autonomy in their decision-making processes. This perception of autonomy was significantly associated with their job satisfaction and professional efficacy. The study highlighted that the educational context and national policies in Sweden and Finland foster an environment where teacher autonomy is supported, contributing positively to their overall job satisfaction and mental well-being.Based on the foregoing arguments, we hypothesized that:

H_2*: Involvement in decision-making has a significant effect on the mental well-being of female secondary school teachers in Lagos State.*

Research Methodology

This study used the descriptive survey research design as the blueprint for data collection and analysis. The target population for data collection comprised female teachers employed in the 322 public senior secondary schools in Lagos State, totaling 5,187 as of 2017, according to the Lagos State Ministry of Education (2017). Due to the absence of current statistics on the number of female teachers in public senior secondary schools in Lagos State as of 2024, this study employed the exponential growth rate technique to estimate the number of female teachers expected to be employed in Lagos State in 2024. The State's annual growth rate of 3.7%, as reported by the World Population Review 2024 report, was utilized for this projection. Consequently, the estimated number of female teachers in public senior secondary schools in 2024 was projected to be 6,271. Hence, this figure was adopted as the population of the study.

Using the Krejcie and Morgan (1970) sample size determination table, a sample of 364 was drawn from this population. To account for potential non-response in the survey, an additional 30% of the sample size, as recommended by Israel (1992), was added to the initial 364, resulting in a final sample size of 473.Data collection was conducted using purposive sampling, selecting female teachers working in senior secondary schools who possessed specific and relevant knowledge concerning the variables under study. This method ensured that the data collected was derived from a well-informed group. A structured questionnaire served as the primary data collection instrument, comprising two parts: Part A focused on demographic variables, while Part B contained existing scales adapted to the study's context. Responses were measured using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The adapted scales demonstrated acceptable reliability coefficients, exceeding the 0.70 benchmark as per Cronbach's alpha.

Recognition was measured using a 4-item scale adapted from the work of Grawitch *et al*. (2007) and it has been found to have an acceptable reliability coefficient (α=.750) among ICT professionals (Azeez, 2019). To measure employees' involvement in decision-making, the propensity for participative decision-making scale (PPDMS) developed by Parnell and Bell (1994) was adapted in this study. The 13-item scale is reliable because it has a Cronbach's alpha coefficient of α=.860 in the Nigerian context (Azeez, Fapohunda & Jayeoba, 2017).Additionally, teachers' mental well-being was measured using the Warwick-Edinburgh mental well-being scale developed by Stewart-Brown *et al*. (2009) and the scale has been found to have a reliable coefficient of α = .84 among Norwegian and α = .86 among Swedish respondents respectively (Haver *et al*., 2015).To ensure a proportional distribution, 80 copies of the questionnaire were distributed to each of the six educational districts of Lagos State. Research assistants ensured that participants provided informed consent before participating in the study. The questionnaire administration occurred over four weeks, with 462 copies retrieved following multiple follow-ups. Out of the 462 copies retrieved, representing a 97.7% response rate, three copies were excluded due to incompleteness, resulting in 459 completed questionnaires, or 97%, used for final analysis.The collected data were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics were employed to analyze demographic data, while structural equation modeling (SEM) was used to assess the structural relationships between recognition, involvement in decision-making process, and mental well-being.The statistical analyses were conducted using the Statistical

Package for the Social Sciences (SPSS) version 26 and SPSS AMOS version 22.This study adhered to the Lagos State University Research Ethics Policy (2020), ensuring the maintenance of ethical standards in protecting participants' rights, maintaining confidentiality, and upholding research integrity.

Findings and Discussion

This section brings to the fore the analysis and discussion of collected data to draw conclusions and make appropriate recommendations.

Table 1: Analysis of Demographic Variables

Variable	Category	Frequency (%)
Age	20-30	60 (13%)
	31-40	150 (33%)
	41-50	160 (35%)
	51-60	89 (19%)
Department (Teaching Area)	Science	120 (26%)
	Arts	140 (30%)
	Commercial	110 (24%)
	Vocational/Technical	89 (19%)
Marital Status	Single	80 (17%)
	Married	320 (70%)
	Separated	30 (7%)
	Widowed	29 (6%)
Educational Qualification	NCE	22 (5%)
	BSc/B.Ed	220 (48%)
	M.Ed./MSc.	178 (39%)
	PhD	39 (8%)
Years of Teaching Experience	0-5	106 (23%)
	6-10	100 (22%)
	11-15	150 (33%)
	16-20	44 (10%)
	21 and above	59 (12%)
Location of School	Urban	250 (54%)
	Sub-Urban	140 (30%)
	Rural	69 (15%)

Source: *Field Survey (2024)*

The demographic results of the study in Table 1 present a comprehensive overview of the characteristics of female teachers in public senior secondary schools in Lagos State. In terms of age distribution, the largest group of respondents falls within the 41-50 years category, comprising 35% of the sample. This is followed by the 31-40 years age group, representing 33%, while the 20-30 and 51-60 age groups constitute 13% and 19% respectively. This indicates a balanced mix of mid-career and more experienced teachers, with a smaller proportion of younger educators. Regarding the teaching areas, the distribution shows that 30% of the teachers are in the Arts, making it the most represented department. Science follows closely with 26%, while the Commercial and Vocational/Technical departments account for 24% and 19% respectively. This distribution suggests a diverse range of academic specializations among the respondents, with a relatively even spread across different subject areas, highlighting the variety of expertise present in the teaching workforce.

In terms of marital status, a significant majority of the respondents, 70%, are married. Single teachers constitute 17%, while those who are separated or widowed make up 7% and 6% respectively. This data suggests that the majority of female teachers in Lagos State are likely to have family responsibilities, which could influence their work-life balance and professional commitments. Educational qualifications of the respondents indicate that nearly half (48%) hold a Bachelor's degree (BSc/B.Ed), with 39% possessing a Master's degree (M.Ed./MSc.).

A smaller percentage, 8%, has attained a PhD, while 5% hold a National Certificate in Education (NCE). This reflects a high level of educational attainment among the teachers, with a significant proportion having advanced degrees. In terms of teaching experience, 33% of the respondents have 11-15 years of experience, 23% have 0-5 years, and 22% have 6-10 years. Those with over 20 years of experience constitute 12%, indicating a substantial presence of both relatively new and highly experienced teachers. Lastly, the location of schools reveals that the majority of teachers (54%) are in urban areas, with 30% in sub-urban and 15% in rural areas, highlighting the urban-centric distribution of teaching personnel in Lagos State.

Test of Hypotheses

H_1: Recognition has a significant effect on the mental well-being of female secondary school teachers in Lagos State.

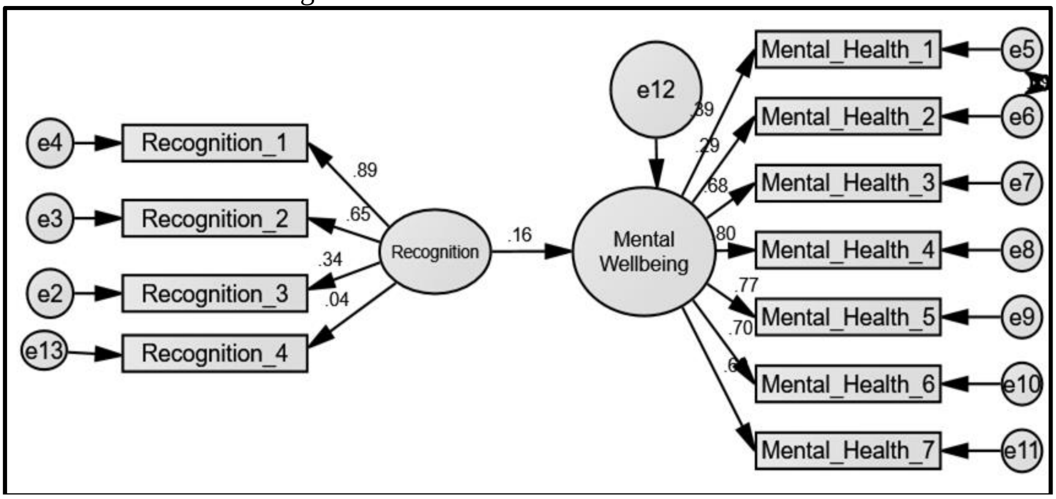

Figure 1: SEM Analysis between recognition and mental wellbeing

The results from the structural equation modeling (SEM) reveal a significant positive effect of recognition onthe mental well-beingofpublic secondary female teachers in Lagos State. The standardized estimate (β) of .162 suggests that an increase in recognition connects with an improvement in mental well-being. This implies that teachers who feel recognized and appreciated are likely to experience better mental he. The critical ratio (C.R.) of 2.581, which exceeds the threshold of 1.96, further substantiates the statistical significance of this effect, indicating that the observed effect is unlikely to be due to chance.The standard error (S.E.) of .067 indicates the level of precision in the estimated effect of recognition on mental well-being. A smaller standard error denotes higher precision, implying that the relationship between recognition and mental well-being is measured with a reasonable degree of accuracy. This precision enhances the reliability of the findings, suggesting that initiatives aimed at increasing recognition could effectively improve the mental well-being of female teachers.

Furthermore, the p-value of .010 signifies that the relationship between recognition and mental well-being is statistically significant at the 0.05 level of significance. This low p-value confirms the robustness of the interplay, providing strong evidence against the null hypothesis. Consequently, these findings underscore the importance of recognition in promoting mental well-being among female teachers, highlighting the potential benefits of implementing recognition programs and policies within educational institutions to enhance teachers' mental health. The findings of this study align with a substantial body of literature emphasizing the importance of recognition in enhancing mental well-being across various professions, including teaching. The study aligns with the submission of Brun and Dugas (2008) who notedthat employees who feel recognized report higher job satisfaction and lower stress and burnout levels. This is particularly pertinent for female teachers, who often encounter unique challenges related to gender roles and societal expectations. The acknowledgment of their professional contributions can serve as a critical buffer against these stressors, thus enhancing their mental well-being. In this context, our study's results, show a significant positive effect of recognition on mental well-being, therefore, reinforcing the pivotal role of recognition in supporting the psychological health of teachers.

Furthermore, Skaalvik and Skaalvik (2011) provided evidence that regular recognition and positive feedback are essential in reducing burnout and increasing job satisfaction among teachers. Their study specifically notes that this relationship is particularly strong among female teachers, underscoring the unique influence recognition has on mitigating the stressors they face. This aligns with our findings that increased recognition significantly enhances mental well-being, suggesting that recognition not only improves job satisfaction but also serves as a protective factor against the adverse effects of occupational stress and burnout. Such findings advocate for the implementation of systematic recognition programs in educational institutions to foster a supportive work environment.Additionally, the studies by Werang *et al*. (2024) and Cheng *et al*. (2023) further substantiate the critical role of recognition in managing job performance and preventing burnout. Werang *et al*. (2024) emphasized that emotional exhaustion diminishes job satisfaction and performance, whereas job satisfaction can buffer against such exhaustion. Cheng *et al*. (2023) integrative review points to excessive workload, lack of support, and insufficient recognition as primary contributors to burnout among teachers. They suggest that recognition programs and adequate support can significantly mitigate burnout and enhance job satisfaction. Matemba (2024) also emphasizes that lack of recognition, alongside inadequate resources and heavy workloads, hinders effective job performance. These findings collectively underscore the necessity of recognition and resource allocation to improve job satisfaction and performance among teachers, corroborating our study's results that advocate for enhanced recognition to bolster teachers' mental well-being.

H_2: Involvement in decision-making has a significant effect on the mental well-being of female secondary school teachers in Lagos State.

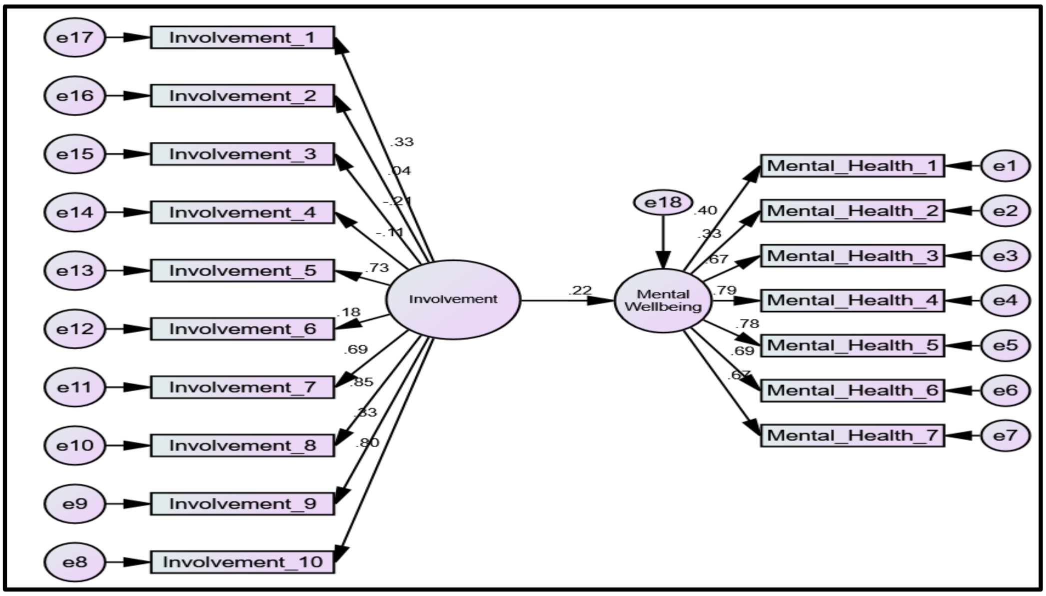

Figure 2: SEM Analysis between involvement in decision making and mental wellbeing

The structural equation modeling (SEM) results in Figure 2 reveal a significant positive effect of involvement onthe mental well-beingof female teachers in Lagos State public secondary schools in Lagos State. The standardized estimate (β) of .217 indicates that an increase in involvement is associated with an improvement in mental well-being. This suggests that teachers who feel more involved in the decision-making processes in their professional environment tend to experience better mental health outcomes. The critical ratio (C.R.) of 3.673, which exceeds the threshold of 1.96, further confirms the statistical significance of this effect, indicating that the observed relationship is unlikely to be due to chance.The standard error (S.E.) of .020 indicates a high level of precision in the estimated effect of involvement in decision-making on mental well-being. A smaller standard error denotes greater precision, suggesting that the interplayofinvolvement in decision-makingon mental well-being is measured with considerable accuracy. This precision enhances the reliability of the findings, implying that efforts to increase teacher involvement could effectively enhance their mental well-being. Such initiatives might include participative decision-making, collaborative teaching strategies, and inclusive policy development, all of which could contribute to a more supportive and engaging work environment.

Furthermore, the p-value of .000 signifies that the interplay between involvement in the decision-making process and mental well-being is statistically significant at the 0.05% level. This low p-value confirms the robustness of the association, providing strong evidence against the null hypothesis of no effect. Consequently, these findings underscore the importance of involvement in fostering mental well-being among female teachers.These findings align with the study by Somech (2002), which found that participative decision-making significantly enhances teachers' sense of autonomy and professional efficacy, leading to improved mental health outcomes. This effect is particularly pronounced among female teachers, who often face additional challenges related to gender roles and expectations. By being more involved in decision-making processes, female teachers can achieve a greater sense of autonomy and empowerment, which is critical for their mental well-being. Dinham and Scott (2000) also support this, revealing that female teachers with a higher degree of involvement in school decision-making report lower levels of stress and burnout, aligning with self-determination theory by Deci and Ryan (1985), which posits that fulfilling the need for autonomy through participative decision-making can enhance intrinsic motivation and wellbeing.Additionally, research by Anastasiou and Belios (2020) on primary school teachers in Greece indicated that older teachers reported higher job satisfaction and lower levels of emotional exhaustion compared to their younger counterparts. This relationship was particularly strong among teachers with extensive teaching experience, suggesting that age and experience contribute significantly to job satisfaction and reduced emotional exhaustion. Furthermore, Paulsrud and Wermke (2020) highlighted the importance of teacher autonomy in Sweden and Finland, where high levels of perceived autonomy in decision-making were significantly associated with job satisfaction and professional efficacy. These studies collectively underscore the importance of ensuring teachers' involvement in the decision-making to enhance their mental well-being, echoing the findings of this study.

Conclusion and Recommendations

The findings of this study underscore the significant effect of recognition and involvement on the mental well-being of female secondary school teachers in Lagos State. The SEM analysis revealed that both recognition ($\beta = .162$) and involvement ($\beta = .217$) have positive and statistically significant effects on mental well-being, with critical ratios and p-values confirming the robustness of these relationships. In conclusion, these results suggest that female teachers who feel recognized and involved in the decision-making processes in their professional environments would experience better mental health well-being. These findings align with existing literature, emphasizing the importance of recognition and participative decision-making in enhancing employee well-being across various professions, including teaching.Based on the findings; it is recommended that public secondaryschool authorities and educational policymakers should prioritize the implementation of systematic recognition programs and policies that acknowledge the contributions of female teachers. Regular positive feedback and appreciation can significantly enhance their mental well-being. Additionally, public secondary school authorities should promote an inclusive environment that encourages teacher involvement in decision-making processes. Strategies such as participative decision-making, collaborative teaching approaches and inclusive policy development can help create a supportive and engaging work environment, thereby improving the mental well-being of female teachers.

As suggestions for further studies, future research should explore the long-term effects of recognition and involvement on the mental well-being of teachers, incorporating longitudinal studies to understand the sustained impact of these factors. Additionally, studies could examine the specific challenges faced by female teachers in different educational contexts and cultural settings to develop tailored interventions. Further research could also investigate the role of other organizational factors, such as workload management and resource allocation, in influencing the mental well-being of female teachers, most especially those working in the public sector.

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NON-PERFORMING LOANS AND PROFITABILITY OF PRIMARY MORTGAGE BANKS IN NIGERIA 2012-2023

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Abstract
This study examined the effect of non-performing loans (NPL) on the profitability of primary mortgage banks in Nigeria from 2012 to 2023. Utilizing time series data from the Nigeria Deposit Insurance Corporation's annual report for 2023, the research investigated how variables such as NPL, capital adequacy ratio (CAR), and loan-to-deposit ratio (LDR) influence return on assets (ROA). Auto-regressive distributed lag models (ARDL) were applied for the analysis, revealing that while non-performing loans had a negative effect, this effect was statistically insignificant over the study period. The study suggests that primary mortgage banks should focus on enhancing credit risk management, optimizing loan recovery strategies, diversifying their loan portfolios, improving capital adequacy, ensuring regulatory compliance, and investing in technology and data analytics to strengthen their operational and financial resilience.
Keywords: *Non-Performing loans and profitability of primary mortgage banks in Nigeria.*

Introduction

In recent years, the performance of primary mortgage banks (PMBs) in Nigeria has garnered significant attention due to their essential role in housing finance and their broader economic impact. PMBs facilitate homeownership by providing mortgage financing to individuals and institutions, which in turn promotes economic growth and development. The profitability and sustainability of these banks are, however, heavily dependent on their asset quality, financial stability, and operational efficiency (Kamandea, Zablonb & Ariemba, 2016).

One major challenge facing these institutions globally, including in Nigeria, is the issue of non-performing loans (NPLs). NPLs are loans where borrowers have failed to make scheduled payments for an extended period, typically 90 days or more. High NPL levels can significantly erode bank profitability, strain capital reserves, and jeopardize solvency, especially in Nigeria, where economic instability and policy changes frequently affect borrowers' repayment capabilities (Nwosu *et al*,2020).Beyond NPLs, other financial metrics such as the capital adequacy ratio (CAR) and loan-to-deposit ratio (LDR) are vital in assessing the financial health of PMBs(Soares & Yunanto,2018). The CAR, which measures a bank's capital relative to its risk-weighted assets, is a critical indicator of financial stability. A higher CAR signifies a bank's ability to absorb potential losses and maintain solvency (Agbeja,*et al*, 2015). Similarly, the LDR, which compares total loans to total deposits, is crucial for ensuring liquidity. An optimal LDR helps maintain a balance between lending activities and the availability of liquid assets to meet withdrawal demands (Adenuga, Mohammed, Laniyan, Akintola, & Asuzu,2021).Despite the critical importance of these factors, there is a notable lack of empirical research specifically addressing the effect of NPLs, CAR, and LDR on the profitability of Nigerian PMBs. Existing studies often focus on commercial banks or other financial sectors, leaving a gap in understanding the unique challenges faced by PMBs. This study aims to bridge this gap by analyzing data from 2012 to 2023, a period marked by significant economic and regulatory changes in Nigeria. The profitability of primary mortgage banks in Nigeria has been under considerable pressure due to the rising incidence of non-performing loans. High levels of NPLs threaten the financial stability of these banks by reducing their return on assets (ROA), a key measure of profitability (Nwosu, Okedigba, & Anih, 2020). Moreover, while capital adequacy and loan-to-deposit ratios are critical for maintaining financial health, their interaction with NPLs and their overall impact on profitability remain underexplored within the context of Nigerian PMBs. Addressing these issues is crucial for developing effective strategies to enhance the performance and sustainability of PMBs, thereby ensuring their continued contribution to the housing finance sector and the broader economy.

Literature Review

A loan is non-performing when payments of interest and/or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons such as a debtor filing for bankruptcy to doubt that payments will be made in full (IMF, 2019). After a loan is classified as non-performing, it (and/or any replacement loans) should remain classified as such until written off or payments of interest and/or principal are received on this or subsequent loans that replace the original (IMF,2005). Okpara (2012) viewed Non-performing loans as default loans, which banks are unable to profit from. Non-performing loans are loans that have not expired, but it is uncertain whether the borrowers would be often to repay their debts. Customers of banks in Nigeria consist of business people, civil servants, contractors, petty traders and the government at large. Each in one way or another contributes to the poor performance of loans in the banking system. Kassim (2009) opined that non-performing assets are credit facilities in respect of which the interest / installment of principal has remained past due for a specific period of time. In simple language, an asset becomes non-performing when it fails to contribute any income to the owners. Barasa and Njuguna (2017) stated “the accumulation of non-performing loans is generally attributable to a number of factors, including economic downturn, macroeconomic volatility, high interest rate, excessive reliance on overly high-priced inter-bank borrowings, insider borrowing and moral hazard. According to Kroszner (2012), a non-performing Loan is a credit facility or advance in which the interest and the principal amount have remained past due for a specific period of time, also known as Non-performing assets. A credit facility is an asset for a bank as the interest payments and the repayment of the principal create a stream of cash flows. It is from the interest payments that a bank makes its profits. Banks usually treat assets as non-performing if they are not serviced for some time. If payments are late for a short time, a loan is classified as past due and once a payment becomes really late (usually 90 days), the loan is classified as non-performing. A high level of non-performing assets, compared to similar lenders, may be a sign of problems, (Kithinji, 2005).

In line with IMF (Recommendation) Banks are required to classify their assets into four broad categories according to their performance- Standard assets, Sub-Standard assets, Doubtful assets and Loss assets. Out of these four, the first one is considered as performing asset and the other three are known as non-performing assets. Standard loans**:** These are the assets which do not carry more than the normal risks and are regular in all respects. These assets do not disclose any problem for the bank. The arrears of interest and principal amount of loan do not exceed 90 days at the end of the financial year. But if the asset fails to be in the category of standard asset i.e. the amount remains due more than 90 days then it is called as Non-performing asset and Non-performing assets are further classified into sub categories of sub-standard, doubtful and loss assets. Sub-Standard Loans: With effect from March 31, 2005, a sub-standard asset would be one, which has remained Non-performing asset for a period less than or equal to 12 months. In case of such assets, the current net worth of the borrower/guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the bank in full. Doubtful Loans: An asset classified as doubtful asset, has all the deficiencies that a sub-standard asset has but it also contains the feature that the weaknesses make collection or liquidation in full, on the basis of currently known facts, conditions and values- highly questionable and improbable. An asset is classified as doubtful asset if it remained in sub-standard categories for a period of 12 months. Loss Loans: A Loss asset is a credit facility where the loss has been identified by bank's internal or external auditor but the amount has not been written-off.

The impact of non-performing loans can be largely linked to the following; Profitability: Whenever a bank makes a wrong choice of its clients, its performing assets turn into Non-Performing Assets. Non-performing loans affect not only current profits of the banks but also future stream of profits, which may lead to the loss of some long-term beneficial opportunities. Non-performing loans generate no income for the banks. The higher the cases of non-performing loans, the lower the level of a bank profitability owning largely to provision requirement. Lower Credit Rating**:** High non-performing loans degrade a bank's credit rating, lowering its creditability as well as its ability to raise fresh capital. Today the incidence of high non-performing loans in the Nigeria banking industry points to a deteriorating credit market. Due to non-performing loans, banks also lose their goodwill and brand image which creates negative impact and depositors deposit their money in some other bank. Liquidity: As the assets of banks are blocked, banks are left with less liquidity in hands and sometimes they are forced to borrow money from other banks leading to additional cost. This shortage of liquidity also creates difficulty in day to day operations of the bank. Additional Operational Cost: This is another indirect cost of high Non-performing loans that a bank has to bear. Time and resources use in handling and managing Non-performing loans would have diverted to some fruitful activities, which would have given good returns. Now a day, banks have special employees that deal with non-performing loans, which is an additional cost to banks.Poor Capital Adequacy Ratio**:** As per Basel Norms, every bank must maintain a Capital Adequacy Ratio, which is the ratio of total capital to risk weighted assets. As non-performing assets go up, so does the aggregate risk weighted assets, forcing the banks to allocate further capital in order to maintain the ratio. Today deposit money banks in Nigeria are struggling to meet the Capital Adequacy norms. Reduction in the GDP**:**Haven understand that the Nigeria banking sector is one of the most viable sector of her economy, the high cases of non-performing loans brings about the decline of the banking sector contributions to the GDP, the higher the non-performing loans the lower the taxable liability of banks.

Capital Adequacy Ratio (CAR) in Primary Mortgage Banks in Nigeria

The Capital Adequacy Ratio (CAR) is a critical metric that measures a bank's capital in relation to its risk-weighted assets, serving as an essential indicator of financial stability and the ability to absorb potential losses. For primary mortgage banks (PMBs) in Nigeria, maintaining an adequate CAR ensures they have enough capital to cover unexpected losses, protect depositors, and maintain confidence in the financial system. This is particularly important in Nigeria due to economic volatility and housing market fluctuations. Regulatory authorities, such as the Central Bank of Nigeria (CBN), enforce minimum CAR requirements to maintain financial stability, with non-compliance leading to penalties, lending restrictions, or even closure. A robust CAR also enhances a bank's ability to raise additional capital, as it signals prudent management and a lower risk of insolvency, attracting both domestic and international investments crucial for expanding mortgage financing operations. While a high CAR may limit a bank's ability to leverage and grow its asset base, it ensures long-term sustainability by minimizing financial distress. Thus, balancing adequate capital with growth aspirations is key for Nigerian PMBs to achieve sustained profitability and effectively contribute to the housing finance sector. In summary, CAR is vital for the financial health, regulatory compliance, investment appeal, and profitability of Nigerian PMBs, playing a crucial role in the stability and growth of the housing finance sector.

Loan to deposit ratio in Primary Mortgage Banks in Nigeria

The loan-to-deposit ratio (LDR) of primary mortgage banks (PMBs) in Nigeria is a key financial metric that measures the liquidity and financial stability of these institutions. It indicates the proportion of a bank's deposits that are given out as loans. A higher LDR suggests that a bank is utilizing its deposits more for lending, which can enhance profitability but also increase liquidity risk if too many loans default. Conversely, a lower LDR may imply that the bank is conservative, potentially leading to lower returns but higher liquidity. In Nigeria, regulatory authorities like the Central Bank of Nigeria (CBN) set guidelines for acceptable LDR levels to ensure that PMBs maintain a balance between profitability and liquidity. This is particularly important in the Nigerian market, where economic volatility can impact borrowers' ability to repay loans. As a result a result of recent regulations, the CBN often mandates a specific LDR threshold that banks must adhere to, promoting stability within the financial system while encouraging lending to stimulate economic growth. Overall, the LDR in Nigerian PMBs is a critical indicator of their operational health and their role in supporting the housing finance market in the country.

Primary Mortgage Institutions

According to the CBN (2019), a Primary Mortgage Institution (PMI) shall be construed as any company that is licensed to carry out mortgage business in Nigeria. PMIs were conceived as retail mortgage institutions operating under regulatory and operational supervision of the Federal Mortgage Bank (FMBN) as the apex institution from which they could also source funds for on-lending. According to Omirin and Nubi (2007), primary mortgage institutions emerged after the federal government's attempts to deregulate the financial sector in the late 1980s and early 1990s. Following the establishment of the National Housing Fund by decree no 53 of 1989 and the announcement of the 1991 national housing policy the Primary Mortgage Institutions Decree was passed in 1993 to facilitate speedy implementation of financial reforms envisaged under the national housing policy. The purpose was to encourage the establishment of financial institutions capable of mobilizing savings and facilitating greater access to loans in order to popularize home ownership of individuals wishing to build or buy their own homes and for large-scale private builders producing houses for sale.

According to CBN (2003), Mortgage business shall include the following: a. granting of loans or advances to any person for the building, improvement or extension of a dwelling/commercial house; b. granting loans and advances to any person for the purchase or construction of a dwelling/commercial house; c. Acceptance of savings and deposits from the public and payment of interest thereon; d. management of pension funds/schemes; e. offering of technical advisory services for the purchase or construction of a dwelling house; f. performing estate management duties; g. offering of project consultancy services for estate development; h. engaging in estate development through loan syndication, subject to the restriction imposed by the shareholders' funds unimpaired by losses; i.

engaging in property trading including land acquisition and disposal; j. Engaging in other activities which the Bank may approve from time to time.

Theoretical Framework

Financial Intermediation Theory

The Financial Intermediation Theory, proposed by Allen and Santomero (1997), posits that financial intermediaries, such as banks and mortgage institutions, play a crucial role in the economy by facilitating the flow of funds between savers and borrowers. According to Allen and Santomero, financial intermediaries collect funds from savers (depositors) and then channel these funds to borrowers (e.g., individuals, businesses) in the form of loans or investments. This process helps to efficiently allocate capital within the economy, as intermediaries are able to pool savings from numerous small depositors and allocate them to borrowers who require larger amounts for productive investments (Allen & Santomero, 1997).

Implication of the theory to the study

The Financial Intermediation Theory emphasizes the pivotal role of primary mortgage banks (PMBs) in Nigeria, acting as intermediaries in deposit collection and mortgage lending. PMBs' profitability and susceptibility to non-performing loans (NPLs) hinge on the quality of their loan portfolios. Effective risk management, including rigorous credit assessments and borrower monitoring, is crucial. PMBs balance profitability with risk by diversifying loan portfolios and maintaining prudent underwriting standards. Economic cycles affect borrower repayment capacities, influencing NPL rates. Regulatory oversight ensures PMBs manage their portfolios to minimize NPLs and sustain profitability, emphasizing customer trust and adherence to market conditions.

Empirical Review

Bob-Manuel (2023) investigated the impact of non-performing loans (NPLs) on deposit money banks' (DMBs) performance in Nigeria, focusing on the role of capital adequacy, net interest income, and loan-to-deposit ratio in determining return on equity (ROE). The research utilizes panel data analysis, encompassing a sample of 5 Nigerian DMBs between 2018 and 2022, to explore the relationships between these variables. The study also incorporates empirical reviews of contemporary literature to provide a comprehensive understanding of the factors affecting bank performance. The findings reveal that capital adequacy has a significant positive effect on ROE, suggesting that well-capitalized banks are more efficient in generating income, leading to higher profitability. Net interest income also exhibits a significant positive relationship with ROE, indicating that banks with higher net interest income are better positioned to manage risks and maintain profitability. Conversely, the loan-to-deposit ratio does not show a significant impact on ROE in the Nigerian context. This outcome could be attributed to several factors, such as the high level of non-performing loans in the Nigerian banking sector, which may dilute the positive impact of lending activities on profitability. In conclusion, addressing the high NPLs levels and improving capital adequacy and net interest income can enhance the performance of Nigerian DMBs. Ugwuanyi, Obinne and Efanga (2022) investigated the effect of non-performing loans on bank profitability in Nigeria. This study adopts among other techniques the Ordinary Least Squares (OLS) test method. A multiple regression model was formulated to ascertain the relationship between the non-performing loan and banks profitability variables. Our findings establish that Non-performing Loan exhibited negative and insignificant relationship with Return on Capital Employed, and Performing Loan shows a positive and significant relationship with Return on Capital Employed. However, our result with negative coefficients for Non-performing Loan (NPL) indicates that if they are increased, can also decrease Return on Capital Employed (ROCE).

Abimbola (2020) investigated the impact of non-performing loans on Money deposit banks' performance in Nigeria. Hypotheses were set and data were sourced from secondary data. The study used the confirmed ECM model (via residual and least square method of analyses. The results revealed that non-performing loans have impact Deposit Money Banks performance within the period of study; whereas, the impact of the individually independent variables (net interest margin and deposit to loan.) varied. The study recommends, amongst others that, effective credit policy that is reflected in flexible tenure, restructuring of credit terms and conversion should be adopted in the Deposit Money banks. Afolabi, Obamuyi and Egbetunde (2020) examined the effect of these credit risk variables (non-performing loans and loan-loss provisions) on the financial performance of microfinance banks in Nigeria, using the Granger causality approach. Secondary data covering the periods 2012 to 2018, from six purposively selected microfinance banks, was used for the hypothesized variables in a Vector Autoregressive (VAR) Model.

The unit root test was conducted on the data using the Augmented-Dickey Fuller and Phillip-Perron unit root test, with the aid of the E-VIEW9 statistical software. The results revealed that the variables are stationary which makes them suitable for the VAR model. Furthermore, the Granger causality analysis was carried out and the results established a causal nexus between the credit risk variables and financial performance to include; a unidirectional causality flow from non-performing loans to loan-loss provisions and from loan-loss provisions to returns on assets. Isedu and Erhabor (2020) examine the impact of Non-Performing Loans (NPLs) on banks' loan and advance in Nigeria. Data were collected while the econometric statistical technique was used for preceding the co-integration analysis. The variable capital adequacy and bank loan and advances are positively signed, indicating that there is a direct relationship between bank loan and capital adequacy. The coefficient of the variable capital adequacy is statistically significant.

The result shows that the Gross Domestic Product has a positive sign which, implies that the relationship between banks' loan advances and Gross Domestic Product is positive and statistically significant. The variable Interest Rate has a negative sign which, means that the relationship between Interest Rate and Bank Loan and Advances is inverse, and it is statistically significant. From the result, the variable inflation rate and Bank Loan and Advances are negatively related. The result further shows that total deposit is positive, but has an insignificant statistical effect on bank loan and advances of commercial banks. Nwosu, Okedigba and Anih (2020) examined the extent to which non-performing loans affect commercial bank profitability, and to suggest measures toward mitigating their impact on the banking sector in Nigeria. Data on a sample of 18 commercial banks, covering first quarter of 2014 to fourth quarter of 2018 were analyzed using the panel fixed effect and auto-regressive distributed lag models. Empirical results showed a negative and statistically significant impact of nonperforming loans on banks' profitability. Most of the coefficients of other determinants of bank profitability were in line with apriori expectations. The study showed that lower bank profitability can be explained by higher volume of non-performing loan, increased liquidity ratio and inflation, while higher profitability could be as a result of increase in bank size and capital adequacy ratio. Gabriel, Victor and Vincent (2019) assessed the effect of Non-Performing Loans on the financial performance of commercial banks in Nigeria from 1985 to 2016, using multiple regression techniques. The outcomes of the study revealed that NPLs and Cash Reserve Ratio (CRR) had statistically significant and negative effect on Return on Asset (ROA), thereby reducing the financial performance of the banks. Attoi (2018) examines Non-Performing Loan (NPL) and its effects on the stability of Nigerian banks with national and international operational licenses from 2014:Q2 to 2017:Q2. A \restricted" dynamic GMM is employed to estimate the macroeconomic and bank specific drivers of NPL for each licensed category. Z-Score is constructed to proxy banking stability, and its response to shocks NPLs is examined in a panel vector autoregressive framework. The results reveal that drivers of NPLs vary across the two categories of banks, but, weighted average lending rate is a vital macroeconomic driver of NPLs for both.

Adebisi and Matthew (2015) considered the impact of non-performing loans on firms' profitability of banks in Nigeria. The increased incidence of non-performing loans (NPL) in Nigerian bank generated the current literature on quality of banks profitability. Though there have been reforms in the banking industry to ensure effective financial institutions, the banks shareholders' funds are affected by the non-performing loans. This study made use of secondary data obtained from the Annual Report and Statement of Accounts of the NDIC for a period of seven (7) years (2006-2012). Data were analyzed using the regression statistical tools. The first result revealed that there is no relationship between the Non-performing Loans (NPL) and Return on Assets (ROA) of Nigerian Banks. This means that the asset values of the firms are not affected by the level of NPL. The shareholders wealth maximization is affected as second result showed that there is a relationship between the Non-performing Loan (NPL) and Return on Equity (ROE) of Nigerian Banks. Wangai, Bosire and Gathogo (2012) studied the effect of non-performing loans on financial performance of microfinance banks (MFBs) in Kenya. The study was conducted in microfinance banks in Nakuru town, Kenya. A descriptive research design was adopted. The target population constituted the 66 credit and management staff of the aforementioned microfinance banks. A census survey was employed which implies that there was no sampling. The collected data was analyzed both descriptively and inferentially. The research findings were presented in form of descriptive and inferential statistical tables. It was established that, credit risk significantly affected financial performance of microfinance banks (MFBs) in Nakuru town. The credit risk negated the microfinance banks (MFBs) financial performance. It was deduced that, increase in credit risk would significantly reduce the microfinance banks (MFBs) financial performance. The study deduced that credit risk is caused by size, net interest margin, and capital ratio of microfinance banks (MFBs) among other variables. Credit risk controls adopted by microfinance banks (MFBs) were also concluded to affect microfinance banks (MFBs) financial performance. It was concluded that credit risk negates the profitability of MFBs due to increment in NPLs and as such reduces the microfinance banks (MFBs) financial performance.

Methodology

The study utilized data from the 2023 annual report of the Nigeria Deposit Insurance Corporation (NDIC), covering the period from 2012 to 2023. The base year of 2012 was selected due to significant regulatory and structural changes in Nigeria's mortgage banking sector, led by the Central Bank of Nigeria (CBN) and the Nigerian Mortgage Refinance Company (NMRC). The research employed an ex-post facto design.The study adapted and modified the model byUgwuanyi, Obinne&Efanga, 2022, who modeled Return on Capital Employed (RCE) as a function of Non-Performing Loan(NPL) and Performing Loan(PLN)on the study Effect of non-performing loans on bank profitability in Nigeria.The model of Ugwuanyi, Obinne &Efanga, (2022) is expressed as follows;

ROCE = f(NPL, PLN)……………eq.1

The model for this study will be

$ROA_t=f(NPL_t, CAR_t, LDR_t)+\epsilon_t$……………………………………………eq.2

In equation 2, we re-specify equation 1 as

$ROA_t= \alpha_0 + \alpha_1 NPL_t + \alpha_2 CAR_t + \alpha_3 LDR_t + \mu_t$…………………………… eq .3

μ_t is the error term. The a priori expectation is such that α_1; α_3; α_4; >0and α_2<0

Where: ROA =Return on Assets of Primary Mortgage Banks in Nigeria
NPL = Non-performing loans of Primary Mortgage Banks in Nigeria
CAR= Capital Adequacy Ratio of Primary Mortgage Banks in Nigeria

LDR= Loan to Deposit Ratio of Primary Mortgage Banks in Nigeria

Results and Discussion

Table 1: Descriptive statistics results

Table 1:Descriptive statistics results

Variables	Obs	Mean	Standard Dev	Min	Max	Skewness	Kurtosis
ROA	12	0.540833	3.092450	-7.140000	6.120000	-0.899392	4.858688
NPL	12	38.43750	26.85566	5.760000	91.50000	0.830094	2.445763
LDR	12	138.0367	33.08125	70.27000	178.8600	-0.957730	2.886984
CAR	12	39.38250	25.58820	9.950000	66.56000	-0.204253	1.179373

Source: Computer analysis using E-views 12.0

Table 1 displays the descriptive statistics results for the entire study sample. For the entire sample, the mean (or standard deviation) values for Return on Assets of Primary Mortgage Banks in Nigeria(ROA),Non-performing loans of Primary Mortgage Banks in Nigeria (NPL),Capital Adequacy Ratio of Primary Mortgage Banks in Nigeria (CAR),Loan to Deposit Ratio of Primary Mortgage Banks in Nigeria are 0.540833, 38.43750, 138.0367 and 39.38250(or 3.092450, 26.85566, 33.08125, and 25.58820, respectively). The maximum and minimum values for the four variables are 178.8600and -7.140000, respectively. The skewness has both negative and positive values, indicating that the distribution is both negatively and positively skewed. The attainment of stationarity by variable(s) is necessary in model estimation due to the influence of non-stationarity on regression output. To this effect, the Augmented Dickey-Fuller (ADF) unit root test was used to prove that the data were stationary.

Augmented Dickey-Fuller (ADF) unit root text was used to determine the stationarity of the variables. Table 2 ,3 and 4 shows that some of variables were stationary at level, 1st diff and 2nd diff meaning there is mixed integration hence the need to use ARDL as method of data analysis.

Table 2: Result of ADF Unit Root Test at Level

Variables	**ADF Test Statistic**	**Test Critical Value at 1%**	**Test Critical Value at 5%**	**Remark**
ROA	-3.816244(0.0182) **	-4.200056	-3.175352	Stationary
NPL	-4.333142(0.0082) **	-4.200056	-3.175352	Stationary
LDR	-2.050762(0.2643)	-4.200056	-3.175352	Not Stationary
CAR	-0.395227(0.8783)	-4.200056	-3.175352	Not Stationary

Source: *Author’s Computation*

Table 3: Result of ADF Unit Root Test at 1ST DIFF

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
ROA	-7.173409(0.0003) **	-4.297073	-3.212696	Stationary
NPL	-6.097185(0.0009) **	-4.297073	-3.212696	Stationary
LDR	-2.851147(0.0857)	-4.297073	-3.212696	Not Stationary
CAR	-2.704786(0.1065)	-4.297073	-3.212696	Not Stationary

Source: *Author's Computation*

Table 4: Result of ADF Unit Root Test at 2ndDIFF

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
ROA	-7.823371(0.0002)**	-4.420595	-3.259808	Stationary
NPL	-7.058025(0.0004)**	-4.420595	-3.259808	Stationary
LDR	-4.687392(0.0070) **	-4.420595	-3.259808	Stationary
CAR	-3.613670(0.0000) **	-4.420595	-3.259808	Stationary

Source: Author's Computation

The Augmented Dickey-Fuller (ADF) unit root text in tables 2, 3, and 4 indicates that ROA and NPL were stationary at level implying that the variables should be differentiated further. Again, only ROA and NPLwere stationary at the first difference, according to Table 3. Table 4 shows that at the second difference, all the variables were stationary. This is due to the fact that their ADF test statistic value is greater than the Mackinnon critical value of 5% in absolute terms. As a result, Auto Regressive Distributed lag models (ARDL) as method of data analysis was required. With the determination of ARDL as method of data analysis especially short run relationship there is need to determine the long run relationship using ARDL Co-Integration Relationship**.**

ARDL Co-integration Relationship

The confirmation of the stationarity of the data through the unit root test of ADF allows for the determination of the co-integration relationship between the dependent and explanatory variables in the models. The ARDL was chosen as against the traditional Johansen co-integration because it is structured in such a way that it takes into account the different order of integration of financial time series data. **Co-integration test For Long-run Effect**

ARDL Co-Integration Test

The confirmation of data stationarity through the Augmented Dickey-Fuller (ADF) unit root test allows for assessing the co-integration relationship between the dependent and explanatory variables in the models. The autoregressive distributed lag (ARDL) model was chosen over the traditional Johansen co-integration test because ARDL can handle financial time series data with different orders of integration. The ARDL bounds test follows the critical values at the lower and upper bounds for decision-making at the significance levels of 1%, 2.5%, 5%, and 10%.

With a computed F-statistic value of 13.20780, which exceeds the critical bounds at 2.5%, 5%, and 10%, this indicates a long-run equilibrium relationship among the variables. This suggests that the selected variables are co-integrated with the profitability of primary mortgage banks.

Table 5. ARDL bounds tests for cointegration

F-Bounds Test		**Null Hypothesis: No levels relationship**		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	13.20780	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	13.15	4.08
		1%	3.65	4.66

Source: Author's Calculation employing E-Views 12 Software

Given that the computed F-statistic value of 13.20780 surpasses the lower and upper critical bounds at the significance levels of 1%, 2.5%, 5%, and 10%, we infer a stable long-run relationship among the variables. This implies that the selected variables significantly affect the profitability of primary mortgage banks in Nigeria over the long term.

Decision Rule: We reject the null hypothesis of no co-integration and accept the alternative hypothesis that there is co-integration. Thus, we conclude that non-performing loans (NPL), capital adequacy ratio (CAR), and loan-to-deposit ratio (LDR) have a long-term effect on the profitability of primary mortgage banks in Nigeria during the study period.

Nature of Long Run Relationship/ARDL Error Correction Model

The ARDL result has proven that Return on Assets, non-performing loans (NPL), capital adequacy ratio (CAR), and loan-to-deposit ratio (LDR) are co-integrated/related in the long run. Consequently, the determination of the nature of the long run relationship becomes necessary as well as the speed of the adjustment to equilibrium.

Table 6: ARDL Co-integrating and Long Run Form for ROA→NPL +LDR+CAR

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA(-1) *	-1.463478	0.196729	-7.439063	0.0000
NPL**	-0.000605	0.025713	-0.023517	0.9820
LDR**	0.149605	0.036807	4.064597	0.0066
CAR**	0.088690	0.032617	2.719147	0.0347
CointEq(-1)*	-1.463478	0.139496	-10.49119	0.0000
Long Run Coefficients				

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPL	-0.000413	0.017557	-0.023534	0.9820
LDR	0.10226	0.027278	3.747586	0.0095
CAR	0.060602	0.023052	2.628943	0.0391
C	-16.62797	5.025885	-3.308466	0.0162

Computer Output Data using E-views 12.0

The ARDL results indicate that return on assets (ROA), non-performing loans (NPL), capital adequacy ratio (CAR), and loan-to-deposit ratio (LDR) exhibit a long-term co-integrated relationship. Consequently, it is essential to determine the nature of this long-term relationship and the speed at which deviations from equilibrium are corrected. Table 6 reveals that the significant coefficients for LDR (0.10226, p = 0.0095) and CAR (0.060602, p = 0.0391) in the long-run equation suggest these variables positively influence the ROA of primary mortgage banks in Nigeria over the long term. Specifically, higher loan-to-deposit and capital adequacy ratios are associated with increased profitability. In contrast, the NPL variable shows an insignificant coefficient (-0.000413, p = 0.9820), indicating no significant long-term effect on ROA. The error correction term (CointEq(-1)) has a coefficient of -1.463478 (p = 0.0000), which is significantly negative, implying a strong speed of adjustment toward long-run equilibrium. Specifically, approximately 146% of any deviation from the long-run equilibrium is corrected in the next period, indicating a rapid return to equilibrium after short-term shocks.

Diagnostic Test

Table 7 Test for heteroskedasticity and serial correlation LM test

	F-statistics	**Probability**
Serial Correlation LM Test:	2.554199	0.1929
Heteroskedasticity Test	0.589153	0.6833

Source: Author's Calculation employing E-Views 12 Software

The serial correlation LM (Lagrange multiplier) test examines autocorrelation in the model's residuals, with the null hypothesis being no serial correlation. Given a probability value of 0.1929, which is above typical significance levels (0.01, 0.05, and 0.10), we fail to reject the null hypothesis, indicating no significant autocorrelation in the residuals. This suggests the model does not suffer from serial correlation issues.The heteroskedasticity test checks whether the variance of the residuals is constant (homoskedasticity) or varies across observations (heteroskedasticity). The null hypothesis for this test is constant variance. With a probability value of 0.6833, which is also above common significance levels, we fail to reject the null hypothesis, indicating that the residuals have constant variance and the model does not suffer from heteroskedasticity.

Implications: The absence of serial correlation means that error terms from one period are not correlated with those from another, avoiding inefficient estimates and invalid standard errors. The absence of heteroskedasticity means that the variability of the residuals is consistent across all levels of the independent variables, ensuring reliable statistical tests. Therefore, the model is well-specified, and the estimated coefficients and standard errors are reliable, making inferences about the relationship between return on assets (ROA), non-performing loans (NPL), capital adequacy ratio (CAR), and loan-to-deposit ratio (LDR) with respect to primary mortgage banks in Nigeria robust.

CUSUM and CUSUM of squares tests of stability

The stability test results are shown in figure 2 and 3.The CUSUM (Cumulative Sum) test assesses the stability of model coefficients over time by detecting structural changes. The test statistic is plotted against time, and the model is considered stable if the CUSUM line remains within the 5% critical bounds. The CUSUM of Squares test, more sensitive to variance changes, plots the cumulative sum of squared residuals over time. The CUSUM and CUSUM of Squares tests are used to check model stability. The results indicate the model's stability, as the blue lines in the figures remain within the critical red dotted lines at the 5% significance level. This confirms that the model performs well. Since the CUSUM and CUSUM of Squares lines in Figs. 1 and 2 stay within their critical bounds, we conclude that the model is stable in terms of both coefficients and variance over the examined period. This stability suggests that the relationship between the variables (ROA, NPL, CAR, and LDR) and the model's predictive power is consistent over time, reinforcing the reliability of the model's inferences. If either line crossed the critical bounds, it would suggest the need for further investigation into potential structural breaks or changes in the data generation process.

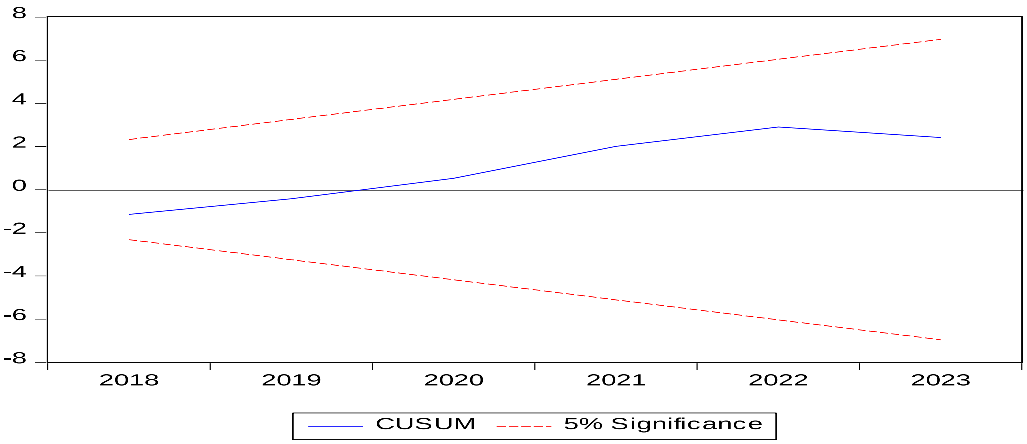

Fig. 1: *CUSUM Text*
Source: E-views 12.0 version data output

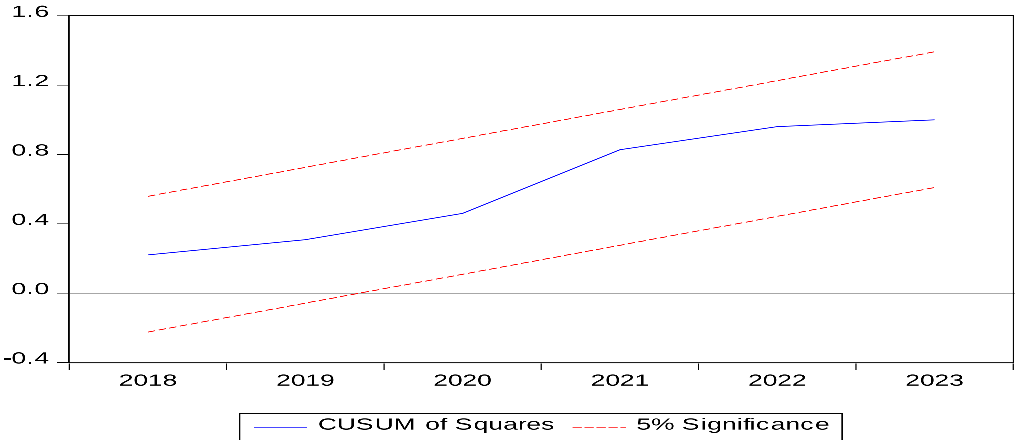

Fig. 2: *CUSUM of Squares Text*
Source: E-views 12.0 version data output

Short Run OLS Relationship

In analysing the Non-Performing loans and profitability of primary mortgage banks in Nigeria, the OLS regression was applied and the result shown in Tables 9. The outputs were interpreted using the coefficients of the individual variables, Adjusted R-square,f-statistic and Durbin Watson.

Table 9: OLS Regression: NPL and profitability of primary mortgage banks

Dependent Variable: ROA
Method: ARDL
Date: 07/01/24 Time: 15:39
Sample (adjusted): 2013 2023
Included observations: 11 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (0 lag, automatic): NPL LDR CAR
Fixed regressors: C
Number of models evalulated: 2
Selected Model: ARDL(1, 0, 0, 0)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ROA(-1)	-0.463478	0.196729	-2.355925	0.0566
NPL	-0.000605	0.025713	-0.023517	0.9820
LDR	0.149605	0.036807	4.064597	0.0066
CAR	0.088690	0.032617	2.719147	0.0347
C	-24.33468	6.777174	-3.590682	0.0115
R-squared	0.793974	Mean dependent var		0.418182
Adjusted R-squared	0.656623	S.D. dependent var		3.212631

S.E. of regression	1.882550	Akaike info criterion	4.406087
Sum squared resid	21.26398	Schwarz criterion	4.586949
Log likelihood	-19.23348	Hannan-Quinn criter.	4.292079
F-statistic	5.780620	Durbin-Watson stat	1.746119
Prob(F-statistic)	0.029575		

*Note: p-values and any subsequent tests do not account for model selection.

Source: Author's E-view 12 computations

Text of Probability

The coefficient for NPL is negative and not statistically significant (p-value = 0.9820), suggesting that NPL has no significant effect on ROA in the sample period.The coefficient for LDR is positive and statistically significant (p-value = 0.0066), indicating that a higher LDR is associated with a higher ROA. This suggests that increasing the proportion of loans to deposits positively affects profitability.The coefficient for CAR is positive and statistically significant (p-value = 0.0347), suggesting that a higher CAR leads to a higher ROA. This implies that better capitalization improves profitability.The constant term is negative and statistically significant (p-value = 0.0115), indicating that, in the absence of the explanatory variables, the expected ROA is significantly below zero.R-squared (0.793974): Indicates that approximately 79.4% of the variance in ROA is explained by the model.Adjusted R-squared (0.656623): Adjusts the R-squared value for the number of predictors in the model, indicating that 65.7% of the variance in ROA is explained, accounting for the degrees of freedom.F-statistic (5.780620) and prob(F-statistic) (0.029575): The F-statistic is statistically significant, indicating that the model provides a better fit than a model with no predictors.Durbin-Watson stat (1.746119): Close to 2, suggesting that there is no significant autocorrelation in the residuals.

The ARDL model indicates that LDR and CAR positively influence ROA in the long run, while NPL does not have a significant effect on ROA. The model's high R-squared and significant F-statistic suggest a good overall fit. the diagnostics suggest no issues with autocorrelation in the residuals. Therefore, the model provides reliable insights into the factors affecting the profitability of primary mortgage banks in Nigeria.

Summary, Conclusion and Policy Implication

Primary mortgage banks enable individuals to access higher-quality housing, leading to enhanced living standards and overall life quality. Improved housing conditions have been associated with better health outcomes, educational achievements, and social well-being. Additionally, by providing mortgage financing, primary mortgage banks stimulate growth in the construction industry and related sectors. This activity generates job opportunities, stimulates economic activity, and contributes substantially to a country's economic development. In

Nigeria, for example, the expansion of the housing sector can significantly influence GDP growth and foster economic diversification. However, empirical studies have produced conflicting findings on this matter. Therefore, this study seeks to investigate the effect of non-performing loans on primary mortgage banks in Nigeria between 2012 and 2023.

The analysis started by testing the stationarity of the variables, revealing different integration orders: stationary at I(0), first-order integrated at I(1), and second-order integrated at I(2). Subsequently, auto-regressive distributed lag (ARDL) models were employed. The results indicate that although non-performing loans negatively affect the return on assets of primary mortgage banks in Nigeria, this effect lacks statistical significance. This underscores the primary challenge for these banks in effectively managing their loan portfolios to mitigate the potential impact of defaults. Based on these findings, the study proposes the following recommendations: Strengthening credit risk assessment frameworks and procedures to help mitigate the potential impact of non-performing loans. This includes improving the evaluation of borrower creditworthiness, implementing early warning systems for loan defaults, and enhancing monitoring mechanisms throughout the loan lifecycle.Developing effective strategies for loan recovery and debt restructuring can improve the recovery rate of non-performing loans. This might involve establishing specialized units or outsourcing collection activities to third-party agencies with expertise in loan recovery. Diversifying the loan portfolio by offering a variety of mortgage products tailored to different segments of the market can spread risk and reduce dependence on any single category of loans. This strategy can help mitigate the impact of economic downturns or fluctuations in specific sectors. Maintaining adequate capital reserves is essential for absorbing losses from non-performing loans without compromising financial stability. Primary mortgage banks should continually assess their capital adequacy ratios and consider strategies to bolster capital levels when necessary. Ensuring compliance with regulatory requirements, particularly regarding loan classification, provisioning, and reporting of non-performing loans, is critical. Adhering to regulatory standards promotes transparency and trust among stakeholders, including depositors, investors, and regulatory authorities. Leveraging technology and data analytics can enhance operational efficiency in credit risk management and loan servicing. Implementing advanced analytics for predictive modeling and monitoring can improve decision-making processes related to loan origination and portfolio management.

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EFFECTS OF CURRENCY OUTSIDE BANKS ON REAL ECONOMIC GROWTH IN NIGERIA

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Abstract
In the figures released by the Central Bank of Nigeria (CBN) in November, 2023, about 92% of currency in circulation (CIC) in Nigeria is outside the banking system. Obviously, this is a source of concern to the regulatory authorities. Some questions readily cme to mind in this regard - Does it mean that Nigerians no longer save their monies in banks or is it that they are investing into the economy. If the later is the case, then the Nigerian economy is better off for it. Thus, this study is set to ascertain the effects of currency outside banks (COB) on real economic growth in Nigeria. Varied econometric tests were carried out. .Outcome of the study revealed that Currency outside bank has a negative but not significant relationship with Real Gross Domestic Product. Pairwise Granger Causality test indicates that no causality was established between Currency outside banks and Real Gross Domestic Product. This implies that Currency outside banks did not influence Real Gross Domestic Product in Nigeria and vice versa for the period under review. However, the above results should be interpreted with caution as more Nigerians now prefer to keep money at home instead of banks for some obvious reasons that range from greed, corruption and loss of confidence in the Nigerian banking sector .Other reasons include poor banking services, instability of the financial sector and the political class who had stolen public funds, they need a safe haven for their loot which the conventional banks cannot offer them. The study therefore recommends that government should design policies to encourage and to incorporate financially excluded economic agents controlling huge chunks of funds outside the formal financial system. This is with the aim of contributing to economic growth, development and improved financial deepening in Nigeria.
Keywords: *Currency outside Banks, Currency in Circulation, Embezzled Funds, and Real Economic growth.*

Introduction

Currency outside bank (COB) refers to all notes and coins held outside the Central Bank of Nigeria (CBN, 2012). Fadiya (2013) defines it as the amount of notes and coins held by economic agents outside the banking sector.

In the latest figures released by the Central Bank of Nigeria (CBN) in November, 2023, about 92% of the currency in circulation (CIC) in Nigeria is outside the banking system. This marks a notable rise from about 86% that was recorded in October 2022. This remarkable increase may not be unconnected to the CBNs ‘Naira redesigns policy of 2023.

The magnitude of this shift is further illustrated by the CIC, which soared by 21.37% in under three months, amid the intensifying cash crunch felt across the nation. Specifically, the CBN's data reveals a climb to N3.35 trillion in CIC in November 2023, a significant jump from N2.76 trillion noted in September 2023, coinciding with Yemi Cardoso's assumption of office as the governor of the CBN. Also, cash outside banks experienced a 27.80% increase, reaching N3.08 trillion in November 2023 from N2.41 trillion in September 2023.

This surge in non-bank held cash comes amidst growing public concern over the sufficiency of currency in the banking system. In response, the CBN issued a statement in November 2023, reassuring citizens of adequate currency stock and advising against panic withdrawals.

The backdrop to this scenario includes widespread reports of cash scarcity at banks, ATMs, Points of Sale, and Bureaux de Change (BOCs) across major cities in Nigeria. This shortage has placed considerable strain on Nigerian banks, which have struggled to meet customer withdrawal demands, leading to various operational challenges.

It will be recalled that, the immediate past CBN Governor Godwin Emefiele in 2022 opined that the increase in inflationary pressure was being fuelled by the prevalence of N1,000 and N500 bills in circulation. He bemoaned the difficulties of managing cash, citing widespread hoarding of banknotes as an example, with more than 80% of all currency in circulation stored in places other than commercial banks' vaults. According to a premium times newsparer report (2023), the CBN's naira redesign policy had a significant impact on the country's currency supply, reducing it from N3.29 trillion at the end of October 2022 to N1.38 trillion by the end of January 2023. However, with the change in leadership at the apex bank, it appears that the central bank is allowing more cash to circulate.

The Central Bank of Nigeria also removed the deadline for the legal tender status of old N200, N500, and N1000 notes from the initial December 31, 2023, till otherwise advised, which, likely signals a complete end to the cash scarcity crisis faced early this year. The Bullion(2023) did report that currency in circulation (CIC) reached a new year high of N3.4 trillion as of December 11, 2023. This further suggests an increase of N50 billion in less than one month.

The above trend reveals a deeper behavioural pattern among Nigerians. The spike in CIC strongly suggests that more people are opting to hoard cash. This behaviour is a likely contributor to the palpable cash scarcity currently gripping the country. As more cash is held outside the banking system, the availability of currency within banks and ATMs dwindles, leading to the challenges many Nigerians are facing in accessing cash.

In the order of Keynesian approach to demand for money; people seek to hold money for three major reasons namely – the transaction, precautionary and speculative motives. It is assumed that currency outside banks is being used for productive processes. There appears to be so much cash outside the banking system in Nigeria. The questions that readily come to mind are - Does it mean that Nigerians no longer save nor keep their monies in banks or is it that they are actually investing in the economy with this humongous amount of money outside the banking system. If the later question is the reason, then the Nigerian economy will be better off for it.

Objective of the study

The objective of this study is to ascertain the effect of currency outside banks on real economic growth in Nigeria

Research Questions

To what extent has currency outside banks affected the level of real economic growth in Nigeria?

1.0 Review of Related Literature

There exists a vast literature on the effect of currency outside banks on real economic growth for developing countries .Stavreski (1998), identified major indicators showing the importance of Currency outside bank (COB) in every economy namely, share of money supply and ratio of currency outside banks to real Gross Domestic Product.

Tomlinson (2012) observed that where people do not have faith in the electronic payment system, demand for cash will be higher as most transactions will be on cash basis, citing Nigeria as being 99% transactions cash-based. Theoretically, the main purpose of currency in circulation is to provide for cash transactions within the economy.

Several reasons (Fadiya, 2013) have been put forward for the high currency ratio in Nigeria. They include:

i. cash is the best form of payment when economic agents want to hide part of their economic activities to reduce tax base
ii. Cash payment provides highest level of anonymity making it the most attractive form of financing unlawful activities.
iii. the underdeveloped nature of the banking system and the inadequate development of the electronic payment tools such as credit cards, debit cards and ATM cards
iv. inefficiency of Central Bank of Nigeria monetary policy

v. the underdeveloped nature of the Nigeria banking system
vi. Failure of the economy to develop the informal sector.
vii. Low interest rate environment appears to have affected the rising trends.

While currency outside bank is a liability item on the part of the Apex bank; , currency ratio is a co-efficient which depicts the behavior of the non-bank public with respect to the use of transactions balances. It is the ratio of total currency in circulation outside the banking system (COB) to total money supply in the economy (M) and with the formula C/M. (Onoh, 2007). The magnitude has great implications for money supply. 'C' is low in industrialized countries with developed financial system and habits. In the less developed countries, it is usually high due to the undeveloped nature of their financial system and non-cash payment systems.

According to Mark, Virenda and Justin (2013) the ratio of Currency outside bank to Demand deposits is a measure of electronic payment system development in an economy as, a low ratio indicates that the economy is tending towards a cashless society. A sustained improvement in electronic payment system enhances economic growth. This is true with Nigeria. In line with CBN statistical bulletin (various issues), Nigeria's Currency Ratio (COB/M1) has been on the increase while Demand Deposit Ratio has been on the decline. From 52.9% in 1994, it reduced to 33.3% in 2004 and drastically declined to 16.2% in 2021. On the other hand, demand deposit ratio has been on the increase. In the same period, it increased from 47.1% in 1994 to 66.7% in 2004 and further rose to 70.7% in 2021. This astronomical increase in the Demand Deposit Ratio was achieved with the launching of Financial Inclusion Strategy in 2012 and Cashless Policy initiated by the monetary authorities. The continuous improvement shows that the Nigerian financial system is growing and that financial habits are developing fast.

Methodology

An ex-post factor research design was adopted in this study. It covered the period from 1994 to 2019. The data set were culled from CBN's statisticak bulletin (various issues).

Specification

The model that we intend to use in this study was postulated by Milton Friedman - Quantity Theory of Money'' or the ''Monetarist model'' The model indicates the relationship between money in circulation outside banks and real economic growth path in a country. The model is represented as MV = PT

Where:

M= Money supply (money in circulation outside banks

V= Velocity of money (the rate at which which money is spent and re-spent in the economy)

P= Price level (the average price of goods and services)

T = Real economic growth (the total amount of goods and services produced in the economy).

The above equation suggests that an increase in the money supply (M) will lead to an increase in Real Economic growth (T), if the velocity of money (V) and the price level (P) remain constant.

However if the increase in money supply leads to inflatin,) an increase in the price level (P), the real economic growth (T) may not increase accordingly.
Friedmans Quantity Theory of Money emphasizes the importance of money supply in determining economic activity. It also acknowledges the role of other factors like velocity and price level in influencing the relationship between money and economic growth.

For sake of emphasis, this model is represented as: MV = PT
In a more simplified form, it could be written as: MV = PY
MV divided by P = Y
Where Y = Real Gross Domstic Product.

Data Analysis

Econometric techniques were employed in the analysis of the time series data with the aid of E- views10 software statistical package. The analytical tools employed include the following: Descriptive Statistics, Stationarity Test: Augmented Dickey Fuller (ADF) Test and Regression Analysis.
The study also ran the following tests: Diagnostic/Reliability Checks, Co-integration Test (Johansen's test),T-Test, F-Test and Causality test

Data Analysis

Unit Root Tests.

As procedure demands, unit root test is usually conducted on all the time series data of a model to confirm stationarity of the series. Data is stationary when it has a constant mean value, variance and co-variance or where the calculated ADF is greater than the critical ADF.

Table 4.1: Summary of the Unit Root Test – Model 1

Variable		t-statistic	Critical value	Prob.	Order of Integration
LNRGDP	Level	-1.514410	-2.976263	0.5112	1(1)
	1st Diff	-6.018807	-2.986225	0.0000	
LNCOB	Level	-1.084205	-3.004861	0.7030	1(1)
	1st Diff	-3.850135	-2.998064	0.0080	

Source: E-views version 10

From Table 4.1 above, ADF results show that all the two variables of Model 1 are integrated of order 1(1) and therefore stationary and suitable for further analysis Furthermore, this indicates that the regression is no more spurious but real. .All the variables are individually stationary or integrated of order 1(1).

Normality and Reliability Tests for Model 1

In order to ascertain further if the data for the study were good enough for analysis, we investigated if the data were normally distributed at the mean. Reliability tests were therefore conducted. The results of the tests are presented in Figure 4.1.

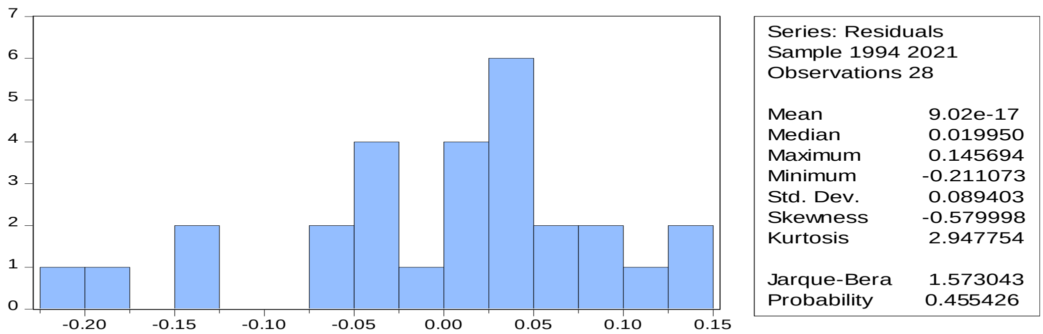


Figure 4.1: Jarque-Bera Normality Test for Model 1- Source: E-views10 output

Though the Histogram Normality Test as shown in Table 4.7 is not bell-shaped, the nearness of the skewness and kurtosis of -0.580 and 2.9 to 1.0 and 3.0 respectively indicates that the residual were to a large extent normally distributed around the mean. Furthermore, the JB statistic and p-value were 1.573 and 0.455 respectively. Because the p-value of 0.455 is greater than 0.05, it is concluded from the skewness and the kurtosis that the residuals of the model are normally distributed around the mean.

Table 4.2: Serial Correlation and Heteroskedasticity Tests

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.700614	Prob. F(2,3)	0.3208
Obs*R-squared	2.06556	Prob. Chi-Square(2)	0.2001

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.33615	Prob. F(28,5)	0.9998
Obs*R-squared	3.70869	Prob. Chi-Square(28)	0.8813
Scaled explained SS	0.509331	Prob. Chi-Square(28)	0.7915

Source: E-views10 output

The Breusch-Godfrey serial LM Test as well as the Heteroskedasticity tests in Table 4.5, indicates that the residuals of the model are neither serially correlated nor heteroskedastic, given the Observed R-sqared values and associated p-values of 2.06556(0.2001) and 3.70869(0.8813) respectively.

Table 4.3 Ramsey Reset Test Results for Model 1

Ramsey RESET Test

Specification: LNRGDP LNCOB C

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	0.695004	25	0.5124
F-statistic	0.263049	(1, 25)	0.6124
Likelihood ratio	0.141309	1	0.3075

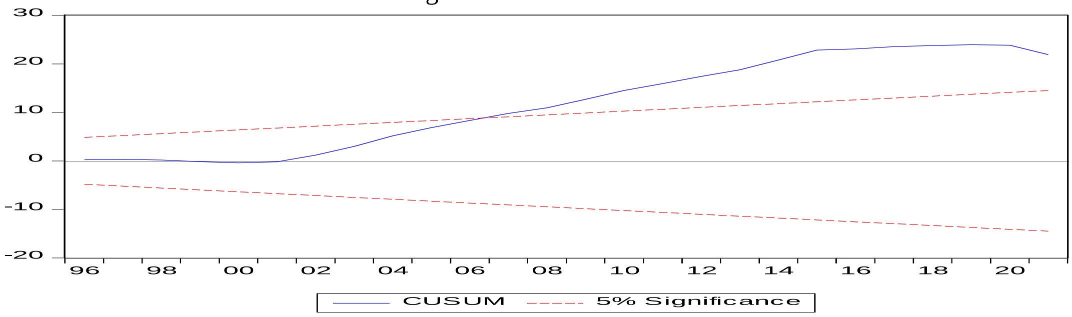
F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.048583	1	0.048583
Restricted SSR	0.215808	26	0.008300
Unrestricted SSR	0.167226	25	0.006689

Source: E-views10 output

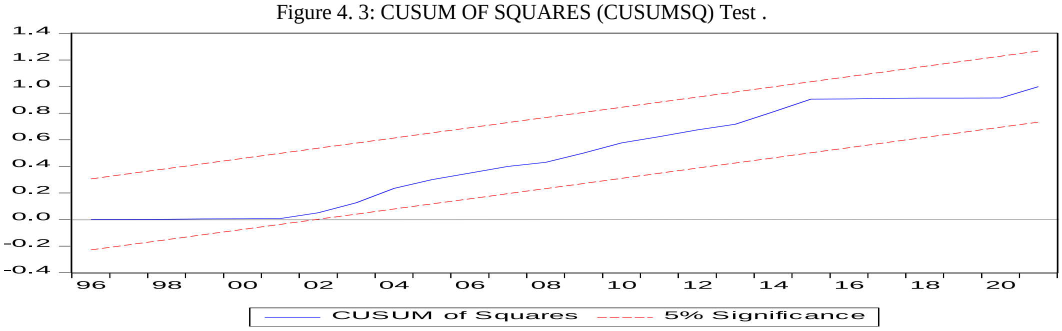
The result of the Ramsey Reset test presented in Table 4.6, indicates p-value of 0.5124 for both ‘t’ and the ‘F’ statistics, which are considered good for the acceptance of the null hypothesis at 5% Alpha value. Thus there are no misspecification errors in model 1.

Figure 4.2: CUSUM Test



Source: E-views10 output

Figure 4. 3: CUSUM OF SQUARES (CUSUMSQ) Test .



Source: E-views version10

The Cusum and Cusum of Squares tests in Figures 4.8 and 4.9 reveal that the model estimates are stable across the period and no structural break.

Co-integration Test for the Model.

Having established the stationarity of the individual variables, it is also important to establish the stationarity of the linear combinations of the variables of the model in order to establish if a long-run or stable equilibrium relationship existed between the dependent variable and the independent variables.

Table 4.4: Johansen Co-integration Test Results

Series: LNRGDP LNCOB
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic
None *	0.589778	30.72269
At most 1	0.252175	7.555233

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Source: E-views10 output

Table 4.4 shows the summary results of the Johansen Co-integration test employed on the long run co-integration relationship between Real Gross Domestic Product and Currency Outside Bank. The Trace test indicates one co-integrating equation at the 5% level of significance which implies a co-integration of the variables of the model and a long run equilibrium relationship.

Table 4.5 Error Correction Model.
Dependent Variable: D(LNRGDP)
Method: Least Squares
Date: 07/16/23 Time: 04:48
Sample (adjusted): 1995 2021.
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.051208	0.008234	6.218822	0.0000
D(LNCOB)	-0.016319	0.050761	-0.321495	0.7506
ECM(-1)	-0.300147	0.058278	-5.150233	0.0000

R-squared	0.627469	Mean dependent var	0.047683
Adjusted R-squared	0.588092	S.D. dependent var	0.035847
S.E. of regression	0.025647	Akaike info criterion	-4.384309
Sum squared resid	0.015787	Schwarz criterion	-4.240327
Log likelihood	62.18817	Hannan-Quinn criter.	-4.341495
F-statistic	13.39517	Durbin-Watson stat	1.745487
Prob(F-statistic)	0.000124		

Source: E-views version 10

As shown in Table 4.5 above, the Error Correction Co-efficient of -0.300147 is appropriately signed in the negative and is also significant at the 5% level of significance with a p-value of 0.0000. The co-efficient shows that the periodic speed of adjustment of the model is approximately 30.01 per annum. Every period (year) there is a deviation of 30.01% from equilibrium caused by shocks. To correct the error 100% will take 100/30.01 years, approximately three years and four months. There is the need to reiterate here that the above tests are a function of our earlier stated research hypothesis and the research questions.

Interpretation and Discussion of Results of Model 1

Based on Table 4.5 above, the Adjusted R-squared value 0.5881 shows that about 58.81% of the changes in Real gross Domestic Product (RGDP) of the period covered by the study was caused by the variation of the explanatory variable, COB, while the remaining 41.19 percent is unaccounted for by the model but captured by the error term. The F-statistic of 13.40 with p-value of 0.0001 shows the strong overall significance of the model. Currency Outside Bank did not impact significantly on the Real GDP of Nigeria. The Durbin Watson statistic of 1.75 shows absence of autocorrelation. The model can be used for reliable prediction. Below is the coefficient of the variable and the regression equation becomes **RGDP = 0.051208 - 0.016319LNCOB -0.321495* 0.050761#**

Where * represents t-statistic, # represents standard error
The equation above shows that Currency outside bank has a negative and no significant relationship with Real Gross Domestic Product. The result is consistent with the study of Fadiya (2013) whose findings revealed that the coefficient of currency outside bank is statistically not significant to RGDP.

Table 4.6: Pairwise Granger Causality Test Result

Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
LNCOB does not Granger Cause LNRGDP	26	7.85990	0.0028
LNRGDP does not Granger Cause LNCOB		2.48390	0.1076

Source: E-views version 10.

In the result as presented in Table 4.6, p-value of 0.0028 is less than the Alpha value of 0.05. In view of the low p-value, the null hypothesis that LNCOB does not Granger cause LNCOB is rejected. Similarly, based on the high F-statistic 7.85990 and low p-value 0.0028, the null hypothesis of LNRGSP does not Granger cause LNCOB is rejected. This implies that Currency outside banks significantly influenced Real Gross Domestic Product in Nigeria in the period under study.

Discussion of Findings

Currency outside bank has a negative and no significant relationship with Real Gross Domestic Product. Pairwise Granger Causality test indicates that no causality was established between Currency outside banks and Real Gross Domestic Product. This implies that Currency outside banks did not influence Real Gross Domestic Product in Nigeria and vice versa in the period under study.

Though the result does not agree with the a priori expectation, but it gives a strong support to the findings of Fadiya (2013) whose findings revealed that the coefficient of currency outside bank is statistically not significant to RGDP.

Summary, Conclusion and Policy Recommendations

The study has proved that money-output function conforms to Irvin Fisher's Exchange Equation and also incorporates the idea of other well-known theories. The study here by make the following recommendations:
Government should design policies to encourage financially excluded economic agents controlling funds outside the formal financial system with the aim of contributing to economic growth and development. The current move by CBN

through Financial Inclusion Strategy initiated in 2012 and recent Naira redesign policy are steps in the right direction which should be supported. Banks while embracing financial technology should further strengthen financial intermediation through e-channels and agency banking activities towards improved financial deepening.

Limitations of Study and Strategic Imperatives

The above results should be interpreted with caution as majority of currency in circulation (CIC) in Nigeria is outside the banking system

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MANAGEMENT CONSULTANCY AND CORPORATE EFFECTIVENESS IN SMALL SCALE ENTREPRENEURIAL FIRMS IN OKIGWE

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Abstract
Many businesses suffer corporate ineffectiveness because of their perceived poor attitude to management consultancy services hence this study on management consultancy and corporate effectiveness in small scale entrepreneurial firms in Okigwe. The study examines the relationship between management consultancy and employee commitment; and it evaluates the level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe. Two research questions and two hypotheses guide the study. The research employs the survey research design. It uses a five-point Likert Scale structured questionnaire as the major instrument for data collection. The study employs the Cronbach Alpha statistic for obtaining 0.86 as the reliability ratio of the survey instrument. The study commits data analysis to descriptive statistics of mean score and standard deviations. It uses correlation analysis for testing hypotheses. The study finds that there is a significant relationship between management consultancy and employee commitment; and there is a significant level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe. The study concludes that management consultancy correlates with corporate effectiveness in small scale entrepreneurial firms in Okigwe. The study recommends that small scale entrepreneurial firms need to enhance the rate at which they embrace management consultancy so as to always increase employee commitment and customer loyalty. Also, employees in small scale entrepreneurial firms need to make more efforts to support management in the efforts it makes to improve overall effectiveness of the enterprises.
Keywords: *Management consultancy, Employee commitment, Customer loyalty, Small scale entrepreneurial firms.*

Introduction

Any business organization that desires to consistently boost its effectiveness in a fiercely competitive business environment may never despise the power of management consultancy. PMable (2024) defines management consultancy as the act of rendering advisory services to corporate entities so as to enable them enhance their organizational performance while achieving their corporate targets. Management consultancy requires the use of communication, leadership, and problem-solving skills to intervene in the clients' situations. Staff (2023) believes that management consultancy is done to assist enterprises to succeed. Courtney and Pelta (2022) assert that business organizations make use of management consultancy to get direction and guidance on different strategies and corporate matters thereby enabling the resolution of difficult business challenges. Management consultancy is about the broadcast type of consulting and it represents more than fifty percent of the consulting industry. Management consultancy examines corporate issues on a variety of business areas including but not limited to corporate strategy, sales and supply chain, sourcing, procurement and marketing, research and development, talent management and human capital, training, development and compensation (Courtney and Pelta, 2022).

The foregoing shows that the core duty of a Management Consultant is to proffer solutions to enterprise problems. This is despite the fact that specific organizational challenges vary due to the diverse nature of organizations. This study focuses on management consultancy in small scale entrepreneurial firms. Staff (2023) defines a small scale business as an enterprise with fewer employees and typically lower average annual income than bigger businesses. Nna (2024) opines that small scale business is helpful but entrepreneurship does not come without its fair share of difficulties.

In the context of this study, management consultancy is the use of professional expertise to enhance corporate effectiveness in small scale entrepreneurial firms in Okigwe. Corporate effectiveness is the setting and achieving of organizational goals. Chaudhary (2024) asserts that since organizations have varied needs, objectives and financial budgets, demands by customers and availability of resources, effectiveness denotes different meanings to various organizations. Feyisayo (2024) describes effectiveness as the identification and achievement of organizational goals. She maintains that the goals must be clear in such a way that people are evidently working towards them. In the context of this study however, corporate effectiveness is the use of management consultancy to improve employee commitment and customer loyalty in small scale entrepreneurial firms in Okigwe.

Lineup (2024) defines employee commitment as the emotional and psychological attachment which a worker feels towards the organization. It is indeed, an index of employee loyalty, employee dedication and employee engagement with their job tasks as well as the corporate goal. It is factual that employee commitment goes beyond the core contract of employment as it demonstrates the ability of the employee to whole-heartedly and genuinely invest in the success and the good of the enterprise or entity. Employee commitment can be affective commitment which is the worker's emotional commitment to the organizational; continuance commitment which reflects the costs of quitting the present job vis-à-vis finding an alternative job and adaptably adjusting to the new work environment; and normative commitment which is driven by a sense of moral obligation to remain with the entity (Lineup, 2024).

Bhat (2024) sees employee commitment as the degree of enthusiasm a worker demonstrates over his or her job tasks. It shows the feeling of responsibility of an employee over the goals, the mission and the vision of the entity in which the worker finds him or herself. Indeed, Moore (2024) posits that in the realm of corporate success, having a good understanding and beefing the commitment of workers is quite pivotal. The researchers strongly believe that positive work commitment breeds act of employee loyalty to the organization; the development of sense of belonging to the team; the ability to share common values and active employee participation over time.

Another index of corporate effectiveness which this study investigates is customer loyalty. Chambers (2024) maintains that customer loyalty is the act of selecting one firm's products regularly as against the products of its rivals. Customers who are loyal to a firm or its products are not easily distracted by price or product availability. Customer loyalty shows that a firm consistently meets and exceeds the expectations of its customers. Szaniawska-Schiavo (2024) opines that customer loyalty shows how willing a customer is to do repeat product purchases in an enterprise. It occurs when consumers have great experiences over the use of a product.

This study on management consultancy and corporate effectiveness in small scale entrepreneurial firms in Okigwe is embarked upon because no visible empirical study ever accessed by the researchers on management consultancy investigates how management consultancy influences effectiveness indicators of employee commitment and customer loyalty in Okigwe. This study is therefore geared towards assessing how small scale entrepreneurial firms in Okigwe improve on employee commitment and customer loyalty with the instrumentality of management consultancy with a view to contributing to knowledge and bridging research gaps.

Statement of the Problem

It is a truism that any small scale enterprise that seeks to become and remain effective must not toy with the role management consultancy plays in enhancing business effectiveness. This is the ideal situation. It is however worrisome that many small scale entrepreneurial firms have been observed by the researchers to have relegated management consulting services to the background and such is feared to have adversely influenced employee commitment and customer loyalty in the organizations.

Also, empirical studies accessed by the researchers in the area of management consultancy did not indicate how management consultancy correlates with employee commitment neither did the studies show the relationship between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

This shows that huge research gaps exist. It is based on the research gaps that this study is conducted to bridge the gaps and to contribute to knowledge.

Objectives of the Study

The major objective of this study is to investigate management consultancy and corporate effectiveness in small scale entrepreneurial firms in Okigwe. Specifically, the study was conducted to:

i. examine the relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe.
ii. evaluate the level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

Research Questions

Based on the objectives of the study, the researchers developed the following research questions:

i. What is the relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe?
ii. What is the level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe?

Hypotheses

Based on the research questions, the researchers developed the following hypotheses:

H_{01}: There is no significant relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe.

H_{02}: There is no significant level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

Scope of the Study

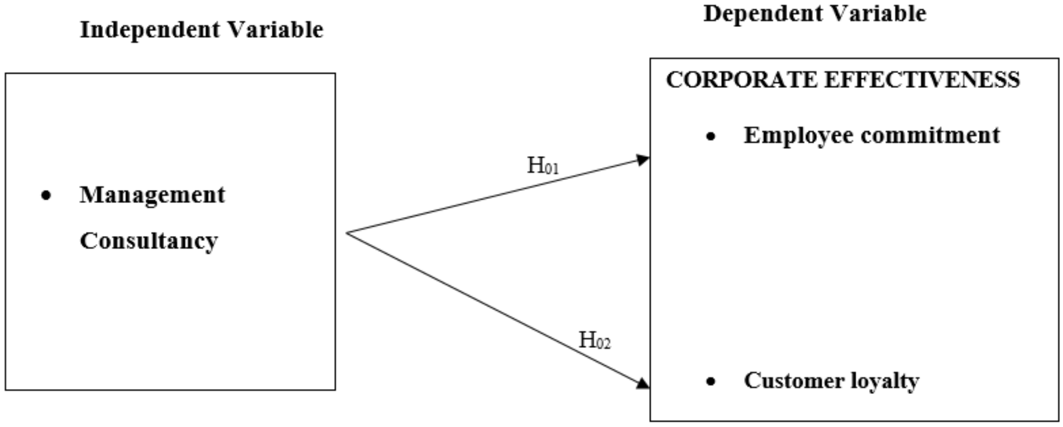
The study concentrates on selected small scale entrepreneurial firms in Okigwe which is the geographical scope of the study. The unit scope comprises of the functional units in the organizations. The content scope includes the relationship between: management consultancy and employee commitment; management consultancy and customer loyalty in the small scale entrepreneurial firms in Okigwe.

Review of Related Literature

Conceptual Literature

The researchers used the following conceptual model to show the variables and relationships which the study covers:

Fig 1: Operational Conceptual Model



Source: From the Researchers' Desk (2024).

The above conceptual model shows that management consultancy may influence employee commitment and customer loyalty. The researchers reviewed various concepts in the study as follows:

Management Consultancy

Miles (2023) opines that management consulting is one of the growing industries which offer wonderful and dynamic work with potentials that are high for earning. It is a remarkably rewarding career option. Management consultants are known for helping enterprises and organizations enhance their operations hence they work with organizational leaders to evaluate the performance of teams while recommending steps for improving outcomes.

The Consultants are experts at proffering solutions to corporate problems as they are proficient in problem identification, setting of goals and creation of pathways enterprises need to follow to achieve their goals (Miles, 2023). Globally, management consultancy is growing. MCA (2023) reveals that consulting activity is expected to grow by 12% in 2024 as MCA member firms experience a significant increase in demand from clients during period of disruption and change. This agrees with the position of Peachman (2023) who posits that irrespective of whether corporate life is booming or not, management consultancy remains in high demand globally hence the global market for such consultancy services will be over eight hundred billion dollars by the year 2031. Khatabook (2022) reveals that management consultancy is a tool for using diverse strategies for analysis of data; development of game plans, and monitoring of progress. These techniques and strategies include benchmarking, market research, surveys, process mapping, competitive analysis and focus groups. Consultancy not only provides an objective and sincere assessment, it also provides gainful insights and useful expertise while helping to discover and handle potential problems and providing priceless advice and invaluable guidance. It can take the form of strategy consulting, organizational consulting, operational consulting, financial consulting, technology consulting and change management consulting.

Corporate Effectiveness

Herbert (2023) maintains that organizational effectiveness describes the proficiency an organization has in terms of achieving the corporate goals and objectives. It is a measure of how sound an entity makes good use of the organizational resources including human and material resources as well as time, to accomplish its desired goals.

In the context of this study, corporate effectiveness is the use of management consultancy to enhance employee commitment and customer loyalty in small scale entrepreneurial firms in Okigwe.

- **Employee Commitment**

Wainwright (2023) believes that employee commitment denotes being connected to a business goal hence it lays emphasis on the believe one has in a business goal irrespective of the origin of that goal while desiring strongly to achieve the goal. It also implies connection to an organization and to a job hence commitment is a psychological state that binds one to the organization and it demonstrates the probability that a worker continues with the job with a feeling of being psychologically bound to the job irrespective of whether the job is fulfilling or not.

Also, Tripathi (2023) opines that there are factors that drive the commitment of workers. These factors can be personal factors, professional factors and situational factors. The personal factors are personality, values, experience and family situation. The professional factors are job satisfaction, career opportunities, compensation and work-life balance. The situational factors are company culture, leadership, workload and change.

- **Customer Loyalty**

Raese (2023) opines that customer loyalty is increasing in importance. Smail (2023) maintains that customer loyalty is the ability of a customer to willingly and consciously engage with a particular firm and buy from the enterprise over time. West (2024) is of the view that customer loyalty is a major aspect of any business strategy hence it takes five times more to do new customer acquisition than to retain the already existing customers. Enhancement of customer loyalty is critical to reducing business costs. This can be down by embracing loyalty programmes. The customer loyalty trends are: loyalty partnerships, gamification, tiered benefits, personalization, mobile apps, flexibility, premium loyalty programmes and frequently asked questions.

Theoretical Literature

Based on the emphasis on management consultancy and corporate effectiveness indicators like employee commitment and customer loyalty, the research employs the following theories to beef up the study:

Resource-Based Theory

The Resource-Based theory was first put forward by Penrose (1959). Penrose cites unused managerial resources as the primary driver of growth. Penrose recognized that internal managerial resources are both drivers and limits to the expansion any firm can undertake (Lowe and Teece, 2001).

Resource-Based theory contends that the possession of strategic resources provides an organization with the golden opportunity to develop competitive advantages over its rivals. Joseph and Dejmal (2023) describe Resource-Based theory as an organizational strategy which concentrates on internal resources as a means of creating a competitive advantage. The key component in the theory is competitive advantage. The model has its origins in industrial organization economics and draws upon resource dependence theory.

Oko (2023) opines that the possession of resources is valuable, difficult to imitate, rare, and cannot be substituted. Organizations should look inside the company to find the sources of competitive advantage through the use of their resources. Competitive advantage is an advantage that a firm has over its competitors that allows it to generate sales of margins and/or retain more customers than the competition. A firm's competitive advantage evolves from the resources that the organization has. In the Resource-Based Model, resources are given the major role of assisting companies in achieving higher organizational performance and competitive advantage. It is with the resources of an organization that it hires management consultants, motivates employees unto being committed to their jobs and gain customer loyalty in a fiercely competitive business environment like in Okigwe. This makes the theory very relevant to this study.

Michael Porter's Five Forces Model

Porter's Five Forces is a model that identifies and analyzes five competitive forces that shape every industry, and helps determine an industry's weaknesses and strengths. Frequently used to determine corporate strategy, Porter's Model can be applied to any segment of the economy to search for profitability and attractiveness (Uchegbu, 2019) in Njoku, Uhuegbu and Nwata (2024).

Porter's Five Forces is a business analysis model that helps to explain why different industries are able to sustain different levels of profitability. The model was originally published in Michael Porter's book, "Competitive Strategy: Techniques for Analyzing Industries and Competitors" in 1980. The model is widely used to analyze the industry structure of a company as well as its corporate strategy. Porter identified five undeniable forces that play a part in shaping every market and industry in the world. The forces are frequently used to measure competition intensity, attractiveness and profitability of an industry or market.

Competition in the Industry: The importance of this force is the number of competitors and their ability to threaten a company. The larger the number of competitors, along with the number of equivalent products and services they offer, the lesser the power of a company. Suppliers and buyers seek out a company's competition if they are unable to receive a suitable deal. When competitive rivalry is low, a company has greater power to do what it wants to do to achieve higher sales and profits.

- Potential of New Entrants into an Industry

A company's power is also affected by the force of new entrants into its market. The less time and money it costs for a competitor to enter a company's market and be an effective competitor, the more a company's position may be significantly weakened. An industry with strong barriers to entry is an attractive feature for companies that would prefer to operate in a space with fever competitors.

- Power of Suppliers: This force addresses how easily suppliers can drive up the price of goods and services. It is affected by the number of suppliers of key aspects of a good or service, how unique these aspects are, and how much it would cost a company to switch from one supplier to another. The fewer the number of suppliers, and the more a company depends upon a supplier, the more power a supplier holds.

Power of Customers: This specifically deals with the ability customers have to drive prices down. It is affected by how many buyers or customers a company has, how significant each customer is, and how much it would cost a customer to switch from one company to another. The smaller and more powerful a client base, the more power it holds.

- Threat of Substitutes

Competitor substitutes that can be used in place of a company's products or services pose a threat. For example, if customers rely on a company to provide a tool or service that can be substituted with another tool or service or by performing the task manually, and if this substitution is fairly easy and of low cost, a company's power can be weakened.

Understanding Porter's Five Forces and how they apply to an industry, can enable a company adjust its business strategy to better use its resources to generate higher earnings for its investors (Uchegbu, 2019) Njoku, Uhuegbu and Nwata (2024). This theory is quite relevant to this study as some of the elements of the theory like issue of customers are relevant in this study. It is only an organization that is conscious of its competitors and competition itself that engages Management Consultants in its dealings. The commitment of the employees is a strategic tool to outcompete rivals while gaining customer loyalty.

Empirical Literature

The researchers used the following empirical studies to boost the study:

Paul and Olumuyiwa (2024) investigated impact of customer loyalty on organizational performance in some selected publishing companies in South-Western Nigeria. It was a survey research. Data analysis was committed to Pearson's correlation analysis. It was found that there is a significant correlation between customer loyalty and organizational performance of publishing companies in South Western Nigeria. The study recommends that publishing companies tailor marketing strategies that align with customer expectations, prioritizing transparency in pricing and delivering exceptional customers.

Egbe, Lifu, Okwajie and Abiji (2023) did a study on the correlation between management consultancy and organizational performance: A case of Lafarge Africa Plc, Calabar Nigeria. The objectives of the study include to examine the relationship human resource consulting and the performance of Lafarge Africa Plc; to examine the correlation between business strategy consulting and the performance of Lafarge Africa Plc., and to ascertain the relationship between information technology consulting and the performance of Lafarge Africa Plc. It was a cross-sectional survey research. The population of the study is 243. The purposive sampling technique was used in the study. Data analysis was committed to Pearson Product Moment Correlation technique. The findings indicate that human resources consulting, business strategy consulting and information technology consulting have significant relationship with the performance of Lafarge Africa Plc, Calabar. The study recommends that management should use information technology consultancy more frequently due to the rapid changes in technology.

Wojciech and Edward (2023) investigates business consulting, knowledge absorptive capacity and innovativeness: A triangular model for micro and small enterprises in Poland. The paper examines a triangular relationship between business consulting, knowledge absorptive capacity and innovativeness. The research adopts the CATI method based on data on 382 Polish micro and small enterprises. The multivariate discrete choice model was employed for data analysis. The findings show that business consulting in Poland and similar nations help firms execute innovative solutions. Knowledge absorptive capacity stimulates innovativeness and it has a positive impact on the relationship between using business consulting and improvement in innovativeness.

Ugwu and Ofor (2023) did a correlation between employee commitment and organizational capabilities of Nigerian Bottling Company. It was a survey research. Correlation analysis was used to handle the study. The results show a strong correlation between employee commitment and organizational competitiveness. It was recommended that managers should routinely re-evaluate their organizational strengths and weaknesses while working with the Human Resource Department to feel competency shortages.

Pogoson, Ofuokwu and Omeire (2023) handled the effect of job security on employee commitment in Nigerian public institutions. It was a survey research. Percentages and regression analysis were used for data analysis. It was found that there is a significant association between employee loyalty, adherence to high standards and commitment. The study concludes that promoting trust and upholding due process rather than unfair dismissals are essential elements for public institutions to boost employee commitment. It was recommended that transparent communication, fair disciplinary procedure and career development opportunities can be used to achieve employee commitment.

Ogbaekirigwe (2016) examined impact of management consultancy in enhancing project implementation. It was a survey research. Descriptive statistics was used to handle data analysis. It was found that lack of funds and poor attitude to consultancy services impeded management consultancy services in project implementation.

Gap Identified in Literature

Based on the empirical studies accessed by the researchers, there are no empirical studies on the link between management consultancy and corporate effectiveness indicators of employee commitment and customer loyalty in small scale entrepreneurial firms in Okigwe. This study fills this enormous research gap.

Methodology

The study adopts the survey research design. The questionnaire is the major instrument for data collection. The population of the study consists of the staff of 22 randomly selected small scale entrepreneurial firms in Okigwe. The total population of the study is 261. The Taro Yame's formula was adopted to obtain a sample size of 158. The data sources consist of primary and secondary sources; the primary sources are the survey tools (questionnaire and observations) while the secondary sources include journals, texts and other materials. Validity of the questionnaire was done by showing the instrument to the supervisors and to other experts for their corrections and inputs (face validity). It was also ensured that all the items in the questionnaire were strictly based on the research questions (content validity). The reliability was conducted by way of carrying out a pilot study and subjecting the outcomes of the pilot study to Cronbach Alpha Statistic.

Hence, a reliability ratio of 0.86 (86%) was obtained. Data analysis was committed to descriptive statistics of mean, percentages and standard deviation. Correlation analytical technique was used to test hypotheses.

The decision rule: The rejection of the null hypothesis was based on the P-Value as the null hypothesis is rejected if P-value < 0.05.

Data Analysis
Out of the 158 copies of the questionnaire distributed, only 150 copies were properly filled and returned. The return rate was 94.9%.

Research Question 1:
What is the relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe?

Table 1: Respondents' responses on the relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe

Q/No	Item	SA	A	UN	D	SD	N	Mean	Std. Dev.
1	With management consultancy services, employees are trained on the need to be committed to the growth of the enterprises.	60	52	21	10	7	150	3.99	0.841
2	Management uses the tool of management consultancy to combat truancy and absenteeism among workers in the small scale enterprises.	65	47	19	11	8	150	4.00	0.917

Field Survey (2024)

The table 1 above presents data from responses by the respondents under study. The result also disclosed a strong agreement by the respondents on their opinion on the relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe. The results further shows that the respondents agreed to the facts that: with management consultancy services, employees are trained on the need to be committed to the growth of the enterprises with a $\bar{\bar{x}} \pm \mathrm{S.D}$ of 3.99 ± 0.841; management uses the tool of management consultancy to combat truancy and absenteeism among workers in the small scale enterprises (with a $\bar{\bar{x}} \pm \mathrm{S.D}$ of 4.00 ± 0.917).

Research Question 2:
What is the level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe?

Table 2: Respondents' responses on the level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe

Q/No.	Item	SA	A	UN	D	SD	N	Mean	Std. Dev.
3	Management consultancy services have helped to reduce customer defections while increasing customer loyalty and retention.	76	32	24	8	10	150	4.04	0.822
4	Customers who participate in customer-based seminars in the enterprises have remained loyal to the enterprise products.	83	26	18	8	15	150	4.03	0.956

Field Survey (2024)

The Table 2 above presents data from responses by respondents on the level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe. The results show that majority of the respondents affirmed to the statements. There is a high level agreement by the respondents on the opinion that management consultancy services have helped to reduce customer defections while increasing customer loyalty and retention as the result accounted for a mean of 4.04 and a standard deviation of 0.822. The result has indicated that the majority of the respondents agreed to the item statement that: customers who participate in customer-based seminars in the enterprises have remained loyal to the enterprise products (with a $\bar{x} \pm \mathrm{S.D}$ of 4.03 ± 0.956).

Testing of Hypotheses
Here the hypotheses associated with the study were tested. The hypotheses were tested in order to find out whether the difference in opinion was significant to draw conclusion.

Test of Hypothesis One
H_{01}: There is no significant relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe.

Table 5: Correlation analysis between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe

Item	Mean	Standard Deviation	Correlation Coefficient	P-value
Management consultancy	3.99	0.841	0.892	0.001
Employee commitment	4.00	0.917		

SPSS Correlation Analysis Output (2024).

The result on table 5 presents the correlation analysis between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe. The result shows a p-value of 0.001 and correlation coefficient of 0.892. The result shows a p-value less than 0.05 being the level of significance; therefore, rejecting the null hypothesis and accepting the alternative hypothesis. Therefore, the correlation coefficient between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe is statistically significant. Therefore, there is a significant relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe.

H_{02}: There is no significant level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

Table 6: Correlation analysis between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe

Item	Mean	Standard Deviation	Correlation Coefficient	P-value
Management consultancy	4.04	0.822	0.876	0.001
Customer loyalty	4.03	0.956		

SPSS Correlation Analysis Output (2024).

The result on table 6 presents the correlation analysis between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe. The result shows a p-value of 0.001 and correlation coefficient of 0.876. The result shows a $p - value \leq 0.05$ level of significance, thereby rejecting the null hypothesis and accepting the alternative which states that there is a significant level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

Summary of Findings

Based on the analysis, the researchers found that:

1. There is a significant relationship between management consultancy and employee commitment in small scale entrepreneurial firms in Okigwe.
2. There is a significant level of correlation between management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

Discussion of Findings

The fact that management consultancy significantly influences employee commitment in the small scale entrepreneurial firms as demonstrated in the testing of hypothesis one on Table 5 implies that the Management Consultants engaged by the firms possess the necessary expertise to make workers love their job tasks and perform above board. This is supported by the revelation on table 1 which shows that with management consultancy services, employees are trained on the need to be committed to the growth of the enterprises. The Table 1 further discloses that management uses the tool of management consultancy to combat truancy and absenteeism among workers in the small scale enterprises. This agrees with the view Wainwright (2023) has on employee commitment hence he believes employee commitment denotes being connected to a business goal hence it lays emphasis on the believe one has in a business goal irrespective of the origin of that goal while desiring strongly to achieve the goal. It also agrees with the study done by Egbe, Lifu, Okwajie and Abiji (2023) on the correlation between management consultancy and organizational performance: A case of Lafarge Africa Plc, Calabar Nigeria. The findings indicate that human resources consulting has significant relationship with the performance of Lafarge Africa Plc, Calabar.

The fact also that management consultancy enhances customer loyalty as demonstrated on the testing of the second hypothesis on Table 6 indicates that the activities of Management Consultants in the enterprise are customer friendly. This is supported by Table 2 which shows that management consultancy services have helped to reduce customer defections while increasing customer loyalty and retention. The Table 2 also reveals that management consultancy services have helped to reduce customer defections while increasing customer loyalty and retention. This is in agreement with the assertion by Raese (2023) who posits that customer loyalty is increasing in importance. The foregoing implies that with sound management consultancy, organizational performance will continue to improve as there will be consistency in customer loyalty and allied performance indicators. This is in agreement with the findings of the study by Paul and Olumuyiwa (2024) who investigated impact of customer loyalty on organizational performance in some selected publishing companies in South-Western Nigeria. It was found in the survey study that there is a significant correlation between customer loyalty and organizational performance of publishing companies in South Western Nigeria.

Conclusion

The study concludes that management consultancy enhances corporate effectiveness in small scale entrepreneurial firms in Okigwe. Any It boosts employee commitment and beefs customer loyalty. The researchers therefore submit that any small scale entrepreneurial firm that relegates management consultancy to the background risks both employee turnover and customer defections.

Recommendations

The study recommends that:

1. Small scale entrepreneurial firms need to enhance the rate at which they embrace management consultancy so as to always increase employee commitment and customer loyalty. They need to make good budgets for management consultancy services so that experts may be always involved in training the workers and customers on the strengths and benefits of being committed staff and loyal customers.
2. Employees in small scale entrepreneurial firms need to make more efforts to support management in the efforts it makes to improve overall effectiveness of the enterprises. This will certainly position the firms on the path of seamless growth, development and sustainability as they operate in fiercely competitive business environments.

Contribution to Knowledge

This study contributes to knowledge by adding to the body of knowledge on management consultancy and how it enhances corporate effectiveness in small scale entrepreneurial firms in Okigwe. It provides empirical literature on the relationships between: management consultancy and employee commitment; as well as management consultancy and customer loyalty in small scale entrepreneurial firms in Okigwe.

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MARKETING ORIENTATION AND THE DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES IN CROSS RIVER STATE

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Abstract
This study examined marketing orientation and the development of small and medium enterprises (SMEs) in Cross River State. It specifically sought to determine the effects of customer focus, product innovation, competitor analysis and integrated marketing communication on the development of SMEs in Calabar. The study adopted cross-sectional survey research design. A structured questionnaire was used to obtain primary data from 318 operators of SMEs in Calabar. Descriptive statistics were applied for data analysis and interpretation, while the hypotheses developed for the study were tested using multiple linear regression in the Statistical Package for the Social Sciences (SPSS 23). The findings of the study revealed that customer focus, product innovation, competitor analysis and integrated marketing communication had significant positive effects on the development of SMEs in Calabar. Hence, the study recommended the following, among others: operators of SMEs in Nigeria need to commit to the principle and practice of customer sovereignty in their operations by ensuring that goods and services they offer are tailored to satisfactorily meet customers' needs on a consistent basis while maintaining a viable relationship with customers for the long term; SMEs should commit to continuous product innovation by conducting trend analysis in order to provide products that align with customers' requirements and offer the most benefits to customers, thereby encouraging customer satisfaction and loyalty; and it is imperative for operators of SMEs to harness the potential of periodic competitor analysis to design and implement marketing campaigns to counter competitors' actions, attract customers' patronage and capture substantial market share.
Keywords: *Marketing orientation, SMEs, Customer focus, Product innovation, Competitor analysis*

Introduction

The development of small and medium enterprises (SMEs) entails the process whereby these enterprises achieve business growth, and market expansion, which leads to increased customer patronage, sales revenue, profitability and competitive advantage (Zafar & Mustafa, 2017). SMEs development not only results in enhanced profitability, and competitiveness for operators; but it also promotes employment, human capital development, and economic growth, especially in developing countries (Obi *et al*., 2018). This is because as these enterprises proliferate, they create jobs across various sectors, thereby reducing unemployment rates and alleviating poverty. In many developing countries like Nigeria, where formal employment opportunities are limited, SMEs serve as vital engines of job creation, absorbing a substantial portion of the workforce (Olowookere *et al*., 2021). Moreover, as SMEs develop and grow, they contribute to the creation of vibrant and dynamic business ecosystems, fostering entrepreneurship and innovation across various domains (*Olaore et al.*, 2021). This diversification not only enhances economic resilience but also reduces dependence on volatile sectors, thereby promoting stability and sustainability in the long term.

As such, several scholars have sought strategic approaches which could be implemented to solidify and reinforce the development of SMEs in developing countries; and marketing orientation is one of them (Puspaningrum, 2020; Riswanto *et al*., 2020; Ali *et al*., 2020). According to Länsiluoto *et al*. (2019), marketing orientation is a business approach where business organizations focus on understanding and satisfying the needs and wants of their target customers through effective marketing strategies in order to gain sustainable competitive advantage. In contemporary times, business organizations, especially large-scale firms have been observed to be integrating the marketing orientation into their operations in a bid to enhance their competitiveness and operational performance (Acosta *et al*., 2018). This is because in today's highly competitive and dynamic market environment, understanding and satisfying customer needs is paramount for business success (Udriyah *et al*., 2019). By adopting a marketing orientation, companies shift their focus from solely producing goods or services to identifying and meeting customer demands effectively. This customer-centric approach allows businesses to stay attuned to market trends, consumer preferences, and emerging needs, enabling them to develop products that resonate with their target audience (Puspaningrum, 2020).

Moreover, with the advent of digital technologies and the proliferation of online platforms, consumers have more choices and access to information than ever before (Gulve, 2021). As a result, they have become increasingly discerning and demanding, expecting personalized experiences and meaningful interactions with brands. Integrating a marketing orientation enables companies to leverage data analytics and customer insights to tailor their offerings and communication strategies to individual preferences, thereby enhancing customer satisfaction and loyalty (Mamun *et al*., 2018). However, in Nigeria, the full-scale integration of the marketing orientation into the operations of SMEs still faces significant hurdles, such as limited resources, lack of marketing enlightenment and education, limited marketing research capabilities and overemphasis on profitability by SMEs operators (Aminu, 2018). As a consequence, a number of SMEs in Nigeria find it difficult to compete and keep pace with their large-scale counterparts, who are harnessing their expertise in marketing to dominate the market. This study was therefore carried out to determine the most effective manner in which marketing orientation dimensions (customer focus, product innovation, competitor analysis and integrated marketing communication) could be implemented by SMEs in Calabar to enhance their business development.

Problem statement

Despite the potential benefits of the marketing orientation to business organizations in contemporary times, SMEs still face difficulties in holistically integrating this orientation into their full-scale operations (Al Badi, 2018). Their inability to holistically integrate and practice the marketing orientation is caused by factors inherent to the nature and structure of SMEs, as well as external market conditions (Amin, 2021). One of these factors is the challenge of limited resources due to the fact that unlike larger corporations, SMEs typically operate with constrained budgets, manpower, and expertise (Bocconcelli *et al*., 2018). As such, they may prioritize immediate operational needs such as day-to-day survival, managing cash flow or fulfilling immediate customer demands, rather than investing in comprehensive marketing strategies. Moreover, most SMEs lack dedicated marketing departments or specialists due to resource constraints (Bagwell, 2023). In many cases, business owners or managers in SMEs wear multiple hats, leading to a lack of focus on marketing activities. Without dedicated personnel to develop and implement marketing strategies, SMEs may struggle to allocate sufficient time and attention to building a customer-centric approach.

Furthermore, some SMEs lack a clear understanding of the concept of marketing orientation and its significance in contemporary times (Quaye & Mensah, 2019). Unlike larger firms that have the capacity to invest in training and development programmes, SMEs may not prioritize educating their workforce about marketing principles and practices. As a result, employees may not fully grasp the importance of customer orientation, market segmentation, and competitive positioning in driving business success. The adverse impact of this status quo is that without a customer-centric approach, SMEs risk offering products or services that do not resonate with target audiences, leading to low customer satisfaction and retention. Also, inadequate focus on marketing orientation by SMEs can result in missed growth opportunities for SMEs (Amin *et al*., 2016). By failing to anticipate and respond to changing market dynamics, SMEs may lose market share to more agile and customer-focused competitors. This can hinder their ability to expand into new markets, attract investment, or form strategic partnerships necessary for sustained growth. Against this backdrop, this study sought to establish the relationship between marketing orientation and development of SMEs in Calabar in order to reinforce the imperatives of the holistic integration of this orientation as a strategic step towards improved competitiveness. Specifically, the study sought to realize the following specific objectives:

i. To determine the effect of customer focus on the development of SMEs in Calabar;
ii. To assess the effect of product innovation on the development of SMEs in Calabar;
iii. To ascertain the effect of competitor analysis on the development of SMEs

in Calabar;

iv. To examine the effect of integrated marketing communication on the development of SMEs in Calabar.

Literature Review

Marketing orientation

Marketing orientation is a business philosophy that prioritizes understanding and meeting the needs and wants of customers. This approach emphasizes market research, customer analysis, and product development tailored to consumer preferences (Riswanto *et al*., 2020). In essence, it places the customer at the center of all business activities. Firms adopting a marketing orientation strive to create superior value for customers, thereby gaining a competitive advantage and achieving long-term success. One key aspect of marketing orientation is the continuous gathering and analysis of market data (Udriyah *et al*., 2019). This involves researching consumer behaviour, preferences, and trends to identify opportunities and anticipate changes in the marketplace. By staying attuned to customer needs, companies can develop products and services that resonate with their target audience, leading to increased sales and customer loyalty. Moreover, marketing-oriented firms prioritize building strong customer relationships through effective communication and personalized interactions, fostering trust and loyalty over time (Nkosi *et al*., 2019).

Another defining feature of marketing orientation is its focus on delivering customer value (Puspaningrum, 2020). Rather than solely concentrating on producing goods or services, companies adopting this approach aim to provide solutions that address specific customer needs and deliver tangible benefits. This customer-centric mindset extends beyond the initial purchase to encompass the entire customer experience, including pre-sale interactions, post-sale support, and ongoing engagement efforts (Mamun *et al*., 2018). By consistently delivering value and exceeding customer expectations, businesses can differentiate themselves from competitors and cultivate a loyal customer base. In contemporary times, marketing orientation has become increasingly important for business organizations as the rise of digital technology and social media has empowered consumers with greater access to information and choices than ever before (Länsiluoto *et al*., 2019). As a result, customers are more discerning and demanding, expecting personalized experiences and meaningful interactions with brands. In this landscape, companies that prioritize understanding and responding to customer needs are better positioned to succeed (Aminu, 2018).

Development of SMEs

The development of small and medium enterprises (SMEs) entails the process whereby these enterprises achieve business growth, and market expansion, which leads to increased customer patronage, sales revenue, profitability and competitive advantage (Zafar & Mustafa, 2017). At the heart of this process lies a concerted effort to optimize internal capabilities and external opportunities to propel these enterprises towards heightened success. Moreover, the journey of SME development entails a relentless pursuit of innovation and adaptability (Widjaja & Wijaya, 2019). In today's dynamic business environment, agility is paramount for SMEs seeking to thrive amidst evolving consumer preferences, technological advancements, and industry disruptions. This necessitates a culture of innovation that encourages experimentation, risk-taking, and continuous improvement across all facets of the enterprise. Whether it is refining existing products, exploring new market segments, or leveraging emerging technologies, SMEs must remain vigilant in their quest to stay ahead of the curve (Tan & Lee, 2021). By embracing innovation as a cornerstone of their growth strategy, SMEs can effectively differentiate themselves from competitors and capitalize on emerging opportunities in their respective industries (Ahmad & Kamarudin, 2022).

Also, the development of SMEs is intricately linked to their ability to foster meaningful relationships with customers and stakeholders (Park & Kim, 2023). Beyond mere transactional interactions, successful SMEs prioritize the cultivation of long-term, mutually beneficial partnerships built on trust, reliability, and exceptional customer service. This entails investing in robust customer relationship management systems, soliciting feedback to drive product/service improvements, and going above and beyond to exceed customer expectations at every touchpoint. By nurturing a loyal customer base and fostering a positive reputation within their industry, SMEs can fortify their market position and lay the groundwork for sustained growth and profitability (Nguyen & Mai, 2018). In addition, the journey of SME development often involves strategic expansion into new markets and territories (Ongom & Nkote, 2021). Armed with a solid foundation and a proven track record of success, SMEs may seek to capitalize on untapped opportunities beyond their traditional geographic boundaries. This expansion may take various forms, including geographical expansion, diversification of product/service offerings, or strategic partnerships/acquisitions.

Customer focus and development of SMEs

Customer focus, as a marketing orientation dimension, refers to the strategic approach taken by businesses to prioritize and cater to the needs, preferences, and satisfaction of their customers (Chigbu & Onyinyechi, 2018). This orientation involves a deep understanding of customer demographics, behaviours, and desires, which enables businesses to tailor their products and marketing efforts accordingly. Essentially, it revolves around placing the customer at the center of all business decisions and activities, aiming to create superior value and build long-term relationships (Bwisa & Waititu, 2017). From another perspective, customer focus can also be defined as the organizational mindset that emphasizes continuous engagement and interaction with customers throughout the entire customer journey (Akotey & Dodoo, 2019). This involves actively seeking feedback, listening to customer concerns, and responding promptly to their needs and preferences. Such an approach fosters a customer-centric culture within the organization, where every employee understands the importance of satisfying customers and works collaboratively towards that goal.

In contemporary times, customer focus plays a crucial role in enhancing the marketing performance of business organizations because by prioritizing customer needs and preferences, businesses can differentiate themselves from competitors in crowded markets (Kasunmu & Obadia, 2018). Understanding what customers truly value allows businesses to develop unique value propositions and tailor their offerings to meet specific customer demands, thereby increasing their attractiveness to target audiences. Also, customer focus fosters customer loyalty and advocacy, which are essential for sustainable business growth (Wang & Chen, 2019). This is because by consistently delivering superior customer experiences and demonstrating a genuine commitment to customer satisfaction, businesses can cultivate strong relationships with their customer base. This viewpoint is backed by the study of Nkosi *et al*. (2019), which revealed that customer focus had a significant positive impact on SME performance in South Africa. The viewpoint is also backed by the study of Mensah and Boateng (2021), which revealed that customer focus had a significant positive relationship with the performance of SMEs in Ghana. The viewpoint also corresponds to the study of Namugenyi and Ssebunya (2020), which revealed that customer focus had a significant positive influence on the marketing performance of SMEs in Uganda. The viewpoint is also reinforced by the study of Nguyen and Tran (2017), which revealed that customer focus significantly improved the performance of SMEs in Vietnam. Therefore, we propose the following hypothesis:

H$_1$: *Customer focus has a significant effect on the development of SMEs in Calabar.*

Product innovation and development of SMEs

Product innovation, as a marketing orientation dimension, can be defined as the strategic process through which a company introduces novel or significantly improved products or services to meet the changing demands and preferences of consumers (Chang & Lim, 2018). This encompasses the development and introduction of new features, functionalities, designs, or technologies that provide enhanced value to customers compared to existing offerings in the market. In essence, product innovation involves the continuous pursuit of differentiation and competitive advantage by creating unique, desirable, and market-leading products that address evolving customer needs and preferences. This orientation requires companies to invest in research and development, design capabilities, and market insights to identify emerging trends and opportunities for innovation (Dune &

Pineda, 2019). Another comprehensive definition of product innovation in the context of marketing orientation is the systematic approach to creating and delivering innovative solutions that address unmet customer needs or solve existing problems in new and better ways (Hasanuzzaman & Chakraborty, 2021). This definition emphasizes the customer-centric nature of product innovation, highlighting its role in understanding and fulfilling the evolving demands, desires, and pain points of target customers.

In contemporary times, product innovation plays a crucial role in driving the marketing performance of business organizations because it enables them to differentiate themselves in highly competitive markets (Ahmed & Akhtar, 2019). This is critical because in today's saturated markets, where consumers are inundated with choices, product innovation becomes a key driver of brand differentiation and customer loyalty. This viewpoint is backed by the study of Nkosi *et al*. (2019), which revealed that product innovation had a significant positive impact on SME performance in South Africa. The viewpoint is also backed by the study of Mensah and Boateng (2021), which revealed that product innovation had a significant positive relationship with the performance of SMEs in Ghana. This viewpoint is also reinforced by the study of Ouma and Ochieng (2018), which revealed that product innovation had a significant positive effect on the performance of SMEs in Kenya. In the study by Namugenyi and Ssebunya (2020), it was also found that product innovation had a significant positive influence on the marketing performance of SMEs in Uganda. The viewpoint is also supported by the study of Prakash and Rajuc (2023), which revealed that product innovation had a significant positive impact on the business performance of micro, small and medium enterprises in Bangladesh. Similarly, the study by Adamu *et al*. (2020) supported this viewpoint by revealing that there is a significant positive relationship between product innovation and performance of small and medium enterprises in Nigeria. Therefore, we propose the following hypothesis:

H_2**:** *Product innovation has a significant effect on the development of SMEs in Calabar.*

Competitor analysis and development of SMEs

Competitor analysis in the context of marketing orientation encompasses the systematic examination and evaluation of rival businesses operating within the same industry or sector (Hussain & El-Said, 2018). It involves gathering, analyzing, and interpreting information about competitors' strategies, strengths, weaknesses, and market positioning to gain insights into their current and potential actions. This process enables businesses to comprehend the competitive landscape they operate in, identify emerging threats and opportunities, and develop effective strategies to maintain or enhance their market position. Through competitor analysis, companies aim to understand their rivals' product offerings, pricing strategies, distribution channels, marketing tactics, and overall performance metrics (Karaev & Karabulut, 2019). Another perspective on competitor analysis views it as a strategic management tool that focuses on understanding the competitive dynamics of the marketplace (Kiros & Mamo, 2020). In this context, competitor analysis involves not only assessing direct competitors but also considering indirect competitors, potential entrants, and substitute products or services. It aims to identify competitive forces that shape industry attractiveness and influence business strategy formulation.

Furthermore, Pansakorn and Khemthong (2021) maintained that competitor analysis plays a crucial role in enhancing the marketing performance of business organizations as it provides valuable insights for strategic decision-making. By understanding competitors' strengths and weaknesses, businesses can refine their own strategies to capitalize on market gaps or differentiate themselves effectively. This viewpoint is backed by the study of Mensah and Boateng (2021), which revealed that competitor analysis had a significant positive relationship with the performance of SMEs in Ghana. The viewpoint is also backed by the study of Ouma and Ochieng (2018), which revealed that competitor analysis had a significant positive effect on the performance of SMEs in Kenya. The viewpoint is also supported by the study of Namugenyi and Ssebunya (2020), which revealed that competitor analysis had a significant positive influence on the marketing performance of SMEs in Uganda. Also, this viewpoint is backed by the study of Nguyen and Tran (2017), which revealed that competitor analysis significantly improved the performance of SMEs in Vietnam. In addition, the viewpoint finds support in the study of Prakash and Rajuc (2023), which revealed that competitor analysis had a significant positive impact on the business performance of micro, small and medium enterprises in Bangladesh. Therefore, we propose the following hypothesis:

H_3**:** *Competitor analysis has a significant effect on the development of SMEs in Calabar.*

Integrated marketing communication and development of SMEs

Integrated marketing communication (IMC) is a strategic approach utilized by organizations to coordinate and align their marketing communication efforts across various channels and platforms, both online and offline, with the aim of delivering a unified and consistent message to their target audience (Chigbu & Onyinyechi, 2018). This approach involves integrating different communication tools and techniques such as advertising, public relations, direct marketing, sales promotion, digital marketing, and social media, among others, into a cohesive and synergistic campaign. Essentially, IMC seeks to break down the silos that traditionally existed between different departments and functions within an organization, fostering collaboration and synergy among them to create a seamless and holistic brand experience for consumers (Yoon & Luong, 2021). Another perspective on IMC emphasizes its role in creating a unified brand identity and messaging strategy that resonates with the target audience across multiple touchpoints (Kasunmu & Obadia, 2018). In this view, IMC goes beyond mere coordination of communication channels and tactics; it involves crafting a compelling brand narrative and value proposition that remains consistent and coherent across various platforms and interactions. By ensuring that all marketing communications reinforce and complement each other, IMC helps to build brand equity, enhance brand recall, and foster stronger connections with customers (Akotey & Dodoo, 2019).

This integrated approach enables organizations to present a cohesive brand image and communicate their value proposition effectively, thereby increasing the likelihood of engagement and conversion among consumers (Dune & Pineda, 2019). Importantly, in contemporary times, where consumers are inundated with an abundance of information and have access to numerous communication channels, IMC plays a crucial role in cutting through the clutter and capturing consumers' attention (Gupta & Singh, 2018). By leveraging the synergy between different communication channels and platforms, organizations can amplify the impact of their marketing efforts and reach their target audience more effectively. This viewpoint is backed by the study of Nkosi *et al*. (2019), which revealed that integrated marketing communication had a significant positive impact on SME performance in South Africa. This viewpoint is also backed by the study of Ouma and Ochieng (2018), which revealed that integrated marketing communication had a significant positive effect on the performance of SMEs in Kenya. The viewpoint is also reinforced by the study of Namugenyi and Ssebunya (2020), which revealed that integrated marketing communication had a significant positive influence on the marketing performance of SMEs in Uganda. In another study by Nguyen and Tran (2017), it was found that integrated marketing communication significantly improved the performance of SMEs in Vietnam. Similarly, the findings of the study by Prakash and Rajuc (2023) revealed that integrated marketing communication had a significant positive impact on the business performance of micro, small and medium enterprises in Bangladesh. Therefore, we propose the following hypothesis:

H_4: *Integrated marketing communication has a significant effect on the development of SMEs in Calabar.*

Review of empirical studies and conceptual model

Nkosi *et al*. (2019) conducted a study to determine the impact of marketing orientation on SME performance in South Africa. The study sought to explain the impacts of product innovation, customer focus, integrated marketing communication and market research on SME performance in South Africa. The study obtained primary data from 296 operators of SMEs in Pretoria using a structured questionnaire. The data were descriptively analyzed and hypotheses tested using multiple regression analysis. The findings of the study revealed that product innovation, customer focus, integrated marketing communication and market research had significant positive impacts on SME performance in South Africa. However, the limitation of this study is that it was constrained overwhelmingly to SMEs in South Africa, with no reference to the influence of marketing orientation dimensions on the development of SMEs in Nigeria.

Mensah and Boateng (2021) examined marketing orientation and SME performance in Ghana. The aim of the study was to investigate the relationship between marketing orientation variables (customer focus, competitor analysis, product innovation, continuous improvement) and the performance of SMEs in Ghana. To that end, the study sought and obtained primary data from 283 enterprises in the SMEs category in Kumasi using a structured questionnaire. The data obtained were analyzed using descriptive statistics and the hypotheses of the study were tested using structural equation modeling. The findings of the study revealed that customer focus, competitor analysis, product innovation, and continuous improvement had significant positive relationships with the performance of SMEs in Ghana. However, the limitation of this study is that it was constrained overwhelmingly to SMEs in Ghana, with no reference to the influence of marketing orientation dimensions on the development of SMEs in Nigeria.

Ouma and Ochieng (2018) investigated the role of marketing orientation in enhancing the performance of SMEs in Kenya. The aim of this study was to examine the effects of competitor analysis, market research, integrated marketing communication, and product innovation on the performance of SMEs in Kenya. The study used a structured questionnaire survey to obtain primary data from 185 operators of SMEs in Nairobi, Kenya. The data were subjected to statistical analysis using descriptive statistics while the hypotheses of the study were tested using regression and correlation analysis. Consequently, the findings of the study revealed that competitor analysis, market research, integrated marketing communication, and product innovation had significant positive effects on the performance of SMEs in Kenya. However, the limitation of this study is that it is restricted to the performance of SMEs in Kenya, with no reference to the causality between marketing orientation and SMEs performance in Nigeria.

Namugenyi and Ssebunya (2020) carried out their own study on marketing orientation and SME performance in Uganda. The specific aim of the study was to determine the influences of integrated marketing communication, competitor analysis, customer focus and product innovation on the marketing performance of SMEs in Uganda. The study relied on a structured questionnaire to obtain primary data from 172 operators of SMEs in Kampala. The data obtained were analyzed and interpreted using descriptive statistics and the hypotheses of the study were tested using multiple regression analysis. The findings thereof revealed that integrated marketing communication, competitor analysis, customer focus and product innovation had significant positive influences on the marketing performance of SMEs in Uganda. However, the limitation of this study is that it is restricted to the performance of SMEs in Uganda, with no reference to the causality between marketing orientation and SMEs performance in Nigeria.

Nguyen and Tran (2017) investigated marketing orientation and SME performance in Vietnam. The study had the objective of determining the roles of competitor analysis, integrated marketing communication, customer focus and relationship marketing in enhancing the performance of SMEs in Vietnam. Using a structured questionnaire survey, the study obtained primary data from 86 owners of SMEs in Ho Chimin City. The data were analyzed and interpreted using frequencies, percentages and mean, while the hypotheses of the study were tested using structural equation modeling. The findings of the study revealed that competitor analysis, integrated marketing communication, customer focus and relationship marketing significantly improved the performance of SMEs in Vietnam. However, the limitation of this study is that it was constrained overwhelmingly to the performance of SMEs in Vietnam, with no reference to the influence of marketing orientation dimensions on the development of SMEs in Nigeria.

In their own study, Prakash and Rajuc (2023) investigated the impact of marketing orientation on the business performance of micro, small and medium enterprises in Bangladesh. The study aimed to unravel the impacts of product innovation, market segmentation, competitor analysis and integrated marketing communication on the business performance of micro, small and medium enterprises in Bangladesh. The study relied on a structured questionnaire survey to obtain primary data from 152 operators of SMEs in Dhaka. The data obtained underwent statistical analysis and interpretation with the aid of descriptive statistics, and the hypotheses of the study were tested using correlation and regression analysis. The findings of the study revealed that product innovation, market segmentation, competitor analysis and integrated marketing communication had significant positive impacts on the business performance of micro, small and medium enterprises in Bangladesh. However, the limitation of this study is that it is restricted to the performance of SMEs in Bangladesh, with no reference to the causality between marketing orientation and SMEs performance in Nigeria.

In another study, Nwankwo and Kanyangale (2019) investigated market orientation and survival of small and medium enterprises in Nigeria. The aim of the study was to determine the effects of customer intensity and value creation on the survival of manufacturing SMEs in Nigeria. To that end, the study obtained primary data from 387 owner-managers of manufacturing SMEs using a structured questionnaire. The findings emerging from the study revealed that customer intensity and value creation significantly and positively contributed to the survival of manufacturing SMEs in Nigeria. However, the limitation of the study is that it was restricted to only two dimensions of marketing orientation, hence, it fails to account for the contributions of other dimensions such as customer focus, competitor analysis and integrated marketing communication to the performance of SMEs in Nigeria.

Also, Oluwatoyin *et al*. (2018) conducted a study on the impact of market orientation on performance of selected hotels in Ondo State, Nigeria. The study sought to determine the effects of customer retention, and customer friendliness practices on the performance of selected hotels in Akure, Ondo State, Nigeria. To that end, the study obtained primary data from managers of 68 hotels in Akure, Ondo State using a structured questionnaire. Descriptive statistics were useful in data analysis and interpretation, while hypotheses testing was done using correlation analysis. The findings of the study revealed that customer retention, and customer friendliness practices had significant impacts on the performance of selected hotels in Akure, Ondo State. However, the limitation of this study is that it only centered on two dimensions of marketing orientation, and hence does not account for the contributions of product innovation, competitor analysis and integrated marketing communication to the performance of Nigerian SMEs.

Similarly, Adamu *et al*. (2020) examined the effect of marketing innovation on performance of small and medium enterprises in Nigeria. The study sought to determine the relationship between marketing innovation dimensions (product innovation, pricing innovation, promotion innovation, distribution innovation) and performance of small and medium enterprises in Nigeria. Primary data were obtained from 203 operators of wood and furniture SMEs in Yobe State, Nigeria using a structured questionnaire. The data were analyzed using descriptive statistics while the hypotheses of the study were tested using Pearson's product moment correlation. The findings of the study therefore revealed that there is a significant positive relationship between marketing innovation dimensions (product innovation, pricing innovation, promotion innovation, distribution innovation) and performance of small and medium enterprises in Nigeria. However, the limitation of this study is that it only centered on one dimension of marketing orientation (product innovation); hence, it is incapable of explaining the roles of customer focus, competitor analysis and integrated marketing communication in enhancing the performance of SMEs in Nigeria.

From the scholarly articles included in this review, it has been observed that several dimensions of marketing orientation have been studied in terms of their relationship with the performance of business organizations such as SMEs. In the context of this study, marketing orientation is perceived using four dimensions rooted in empirical literature (customer focus, product innovation, competitor analysis and integrated marketing communication). The parameters measuring these variables as seen in FIG. 1 were adapted from: Nkosi *et al*. (2019); Mensah and Boateng (2021); Ouma and Ochieng (2018). Similarly, in line with the findings of these relevant studies, the present study hypothesizes that these dimensions of marketing orientation have some sort of relationship with the performance of SMEs in Calabar, Nigeria. The proposed relationship between these marketing orientation dimensions and SMEs performance in Calabar is depicted in FIG. 1.

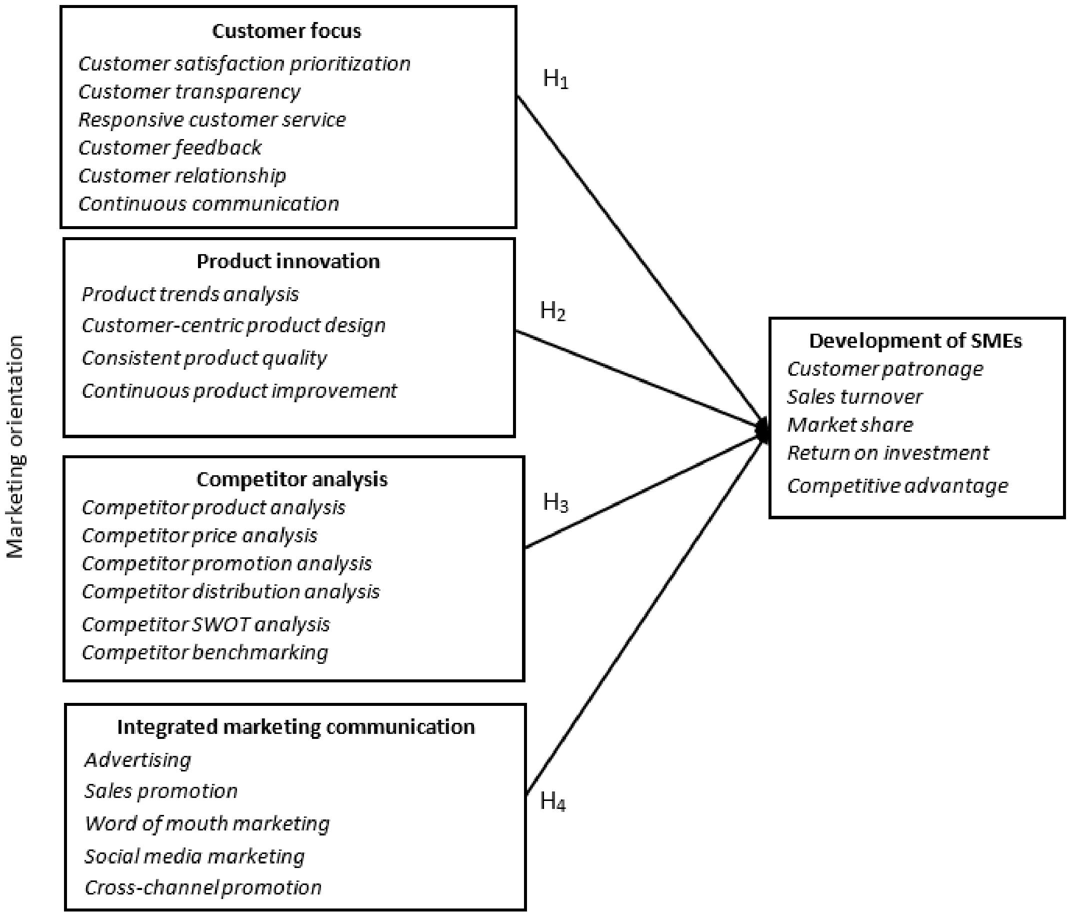

FIG. 1: *Adapted conceptual model of the study*
Source: *Parameters of independent variable adapted from Nkosi et al. (2019); Mensah and Boateng (2021); Ouma and Ochieng (2018). Dependent variable parameters adapted from Amin (2021); Okoli et al. (2021)*

Theoretical Framework

This study is based on the dynamic capabilities theory, propounded by Teece *et al*. (1997), which explains how business organizations can adapt, upgrade and renew their internal resources and capabilities to keep pace with changes in the external business environment. The theory posits that sustained competitive advantage comes from an organization's capacity to dynamically integrate, build, and reconfigure its resources, rather than merely possessing static ones (Teece *et al*., 1997). It extends the resource-based view (RBV) by emphasizing the importance of a firm's proactive adaptability to rapidly evolving business environments (Ringov, 2017). The theory's core processes are sensing, seizing, and transforming (Teece *et al*., 1997). Sensing is the ability to identify changes and opportunities in the external environment.

Seizing involves the swift and effective deployment of resources to exploit these opportunities. Transforming refers to the capacity to reconfigure the resource base to meet new challenges and maintain competitive advantage over time. Teece *et al*. (1997) argue that these dynamic capabilities are essential for firms to navigate dynamic environments and form the foundation for strategic management by allowing organizations to anticipate and respond to market and industry changes.

In the context of this study, the dynamic capabilities theory emerges as a significant framework for understanding the relationship between marketing orientation and the development of SMEs in Nigeria. From its major premise, the theory suggests that SMEs can harness marketing orientation practices as a core component of their dynamic capabilities. These capabilities may enable SMEs to adapt to changing market conditions and environmental dynamics effectively. The premise of the theory further implies that by integrating marketing orientation into their operations, SMEs can not only respond to market shifts but also proactively shape their strategies to meet evolving customer needs and preferences. Furthermore, within the Nigerian business landscape, characterized by rapid changes and uncertainties, the theory suggests that the application of dynamic capabilities becomes even more pertinent for SMEs. This is because by leveraging marketing orientation as a dynamic capability, SMEs can stay attuned to market trends, consumer behaviours, and competitive pressures, allowing them to seize emerging opportunities and mitigate potential threats effectively.

Methodology

Research design

This study adopted cross-sectional survey research design, which enabled the collection of primary data from a cross-section of SMEs operators on a one-time basis, within a short period of time. This research design was suitable for the study because it allowed the researcher to capture a snapshot of the population's characteristics, attitudes, and behaviours at a specific moment, facilitating the examination of the relationship between the study’s variables. Similarly, the design's ability to efficiently gather data from a diverse sample allowed for the generalization of findings to the broader population, enhancing the external validity of the study.

Population and sample size

The target population of this study comprised operators of all SMEs operating in Calabar, Cross River State. However, the exact numerical size of the population is unknown because most SMEs operating in Calabar are unregistered with the government, hence there is insufficient accurate data on the population. Against this backdrop, this study relied on an estimated population of 5000 operators of SMEs in Calabar. This population is appropriate because the actual numerical size of the population is unknown and the estimated population is large enough (above 1000) to closely depict the properties of the actual population (Acharyya & Bhattacharya, 2019). The study applied the Taro Yamane formula to statistically determine the sample size for the study. The Taro Yamane formula is stated thus:

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

Where:

n	=	Sample size required
N	=	Finite population
I	=	Constant
e	=	Margin of error (usually 5 percent)

By simple substitution,

$$n = \frac{5000}{1+5000(0.05)^2}$$

$$= \frac{5000}{1+5000(0.0025)}$$

$$= \frac{5000}{1+12.5}$$

$$= \frac{5000}{13.5}$$

= 370.37 ∴ n = 370 operators of SMEs approximately

Subsequently, the sampling technique adopted therefore was disproportionate stratified sampling, which enabled the researcher to target operators of SMEs in both of Calabar South and Municipality local government areas. In dealing with a heterogeneous population like operators of SMEs, who vary from enterprise to enterprise, it was beneficial to use disproportionate stratification to ensure that each subgroup was adequately represented in the sample (Dźwigoł & Dźwigoł-Barosz, 2018). In applying this technique, the researchers split the local government areas into distinct strata made up of commercial streets where SMEs activity is substantial as shown in Table 1:

Table 1: Stratified sampling technique

Calabar South Strata		Calabar Municipal Strata	
Watt Market	100 operators	Marian Market	100 operators
Goldie Road	50 operators	Etta-Agbor Road	50 operators
Mount Zion Road	20 operators	Marian Road	50 operators

The researchers visited these selected strata along with a team of enumerators and disproportionately included operators of the SMEs found in these locations to participate in the study. This is because the exact population of operators of SMEs in these strata was not known, hence the researcher could not proportionately administer the questionnaire according to the population size. However, only those confirmed to be actual operators, through prior inquiry, were included in the study and also, only those who provided express consent to participate in the study were ultimately included. In this way, stratified sampling ensured that all potential elements of the sample in all strata groups were given the opportunity of being selected as sampling, thereby enhancing the objectivity of the sampling procedure.

Source and Methods of Data Collection

To obtain primary data for the study, the researcher used a 5-point Likert scale questionnaire adapted from existing studies. The instrument comprised two sections; namely: Section A (which collected data on respondents' demographic characteristics such as age, gender, marital status, and educational qualifications) and Section B, which contained statements adapted from existing studies to measure the variables of the study: customer focus, product innovation, competitor analysis, integrated marketing communication and development of SMEs. The parameters for measuring these variables as well as their empirical sources are presented in Table 2.

Table 2: Variables, parameters and empirical sources

SN	Variables	Parameters	Empirical sources
1	Customer focus	Customer satisfaction prioritization Customer transparency Responsive customer service Customer feedback Customer relationship Continuous communication	Nkosi *et al*. (2019); Mensah and Boateng (2021)
2	Product innovation	Product trends analysis Customer-centric product design Consistent product quality Continuous product improvement	Nkosi *et al*. (2019); Mensah and Boateng (2021)
3	Competitor analysis	Competitor product analysis Competitor price analysis Competitor promotion analysis Competitor distribution analysis Competitor SWOT analysis Competitor benchmarking	Mensah and Boateng (2021); Ouma and Ochieng (2018)
4	IMC	Advertising Sales promotion Word of mouth marketing Social media marketing Cross-channel promotion	Nkosi *et al*. (2019)
5	Development of SMEs	Customer patronage Sales turnover Market share Return on investment Competitive advantage	Amin (2021); Okoli *et al*. (2021)

Source: Researchers' construction via literature review

Questionnaire reliability and data analytical method

The reliability status of the research questionnaire was confirmed through the Cronbach alpha reliability method. Draft copies of the questionnaire were administered to a random selection of 30 operators of SMEs selected from a single location in Calabar South. These respondents were deliberately excluded from the actual survey to guard against respondent biases in the actual survey. The data obtained during the survey were coded and entered into the Statistical Package for the Social Sciences (SPSS 26) for reliability testing. The instrument was subsequently deemed reliable and adopted for field administration because all its measurement scales produced Cronbach alpha coefficients not less than the benchmark of 0.7 (see Table 3).

Table 3: Questionnaire reliability statistics

SN	Variables	No. of items	Alpha coefficients
1	Customer focus	6	.792
2	Product innovation	4	.799
3	Competitor analysis	6	.811
4	IMC	5	.726
5	Development of SMEs	5	.764
		26	

Source: Researchers' analysis via SPSS-26 (2024)

After statistically validating the reliability of the questionnaire, it was utilized for field administration, resulting in the collection of primary data for the research. This data was then analyzed using descriptive statistics. Additionally, the study's hypotheses were tested through a multiple linear regression model, as outlined below:

$$DEVSMEs = a + \beta_1 CUSFOC + \beta_2 PRODINO + \beta_3 COMPANLYS + \beta_4 IMC + e$$

Where:

DEVSMEs	=	Development of SMEs
a	=	The intercept (or constant)
β_1CUSFOC	=	Coefficient of customer focus
β_2PRODINO	=	Coefficient of product innovation
β_3COMPANLYS	=	Coefficient of competitor analysis
β_4IMC	=	Coefficient of integrated marketing communication
e	=	Error margin (5 percent)

Analysis and Discussion

Data Analysis and Interpretation

During the questionnaire survey, a total of 370 copies of the questionnaire were administered to operators of SMEs in Calabar, Cross River State. Out of the 370 questionnaire copies distributed, 318 or 86.0 percent of the questionnaire were retrieved and usable for the analysis, while 52 or 14.0 percent of the questionnaire could not be retrieved. This reveals that the majority of the questionnaire administered to respondents were successfully retrieved due to the meticulous and rigorous guidance and follow-up efforts of the research assistants recruited for the questionnaire survey. With this data, the null hypotheses developed for the study were tested thus:

Hypothesis one

Ho: Customer focus has no significant effect on the development of SMEs in Calabar.

Hypothesis two

Ho: Product innovation has no significant effect on the development of SMEs in Calabar.

Hypothesis three

Ho: Competitor analysis has no significant effect on the development of SMEs in Calabar.

Hypothesis four

Ho: Integrated marketing communication has no significant effect on the development of SMEs in Calabar.

Decision criteria: If the probability (P) is less than 0.05, we accept the alternative hypothesis; otherwise, we reject the null hypothesis.

Table 4: Model summary of the effect of marketing orientation on the development of small and medium enterprises in Cross River State

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704[a]	.596	.591	.69865

a. Predictors: (Constant), Customer focus, product innovation, competitor analysis and integrated marketing communication

Source: Researchers' Computation using SPSS-26 (2024)

Table 5: ANOVA[a] of the effect of marketing orientation on the development of small and medium enterprises in Cross River State

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	150.996	4	37.749	77.039	.000[b]
	Residual	153.266	313	.490		
	Total	304.262	317			

a. Dependent Variable: Development of SMEs

b. Predictors: (Constant), Customer focus, product innovation, competitor analysis and integrated marketing communication

Source: *Researcher's Computation using SPSS-26 (2024*)

Table 6: Coefficients[a] of the effect of marketing orientation on the development of small and medium enterprises in Cross River State

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	1.157	.216		5.367	.000
	Customer focus	.135	.084	.386	3.101	.002
	Product innovation	.289	.198	.494	2.929	.004
	Competitor analysis	.233	.055	.326	4.204	.000
	Integrated marketing communication	.635	.041	.312	5.011	.001

a. Dependent Variable: Development of SMEs
Source: Researcher's Computation using SPSS-26 (2024)

Tables 4, 5 and 6 illustrate the effect of marketing orientation on the development of small and medium enterprises in Cross River State. The correlation coefficient (R = 0.704) in Table 4 indicates a strong relationship (70.4 percent) between marketing orientation and development of SMEs in Cross River State. Moreover, the coefficient of determination (R2 = 0.596) suggests that marketing orientation can explain 59.6 percent of the variance in the development of SMEs in Cross River State. Also, the statistical analysis in Table 5 (F = 77.039, p = 0.000) confirms the significant effect of marketing orientation on the development of SMEs in Cross River State.

Similarly, Table 6 highlights the contributions of all the marketing orientation dimensions tested to the dependent variable (development of SMEs). In this scenario, product innovation made the highest contribution (beta = 0.494 or 49.4 percent), followed by customer focus (beta = 0.386 or 38.6 percent). Whereas, integrated marketing communication had the least contribution to the dependent variable (beta = 0.312 or 31.2 percent). Furthermore, the results in Table 6 show that all the dimensions of marketing orientation tested had statistically significant and positive effects on the development of SMEs in Cross River State, as indicated by their respective p-values and positive t-test values (customer focus: p = 0.002, t = 3. 101; product innovation: p = 0.004, t = 2.929; competitor analysis: p = 0.000, t = 4.204; and integrated marketing communication: p = 0.001, t = 5.011). Hence, given that the p-values of all the dimensions tested were less than the error margin of 0.05, all null hypotheses are rejected in favour of the corresponding alternative hypotheses. Thus, the findings of the study revealed that customer focus, product innovation, competitor analysis and integrated marketing communication had significant positive effects on the development of SMEs in Cross River State.

Discussion of Findings

Customer focus and development of SMES

From the test of hypothesis one, it was revealed that customer focus has a significant positive effect on the development of SMEs in Calabar. This finding is backed by the study of Nkosi *et al*. (2019), which revealed that customer focus had a significant positive impact on SME performance in South Africa. The finding is also backed by the study of Mensah and Boateng (2021), which revealed that customer focus had a significant positive relationship with the performance of SMEs in Ghana. The finding also corresponds to the study of Namugenyi and Ssebunya (2020), which revealed that customer focus had a significant positive influence on the marketing performance of SMEs in Uganda. The finding is also reinforced by the study of Nguyen and Tran (2017), which revealed that customer focus significantly improved the performance of SMEs in Vietnam. This finding underscores the critical importance for operators of SMEs in Cross River State to prioritize customer focus as a strategic initiative. The significant positive effect identified implies that SMEs that actively align their business strategies with customer needs and preferences are more likely to experience enhanced growth and development. Therefore, investing in customer-centric approaches such as improving service delivery, understanding customer expectations, and fostering strong customer relationships can potentially yield substantial benefits in terms of business success and sustainability for SMEs in the region.

Product innovation and development of SMES

The test of hypothesis two revealed that product innovation has a significant positive effect on the development of SMEs in Calabar. This finding is backed by the study of Nkosi *et al*. (2019), which revealed that product innovation had a significant positive impact on SME performance in South Africa. The finding is also backed by the study of Mensah and Boateng (2021), which revealed that product innovation had a significant positive relationship with the performance of SMEs in Ghana. Again, the finding is reinforced by the study of Ouma and Ochieng (2018), which revealed that product innovation had a significant positive effect on the performance of SMEs in Kenya. This research finding underscores the critical importance for operators of SMEs in Cross River State to prioritize and invest in product innovation. It indicates that actively engaging in developing and introducing new or improved products can significantly enhance the growth and sustainability of SMEs in the region. By focusing on innovation, the finding suggests that SME operators can potentially differentiate their offerings, attract more customers, improve competitiveness, and ultimately foster long-term business development and success in Cross River State.

Competitor analysis and development of SMES

In testing hypothesis three, it was revealed that competitor analysis has a significant positive effect on the development of SMEs in Calabar. This finding is backed by the study of Mensah and Boateng (2021), which revealed that competitor analysis had a significant positive relationship with the performance of SMEs in Ghana. The finding is also backed by the study of Ouma and Ochieng (2018), which revealed that competitor analysis had a significant positive effect on the performance of SMEs in Kenya. Again, the finding is supported by the study of Namugenyi and Ssebunya (2020), which revealed that competitor analysis had a significant positive influence on the marketing performance of SMEs in Uganda. Also, this finding is backed by the study of Nguyen and Tran (2017), which revealed that competitor analysis significantly improved the performance of SMEs in Vietnam. This research finding underscores the critical importance for operators of SMEs in Cross River State to prioritize and invest in competitor analysis. By understanding their competitors' strategies, strengths, and weaknesses, SMEs can strategically position themselves in the market, identify opportunities for growth and innovation, and effectively differentiate their offerings. This proactive approach not only enhances their competitiveness but also contributes significantly to their overall development and sustainability in a dynamic business environment.

Integrated marketing communication and development of SMES

In testing hypothesis four, the findings revealed that integrated marketing communication has a significant positive effect on the development of SMEs in Calabar. This finding is backed by the study of Nkosi *et al*. (2019), which revealed that integrated marketing communication had a significant positive impact on SME performance in South Africa. This finding is also backed by the study of Ouma and Ochieng (2018), which revealed that integrated marketing communication had a significant positive effect on the performance of SMEs in Kenya. Similarly, the finding is reinforced by the study of Namugenyi and Ssebunya (2020), which revealed that integrated marketing communication had a significant positive influence on the marketing performance of SMEs in Uganda. In another study by Nguyen and Tran (2017), it was found that integrated marketing communication significantly improved the performance of SMEs in Vietnam. This research finding underscores the critical importance for operators of SMEs in Cross River State to adopt and implement integrated marketing communication strategies effectively. By doing so, SMEs can harness the significant positive impact that integrated marketing communication can have on their development. This approach emphasizes the need for cohesive and synchronized marketing efforts across various channels to enhance visibility, brand reputation, customer engagement, and ultimately, business growth within the region.

Conclusion and Recommendations

In contemporary times, the marketing orientation has been projected as a potent framework capable of enabling business organizations navigate the complexities of business and enhance competitive advantage. Scholars have argued that a strong marketing orientation not only facilitates customer-centric strategies but also fosters organizational adaptability, innovation, and long-term profitability in dynamic market environments. This study was therefore carried out to investigate the role of marketing orientation in the development of SMEs in Cross River State. The study specifically sought to unravel the effects of customer focus, product innovation, competitor analysis and integrated marketing communication on the development of SMEs in Calabar. This necessitated the statistical analysis of primary data obtained from operators of SMEs in Calabar. The result of this analysis demonstrated that marketing orientation dimensions (customer focus, product innovation, competitor analysis and integrated marketing communication) had significant positive effects on the development of SMEs in Cross River State. As such, the study concludes that a strong commitment of the implementation of marketing orientation by SMEs can enhance competitive advantage and long-term performance of SMEs in Nigeria. To that end, the following recommendations are suggested for implementation by SMEs:

i. Operators of SMEs in Nigeria need to commit to the principle and practice of customer sovereignty in their operations by ensuring that goods and services they offer are tailored to satisfactorily meet customers’ needs on a consistent basis while maintaining a viable relationship with customers for the long term.
ii. SMEs should commit to continuous product innovation by conducting trend analysis in order to provide products that align with customers’ requirements and offer the most benefits to customers, thereby encouraging customer satisfaction and loyalty. By ensuring customer satisfaction through continuous product innovation, SMEs can actualize sustainable competitive advantage through steady customer patronage and sales revenue.
iii. It is imperative for operators of SMEs to harness the potential of periodic competitor analysis to design and implement marketing campaigns to counter competitors’ actions, attract customers’ patronage and capture substantial market share. This will ensure that SMEs have the substantial customer base to operate profitably in the market especially amidst competitive pressures.
iv. Operators of SMEs in Nigeria can maximize integrated marketing communication by strategically aligning their advertising, public relations, digital marketing, and sales promotions efforts to create consistent, cohesive messaging across all channels, thereby increasing brand visibility, customer engagement, and ultimately enhancing their competitive performance in the market. This consistency and exposure to the target market will ensure that SMEs are also well-positioned to attract customers’ attention and patronage.

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THE NEXUS BETWEEN FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH; GHANAIN EXPERIENCE

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Abstract
This study examined the nexus between financial development and economic growth in Ghana; Economic Growth is proxied with Gross Domestic Product Per Capita was used as the dependent variable while Gross Fixed Capital Formation, Foreign Debt, Foreign Direct Investment and Trade Openness were employed as independent variables. Secondary data analyzed, using descriptive statistics, unit root test, Johansen Co-integration, and ordinary least square methods of multiple regression. It was evident that Gross Fixed Capital Formation (GFCF) and Foreign Direct Investment (FDI) depicts positive and significant influences on Gross Domestic Product Per Capita while Foreign Debt (FD) and Trade Openness (OP) have negative and significant influence on Gross Domestic Product Per Capita. Hence, it is observed that there is a significant relationship between finance and economic development in Ghana. It is recommended that the Ghanaian financial development should be encouraged to support economic growth and development.
Keywords: *Finance, Economic Development, Growth, Nigeria*

Introduction

Ghana has experienced different stages of geographical, political and economic history as a country. This dates back to her colonial history, from about 1901 to WWII). GHANA is the first country in sub-Sahara Africa to get political independence from colonial government. Ghanaian political independence was achieved on the 6th of March 1957. Though, it became self-government with a local Ghanaian Prime Minister was instituted by the British Colonial Government in February 1951. The self-government was established after a period of prolonged agitation by local leaders after the Second World War. Hence, the period from 1951 to 1956 and from 1957 to February 1966 was under the leadership of Dr. Kwame Nkrumah and the Convention People's Party (CPP). CPP swept to power in three national elections organised by the British Colonial Government in 1951, 1954 and 1956 and two subsequent elections after the political independence in 1960 and 1964 (Kwadwo, 1968).

Economically, Ghana was earlier called Gold Coast, because of the rich and large deposits of gold. This was found by European colonialists and explorers from the 15th to 19th Centuries AD. These large gold deposits and other mineral riches of the country led to intense interest and competition by European powers for the coastal trade, which also included extensive trade in slaves. The coastal area of Ghana has the highest number of forts and castles built by European political authorities and traders in West and Central Africa from the 15th to 19th Centuries AD. It suggests the intense nature of the competition for resources including slaves by European powers in Ghana during the colonial era. It is pertinent to note that the first Europeans to arrive on the shores of present day, Ghana in the 15th Century were the Portuguese. This was followed by the Danes, Dutch, French and finally the British; who assumed colonial power in the 19th Century (Ansah, 1983).

Consequently, between 1951-1966, Ghana experienced major economic transformation and development with the establishment of numerous schools and rapid improvement of transport infrastructure and the setting up of the port city of Tema, about 15 kilometres outside Accra. The development of the Akosombo hydroelectric dam in January 1966 became the cornerstone of the country's industrialisation. The core government economic strategy was based on modest industrialisation through import substitution. Within the period, Ghana became the leader in the drive for political independence in Africa and the beacon of pride in Africa and the Black and African Diaspora.

In the period between 1964 and 1965, Ghanaian economy suffered high inflation and very low world market prices of its main export commodity, cocoa. The above reasons couple with the installation of a one-party state in 1964 and external pressures led to the first military coup in February 1966. The establishment of a one-party state in 1964, based on a nation-wide referendum, was partly the result of significant opposition violence including six major failed attempts to assassinate Dr. Nkrumah from 1958 to 1964 organised by the political opposition and external associates. The highly-intense two-party political rivalry, sometimes characterized by violence, that encompassed the pre-independence period and the 1957 to 1964 period in Ghana, appears to be re-emerging in present day Ghana.

From February 1966 to December 1981, Ghana experienced a period of political instability. A succession of three military coups overthrew two elected civilian governments and one military government. The two elected civilian governments both had exactly 27 months of tenure, from October 1969 to January 1972 and from September 1979 to December 1981, respectively. The military coup on the 31st of December 1981 ended the third experiment with multi-party elected civilian governments. The coup ushered in the Provisional National Defence Council (PNDC) under Flight Lieutenant Jerry Rawlings to oversee the administration of the entire country. The years, 1982 and 1983, were largely politically unstable with many attempted coups. The year, 1984 marked the beginning of a 23-year period of new political stability up to the current year (2006). The military government that came to power at the end of 1981 effectively consolidated power starting in 1984 which also saw the country recover from the major drought of 1983.

In December 2000, the main opposition party, the New Patriotic Party (NPP), an offshoot of the United Party defeated the NDC in both Presidential and Parliamentary elections. This party held power for a short time between October 1969 to January 1972. The Progress Party won elections contested in 1969 that banned parties that followed the traditions of the CPP. The first transition of power from one elected civilian government to another from a different party in Ghana since independence happened in January 2001 as NDC handed over power to the NPP. The re-election of the NPP Government in December 2004 completed a 21-year period of political stability, characterised by moderate economic growth but persistent poverty.

Consequently, between mid-1983 and 1991, the new military government sought assistance from the IMF and the World Bank for a structural adjustment programme, which sought to liberalise the economy and increase investment. The structural adjustment programme was modestly successful with increase in growth rates due to increases in total investment even though it led to increased poverty especially among the lower and middle classes. In the political arena, a constitutional government was installed in January 1993, after elections in December 1992. Flight Lieutenant Rawlings, who had then retired from the military, to contest the elections as a civilian, was elected President. His party, the National Democratic Congress (NDC) controlled Parliament. Mr. Rawlings was re-elected for a second final four-year term in December 1996.

Due to power rationing and energy shortages resulting from the low water level of the Akosombo Dam, which supplies 60% of the energy requirements of the country, since September 2006, it is likely that economic growth will be significantly affected in the short-term period. The then government aims to raise annual economic growth rate to 8% and higher in the medium-term period based on its new strategy called the Growth and Poverty Reduction Strategy, 2006-2009. It also targets the lifting of Ghana to a middle-income country by 2015 based on the achievement of a per capita income of US$1 ,000 from the low level of US$380 per capita in 2005. An increase of per capita income by 163% is expected to be achieved in just nine years.

Between 2017 and 2020, in 2018, it grew by 6.20% in 2018 from 2017, in 2019, it growth by 6.51% 2018 and in 2020, it declines to 5.59% from 2019. Hence, in recent times, Ghanaian growth is pegged at 6%. Hence, this research on the relationship between financial development and economic growth; Ghanaian experience is undertaken to clearly ascertain the relationship between financial development and economic growth in Ghana.

Objectives of the Study

The aim of this study is to establish the relationship between financial development and economic growth; Ghanaian experience. The specific objectives include:

1. To determine the impact of Gross Fixed Capital Formation on Gross Domestic Product Per Capita in Ghana.
2. To determine the impact of Foreign Direct Investment on Gross Domestic Product Per Capita in Ghana,
3. To determine the impact of Foreign Debt on Gross Domestic Product Per Capita in Ghana
4. To determine the impact of Trade Openness on Gross Domestic Product Per Capita in Ghana.

The Research paper consist of five (5) sections. Section one (1) is the Introduction. Section two (2) is the literature review, Section three (3) is the methodology, Section four (4) is data presentation and analysis and Section five (5) is conclusion/ recommendations.

Literature Review

Conceptual Framework

Finance is defined as the management of money, financial resources. It includes financial activities such as investing, borrowing, lending, budgeting, saving, and forecasting. Economic Development: is defined as the process by which the economic well-being and quality of life of a nation is improved or transformed according to desired targeted goals and objectives. Economic Growth is defined as an increase in the capacity of an economy to produce goods and services, compared from one period to another. Economic growth is a process by which a nation's wealth increases over time. The most widely used measures of economic growth are the rate of growth in a country's total output of goods and services gauged by the gross domestic product (GDP). Economic growth can also be referred to as the increase of per capita gross domestic product (GDP) or other measures of aggregate income, typically reported as the annual rate of change in the real GDP. Economic growth is primarily driven by improvement in productivity, which involves producing more goods and services with the same inputs of labour, capital, energy and materials (Nzotta, 2005). The capital market seems to influence economic growth through its funds mobilization that would result in savings. Savings, on the other hand result in capital accumulations, which have direct bearing on economic growth and development.

Theoretical Framework

The relationship between finance markets and institutions and economic growth has been widely researched. Theorists have different views namely supply-led growth and demand-following growth**.** According to the supply-led growth theory**,** it is financial development that promotes economic growth while according to the demand-following growth theory**,** it is economic growth that engender the development of financial markets and institutions. Though, some theorists believe that the finance-growth nexus depends on the economy's level of development. Therefore, we will likely expect supply-led growth in low-income economies and demand-following growth in high-income economies. Hence, the expansion of financial markets drives real economic growth at early states of economic development while economic growth drives the expansion of financial markets in mature economies. Thus, as a financial service, has a catalystic role in the economic growth and development of low-income economies. Of course, Ghana is grouped as a low income economy.

This research is based on the Financial market theory of development. Financial market theory of development is an economic theory to use private flows of capital in new stock markets to stimulate domestic economic development in developing countries. The theory was put forward by the World Bank's World Development Report for 2000. Though, the theory has its criticisms, according to Ajit Singh, Professor Emeritus of economics at Cambridge University, noted that stock market development is not an essential progression for the development of a country's financial development. He points out the post-World War II period countries of Germany, Italy, Japan, Korea and Taiwan which were able to industrialize and achieve "economic miracles with little assistance from the stock market.

Empirical Framework

The argument on the nexus between finance and economic growth dates back to Bagehot (1873) who argue that efficient financial institutions speed capital reallocation to sectors that are anticipated to grow faster and thus face better investment prospects, or growth opportunities. Schumpeter (1911), who popularized the significant role of financial sector development in economic growth via the provision of efficient financial services, argues that a well-developed financial system spurs growth in technological innovations by redistributing resources from less productive to the more productive sectors Fisman and Love (2004) noted that industry value added growth patterns are more closely correlated for country pairs with similar levels of Financial development. On the contrary, Lewis (1956) submitted that financial markets first develop, as a consequence of the economic growth process, before driving real economic activity. The financial sector is no doubt the engine room of any economy as it makes resources available for investment, and consequently leading to economic growth.

Methodology

This study employed the expos facto research design. Empirical analysis was carried out using historical data for relevant period of time. Secondary data was employed for analysis.

Model specification

The study focuses on the four most commonly encountered determinants of development in literature: (i) gross fixed capital formation (GFCF), (ii) import and export: (net or as a ratio), (iii) foreign direct investment and (iv) external borrowing and others. one moderator variable, the exchange rates, are also included as determinants of economic development. GDP *per capita* is our as dependent variable. While GFCF, FDI, FD and OP are our independent variables. We therefore have our economic growth model as follow:

GDPPC = f (GFCF, FDI, FD, OP) ……………. (1)
$GDPPC = b_o + b_1GFCF + b_2\ FDI + b_3\ FD + b_4\ OP + U$……… (2)
Where:
GDPPC= Gross Domestic Product Per Capita, GFCF= Gross Fixed Capital Formation
FDI= Foreign Direct Investment, OP= Trade Openness, b_o= Constant, $b_{1\,-}\,b_2$= Coefficients or parameters of the Economic Growth Models.
Transforming equation 2 above with the natural logarithm,
$GDPPC = b_o + b_1GFCF + b_2\ FDI + b_3\ FD + b_4\ OP + U$……… (2)
$LNGDPPC = b_o + b_1LNGFCF + b_2\ LNFDI + b_3\ LNFD + b_4\ LNOP + U$……… (3)
Which our economic growth model for estimation.

Result

Table 1: Descriptive Statistics Results for Ghana's Finance and Economic Growth Nexus (1981-2019)

	LNGDPPC	**LNGFCF**	**LNFDI**	**LNFD**	**LNOP**
Mean	11.79650	9.272378	8.370550	3.720062	3.741261
Median	11.61252	9.198657	8.146128	3.707485	3.841109
Maximum	12.38077	10.20602	9.542825	4.144387	4.064645
Minimum	11.41241	8.041393	7.000000	3.219585	2.800717
Std. Dev.	0.323073	0.592785	0.864150	0.254768	0.286044
Skewness	0.691956	-0.121728	0.164009	-0.197185	-1.743757
Kurtosis	1.797376	2.444265	1.656515	2.086863	5.651495
Jarque-Bera	5.462468	0.598184	3.107893	1.607690	31.18891
Probability	0.065139	0.741491	0.211412	0.447605	0.000000
Sum	460.0634	361.6228	326.4515	145.0824	145.9092
Sum Sq. Dev.	3.966286	13.35297	28.37673	2.466457	3.109195
Observations	39	39	39	39	39

Source: E-View 9 Output

Table 1 presents the descriptive statistics results for Ghana's macroeconomic research data for the period between 1981 and 2019. It is deducible from the Table 1 that the research variables have recorded low variation within the research period. LNFDI depicts the highest variation, followed by LNGFCF, LNGDPPC, LNOP and LNFD. This supported by the low range between the max. and min. values of all the variables. Also, while LNGDPPC and LNFDI depicts positive skewness, LNGFCF, LNFD and LNOP indicate negative skewness. Further, except, LNOP that is leptokurtic, all the variables are platykurtic, which means absence of major fluctuations. Expectedly, except LNOP, all the variables are normally distributed; given the lower than 5% Jarque-Bera p-values.

Table 2: Unit-Root Result for finance-growth nexus in Ghana

Variable		**at level**	**at first difference**	**at second difference**	**Equation Specification**	**Order of integration**
LnGDPPC	ADF	-1.754221 (0.3968)	-5.229343 (0.0001)	-	Intercept	I(1)
	PP	-1.737115 (0.4051)	-5.229343 (0.0001)	-	Intercept	I(1)
LnGFCF	ADF	0.423497 (0.9814)	-6.233063 (0.0000)	-	Intercept	I(1)
	PP	0.455743 (0.9828)	-6229711 (0.0000)	-	Intercept	I(1)
LnFDI	ADF	-0.806772 (0.8058)	-5.276115 (0.0001)	-	Intercept	I(1)
	PP	-0.811931 (0.8043)	-5.185320 (0.0001)	-	Intercept	I(1)
LnFD	ADF	-1.375281 (0.5841)	-5.117454 (0.0002)	-	Intercept	I(1)
	PP	-1.619818 (0.4629)	-5.106464 (0.0002)	-	Intercept	I(1)
LnOP	ADF	0.755051 (0.9918)	-4.754481 (0.0005)	-	Intercept	I(1)
	PP	0.715398 (0.9910)	-4.677102 (0.0006)	-	Intercept	I(1)

Source: E-View 9 Output

Table 2 depicts the unit-root result for variables stationarity. The ADF and PP were applied to ascertain stationarity or non-stationarity presence. It is evident that all the variables are integrated in the same order, that is, I (1). This implies the absence of non-stationarity. Hence, suggesting the plausibility of strong cointegrating relationships among the variables. Consequently, the uniform integration order affirms the use of Johansen co-integration technique. (See Table for the co-integration results).

Table 3: Johansen Co-Integration Result

Date: 05/18/23 Time: 16:20		
Sample (adjusted): 1983 2019		
Included observations: 37 after adjustments		
Trend assumption: Linear deterministic trend		

Series: LNGDPPC LNGFCF LNFDI LNFD LNOP				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.529634	71.81283	69.81889	0.0344
At most 1	0.464967	43.90579	47.85613	0.1120
At most 2	0.324285	20.76502	29.79707	0.3725
At most 3	0.138196	6.261606	15.49471	0.6646
At most 4	0.020296	0.758691	3.841466	0.3837
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: E-View 9 Output

Table 3 presents the co-integration results among the integrated variables. As indicated by the co-integration results, there is 1 cointegrating eqn(s) at the 5% level. Thus, there possibility of long-term convergence among the integrated variables. Contextually, long-run relationship exists between finance and growth in Ghana. However, since the existence of cointegration vectors among the integrated variables does not imply the existence of causal influence or relationship between a model's pairs of variables, conducting short-run and long-run estimations are imperative.

Table 4: Short-Run Estimations

Dependent Variable: LNGDPPC
Method: Least Squares
Date: 05/18/23 Time: 16:48
Sample (adjusted): 1982 2019
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGFCF	0.403242	0.050341	8.010264	0.0000
LNFDI	0.112814	0.037690	2.993237	0.0053
LNFD	-0.259674	0.065412	-3.969834	0.0004
LNOP	-0.419199	0.065828	-6.368050	0.0000
U(-1)	-0.479510	0.149835	-3.200257	0.0031
C	9.644663	0.287099	33.59350	0.0000

R-squared	0.974919	Mean dependent var	11.78112
Adjusted R-squared	0.971000	S.D. dependent var	0.312615
S.E. of regression	0.053236	Akaike info criterion	-2.884219
Sum squared resid	0.090691	Schwarz criterion	-2.625652
Log likelihood	60.80015	Hannan-Quinn criter.	-2.792223
F-statistic	248.7741	Durbin-Watson stat	1.742248
Prob(F-statistic)	0.000000		

Source: E-View 9 Output

Table 4 presents the short-run estimations for finance-growth nexus in Ghana. Evidently, LNGFCF and LNFDI depicts positive coefficients values of 0.4032 and 0.1128 respectively, while LNFD and LNOP have negative coefficients values of -0.2596 and -0.4191. These imply that while LNGFCF and LNFDI positively influence LNGDPPC, the LNFD and LNOP negatively influence the LNGDPPC. All the variables are statistically significant, including the ECM (U), but with negative effects, which conforms with apriori. The R-squared and Adjusted R-squared values of 0.9749 (97.49%) and 0.9710 (97.10%) suggests that finance influence economic growth in Ghana to the tune of 97.49% and 97.10%. The prob(F-statistic) confirm the overall model significance. The Durbin-Watson stat value of 1.74 imply the absence of autocorrelation.

Table 5: Long-Run Estimation

Dependent Variable: LNGDPPC
Method: Least Squares
Date: 05/18/23 Time: 16:38
Sample: 1981 2019
Included observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGFCF	0.410572	0.058247	7.048835	0.0000
LNFDI	0.133627	0.043737	3.055250	0.0044
LNFD	-0.221403	0.075771	-2.921991	0.0061
LNOP	-0.475623	0.074945	-6.346271	0.0000
C	9.474049	0.328165	28.86976	0.0000

R-squared	0.966491	Mean dependent var	11.79650
Adjusted R-squared	0.962549	S.D. dependent var	0.323073
S.E. of regression	0.062522	Akaike info criterion	-2.587392
Sum squared resid	0.132905	Schwarz criterion	-2.374115
Log likelihood	55.45414	Hannan-Quinn criter.	-2.510870
F-statistic	245.1648	Durbin-Watson stat	1.012376
Prob(F-statistic)	0.000000		

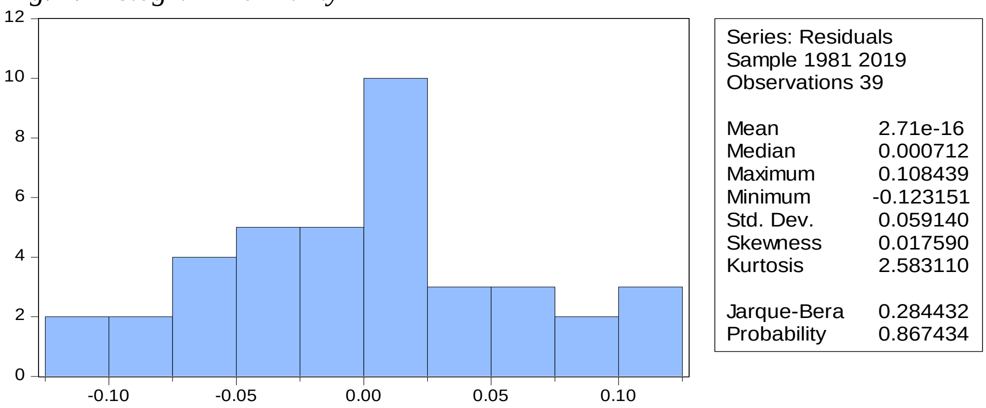
Source: E-View 9 Output

Table 5 presents the short-run estimations for finance-growth nexus in Ghana. The results are similar to the short-run estimations, except for the Durbin-Watson stat of 1.01, which suggests the possibility of first-order autocorrelation. Thus, due to the possibility of autocorrelation, some regression (residual and stability) diagnostics checks are performed.

Regression Diagnostics

Residual Diagnostics

Fig. 1. Histogram Normality



Source: E-View 9 Output

The Fig. 1 result reaffirms the variables' normality, given the less than 5% Jarque-Bera prob value.

Table 6: Serial Correlation and Heteroskedasticity Tests

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.515176	Prob. F(2,30)	0.6026

Obs*R-squared	1.261777	Prob. Chi-Square(2)	0.5321

Heteroskedasticity Test: Breusch-Pagan-Godfrey

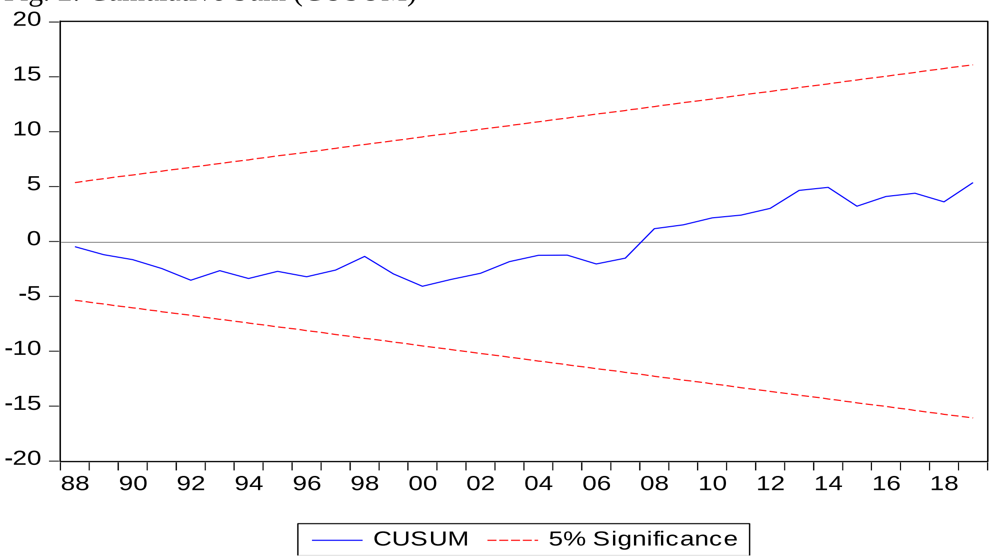
F-statistic	1.630983	Prob. F(4,34)	0.1890
Obs*R-squared	6.278593	Prob. Chi-Square(4)	0.1793
Scaled explained SS	3.777218	Prob. Chi-Square(4)	0.4370

Source: E-View 9 Output

The Table 6 presents the results for both serial correlation and heteroskedasticity tests. Observably, given the higher than 5% p-values for both tests F-statistic and Obs*R-squared, the study affirms the absence of autocorrelation and heteroskedasticity.

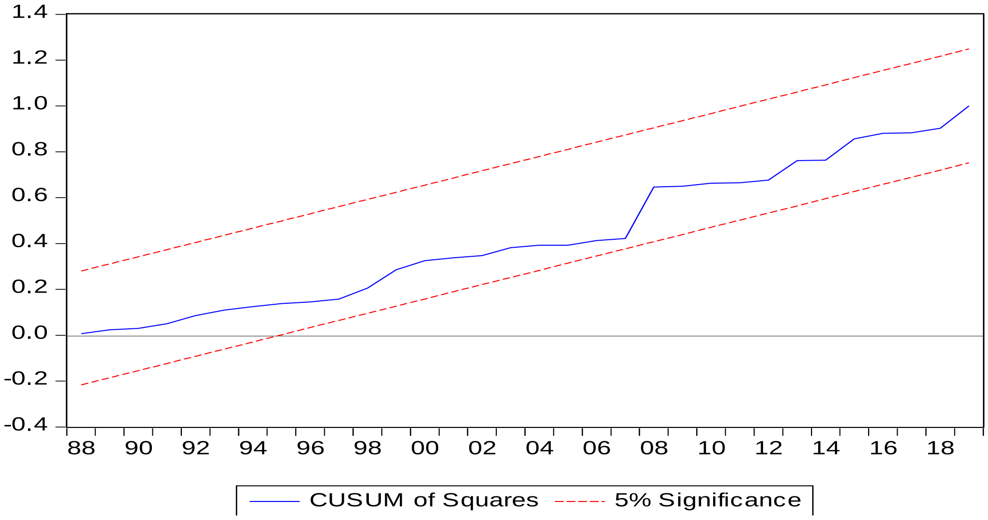
Stability Diagnostics (Recursive Estimates)

Fig. 2: Cumulative Sum (CUSUM)



Source: E-View 9 Output

Fig. 3: Cumulative Sum of Squares (CUSUM SQ)



Source: E-View 9 Output

The Fig. 2 and Fig. 3 ascertains the model stability, hence, the reliability of findings. Thus, given the blue line within the two red lines upper and lower bounds, it can therefore be said that the research model passes stability test.

Conclusion/Recommendations

Judging from our empirical analysis of the financial development and economic growth nexus in Ghana, it was evident that Gross Fixed Capital Formation (GFCF) and Foreign Direct Investment (FDI) depicts positive and significant influences on Economic Growth represented by Gross Domestic Product Per Capita while Foreign Debt (FD) and Trade Openness (OP) have negative and significant influence on Gross Domestic Product Per Capita. Hence, we can sufficiently note that there is a significant relationship between finance and economic development in Ghana; Post cold war.

It is recommended that the Ghanaian government should build more capacities to diversify their economy and open up her economy for economic transaction, with a view to stimulate her exports with the rest of the world. And engender economic growth and development.

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CAN CONFLICT MANAGEMENT AFFECT PERFORMANCE OF PHARMACEUTICAL FIRMS IN LAGOS NIGERIA? AN EMPIRICAL INVESTIGATION

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Abstract
In recent times, the pharmaceutical industry in Nigeria has been faced with challenges such as a shortage of qualified personnel, dwindling performance supply chain disruptions, poor conflict management strategies, ineffective research and development, etc. This study therefore examines the relationship between conflict management and organizational performance in selected pharmaceutical companies in Lagos State Nigeria. The descriptive survey design was used and the population of the study comprised all pharmaceutical companies headquartered in Lagos, Nigeria. Proportionate and random sampling techniques were used to select the sample size of 389 which was determined using Yamane's (1967) sample size formula. A closed-ended questionnaire was designed and administered through computer-assisted means (Google Form) with a 98% response rate. Findings revealed that the combined effect of both dependent and independent sub-variables revealed that conflict management has a weak positive and insignificant correlation with organizational performance in selected pharmaceutical companies in Lagos State, Nigeria (R = 0.085, p >0.005). The study recommends that the management of pharmaceutical companies in Lagos State, Nigeria, should formulate a comprehensive business policy aimed at implementing a contemporary conflict management approach across all departments, in order to enhance employee morale, it is essential for management to actively foster and endorse interpersonal relationships among colleagues. It is also recommended that investment in improving information and communication technology (ICT) tools should be considered to facilitate efficient and timely communication. By doing so, they would be able to effectively compete with their counterparts in the industry within Africa and globally.
Keywords: *Business policy, Collaboration, Communication technology, Conflict, Productivity*

Introduction

Conflict is an inherent daily experience encountered by individuals and organizations. Differences between individuals and groups are to be anticipated in a society where people with various interests, opinions, and values coexist. Conflict within organizations is widely recognized as a significant impediment to the efficient and effective operation of organizational activities and processes. It has become a commonplace occurrence within the workplace environment, as employees vie for authority, position, recognition, and limited resources. Organizational conflicts are inevitable, particularly due to the presence of diverse people inside the company. The everyday interactions and relationships among these persons may result in disputes and discontent within the organization (Awan & Saeed, 2015). Organizational conflict arises due to workers see that their interests are being undermined or impeded by the actions of others (Alshaabani, & Rudnák, 2023; Esbati, & Korunka, 2021). The method in which disagreements are managed inside companies has a significant impact on organizational effectiveness.

These differences result in conflicts and this is one of the key challenges in organizations at this time. Conflict among workers in an organization is rarely inevitable and more so the goals of different available stakeholders within an organization, board, management, and staff are often mismatched and incompatible (Badejo & Lawal, 2021; Iroh, & Nwosu, 2020; Nwokedi, Osaheghe, Okereke, & Gbenga, 2022). In the current difficulties and post-pandemic challenges in the Nigerian economy, and organizations and indeed as obtainable in many developing economies Conflict circumstances influence the overall efficacy of cooperation in organisations because they produce discord among organisational members, which has a detrimental impact on organisational performance. This is because fighting in organisations wastes valuable time and resources. However, we must keep in mind that no organisation is immune to internal conflict since every organisation is made up of various people with varying interests, aims, beliefs, and temperaments, and it is very difficult to harmonise these divergences (Wekhian, 2015; Onwuka, & Anichebe, 2020). Conflict in organisations is seen as a fundamental issue that may impede the smooth and successful operation of organisational activities and processes, and it has become important to have conflict management strategies within an organization. Studies have been conducted in different countries but the different contexts in which these studies have been done varied (Adeoye, & Adeniji, 2018; Adeoye, & Akinleye, 2021; Adewale, & Ajayi, 2019; Ajike, Akinlabi, Magaji & Sonubi, 2015; Ekwochi, Igwe, & Agbaji, 2023; John-Eke, & Akintokunbo, 2020; Maore, Mmbwanga, & Were, 2021; Olukayode, 2015; Onwuka, & Anichebe, 2020). Furthermore, a significant portion of previous research on conflict management and organizational performance has mostly concentrated on educational institutions, manufacturing, and private sector organizations. In light of the theoretical and practical significance of conflict management, the inconclusive evidence of the relationship between conflict management and organizational performance motivates the researcher to take a fresh look at the issues of conflict management in the context of emerging economies, specifically Nigeria. The primary objective is to have little or no conflict amongst the workforce in an organization. However, its effect on organizational performance remains controversial in the academic literature, (Olubiyi, 2022a), and studies examining the relationship between conflict management and organizational performance post-COVID-19 pandemic era and within emerging nations like Nigeria are limited. It has been discovered that research gaps exist in the few studies that have been completed in Nigeria, and those that have been conducted in the banking industry in Nigeria have been confined to a few sub-variables as measures. As a result, the goal of this paper is to fill the gap by providing background information on conflict management and organizational performance as well as examining this relationship in selected pharmaceutical companies in Lagos State the economic capital of Nigeria and one of the largest economies in Africa. Therefore, the objective of this study is to investigate the relationship between conflict management on the organizational performance of selected pharmaceutical companies in Lagos State Nigeria.

Literature Review

Conflict and conflict management in Organisations

Conflict, according to Adewole, Ogunyemi, and Otapo (2019), is a method of the public interface that comprises a scuffle over entitlements to resources, opinions, power, position, choices, desires, and interests. According to Weerarathna (2017), conflict management is the act of dealing with incompatibilities or disputes produced by conflict concerns such as diverse perspectives, limited resources, needs, and goals. Angelina (2014) was of the view that conflict is a situation of discord between two individuals or groups on issues of their interests. Adewole, Ogunyemi, and Otapo (2019), asserted that conflict is an interactive process that shows disagreement, discord, and incompatibility between or within social bodies. According to Abah, Itodo, and Haruna (2019), the methods for regulating and balancing conflict-ridden relationships in a workplace context are the focus of conflict management. Chui (2016) infers that in managing conflicts, administrators seek to know the causes of conflicts and the influence it will have on the organisation as a system; and, as necessary, apply suitable methods to quell the conflicts for the sake of progress toward the attainment of set goals. Conflict may have good outcomes when it serves as a catalyst for fostering innovation, promoting fresh perspectives on established circumstances, facilitating the elucidation of divergent viewpoints, and fostering the growth of individuals' capacities to navigate interpersonal disagreements. Conflict may have negative consequences when it engenders opposition to change, generates disorder within an organization or interpersonal relationships, cultivates a lack of trust, develops a sense of failure, or exacerbates misunderstandings (Adilo, 2019).In the views of Nwokedi, Osaheghe, Okereke, and Gbenga, (2022) conflict management is also seen as the process of handling incompatibilities or disparities brought about by issues such as differing opinions, limited resources, needs, and objectives (Adeolu-Akande, Sanya & Oyedokun, 2020). It involves having good knowledge about conflict styles, acquiring skills in conflict resolution and communication, and developing suitable strategies for the management of conflict. It is the practice of recognising and handling conflict in a fair, sensible, and efficient way, which requires human relations and management skills, including problem-solving, effective communication, and negotiation with a focus on interests. Alshaabani, & Rudnák, (2023) define conflict management as the procedure used to lessen conflict. Managers create policies and procedures in this process to make sure that conflict situations are handled properly.

Sources of Organisational Conflicts

Conflict could emanate internally or externally (Harada, Sivanadan & Ndanusa, 2018). Conflict elements that are internal to an organization are referred to as internal sources of conflict. According to Harada, Sivanadan, and Ndanusa (2018), the primary component of any internal source of conflict is the divergent interests of the organisational actors. In the attempts by these parties to share organisational resources, these interests bring about conflicts. According to Harada, Sivanadan, and Ndanusa (2018), managerial conflicts, personality conflicts, a lack of communication, a lack of accountability, transparency, and responsibility are examples of internal origins of conflict. As argued by Harada, Sivanadan, and Ndanusa (2018), managerial conflicts usually occur as a result of poor management decisions; personality differences happen as a result of a difference in personality traits, culture, and beliefs of organisational members; lack of communication becomes an issue when information on major decisions are not passed at all or not circulated on time to members of the organisation; and of course, when there is no transparency and accountability, there is room for conflict. On the other hand, external Sources of conflict are sources of conflict from outside of an organisation, which influence happenings in the organisation (Harada, Sivanadan, & Ndanusa, 2018). For instance, governmental regulations, market changes that put economic pressure on the economy, recession, domestic and international competition, and international free trade agreements. Also, changes in government, political pressures, and demands from special interest groups can frequently bring about conflict, especially in public enterprises and non-profit organisations. Relationships with clients and suppliers also affect customers' service and delivery of goods and services which also affect the organisation.

Causes of Organisational Conflicts

Adeolu-Akande, Sanya, and Oyedokun (2020) declared that the reasons for conflicts are classified into three groups: structural conflicts, communicational or data conflicts, and personal conflicts. They further explained that people occasionally lack the required information for sound decision-making; they have divergent views on relevant data, are misled, interpret information differently, and have contrasting assessment procedures. They, consequently, express themselves and interpret communication with others differently, which may lead to conflict. Also, Adeolu-

Akande, Sanya, and Oyedokun (2020) tied personal conflicts to individual differences. Hence, conflict was argued to be mainly a consequence of differences in personality, attitudes, and beliefs. The uniqueness of human minds goes with different perceptions of situations. This argument is in line assertion by Girukwayo (2018) who identified communication as the dominant element in all interpersonal conflict. According to De-Bono (2020), problematic personality traits are egocentrism, abrasiveness, laziness, and gossiping. He opined that personality conflict occurs at the workplace, not because of disagreement over a particular issue, rather, it is mainly because of individual personality traits which is an inherent factor. De-Bono (2020) related structural conflicts to conflicts that arise in organisations as a result of unclear reporting lines and roles. In organisations, structural conflicts have various structural factors, including specialisation, authority relationships, roles and expectations, and jurisdictional ambiguities (Harada, Sivanadan, & Ndanusa, 2018; Adeolu-Akande, Sanya & Oyedokun, 2020). Lack of responsibility clarity: When the obligations of the employees are not made clear, conflict results. The tasks and responsibilities of each team member must be clearly defined in advance in order to prevent these situations. These divergences can result in conflicts in an organisation (Prause & Mujtaba, 2015).

Nwokedi, Osaheghe, Okereke, and Gbenga, (2022) considered both individual and organisational factors in generating the causes of conflict. Hence, they identified: (i) the interpersonal dissonance that occurs when one person is suffering individual stress; (ii) the issues brought on by role conflict, a circumstance that develops when there is a disagreement regarding a person's job within an organization; (iii) the conflicts that result in people or groups of people rising against one another to pursue their own selfish goals; (iv) the miscommunications and disparities that result from persons approaching similar issues from very disparate perspectives; and (v) if not extensive and evenly distributed between the parties, the dependency needed for teamwork lead to failures in communication and interaction;

Organisational Performance

Maore, Mmbwanga, and Were, (2021) define organizational performance as the capacity of an organization to achieve its objectives via the efficient and effective use of resources. Therefore, it serves as empirical proof of the performance of individuals inside an organization, as quantified by metrics such as revenue, profit, growth, development, and expansion of the said business. According to Adewole, Ogunyemi, and Otapo (2019), defining, conceptualising, and measuring performance has not been an easy task. This accounts for the wide range of views and opinions regarding what should be seen as the definition and measurement parameters for organizational performance. According to Olubiyi, (2022a), refer to performance is the degree of economy, efficiency, and effectiveness shown by a certain program or activity. Performance, according to Ion and Criveanu (2016), is a subjective perception of reality. This subjective state of the concept explains why there are a multitude of opinions on what the concept is and how to measure it. But, according to Adilo (2019), the term performance refers to those behaviours or actions which are regarded as relevant to the goals of an organisation. He argued that performance itself cannot be said to be the outcome itself, consequences, or the result of behaviours or actions but rather performance should be seen to be the action itself. Thus, they maintained that performance is multidimensional such that specific tasks have different performance components. Nevertheless, some working definitions exist in literature to give an idea of what constitutes organizational performance.

Theoretical Review

Modern Conflict Theory

This theory was propounded by Wright Mills in 1964. According to Mills, competition between individuals with contrasting interests and resources leads to the development of social structures. The "uneven distribution of power and resources in the society" is influenced by these structures, which in turn have an impact on people and resources (Knapp, 1994). The Pentagon, the executive arm of government, and the cooperative elite came together to form the power elites of American society. According to Mills, these elites' interests diverged from those of the general populace. In his theory, the actions of the ruling class would lead to "increased escalation of conflict of weapons of mass destruction, and possibly the annihilation of the human race" (Knapp, 1994). A Guide to Theoretical Thinking by Alan Sears has an explanation of the conflict theory. Sears (2008) argues that rather than order and consensus, communities are constituted by variance that results in conflict. This inequality-based conflict must be resolved by fundamentally altering the social structures already in place since it fosters the development of new social relationships. The structural interests of the disadvantaged are also in opposition to the status quo, and if they are realized, they will bring about social change. Thus, they are viewed as agents of change rather than victims that one should feel sympathy for. Again, environments of abuse and tyranny stifle human potential, such as the capacity for creativity. Due to the so-called "civilization process" or "functional necessity" requirements, this and other attributes may not necessarily have to be underdeveloped. Actually, creativity serves as a catalyst for both economic growth and social change. The role of theory, in conclusion, is to realize human potential and change society, not to uphold the existing power structure.

Empirical Review

Relationship between conflict management and organizational performance

In many current and past studies, scholarly discourse shed light on the relationship between conflict management and organizational performance in many contexts. However empirically, the relationship between conflict management and organizational performance is mixed. This showed that a wide range of studies have been conducted particularly in the areas of causes of organisational conflict as well as conflict management strategies. For instance, Adeoye and Akinleye (2021) focussed their study on sources of organisational conflict, employee turnover, and organisational performance. The study conducted by John-Eke and Akintokunbo (2020) centered on the examination of conflict management as a means to enhance organizational performance via a comprehensive literature review. The primary focus was to ascertain the characteristics and importance of conflicts inside an organization, while also acknowledging the many degrees or categories of conflict. Subsequently, a suitable approach was determined in order to get favorable results that would enhance organizational efficiency. Relevant scholarly journals and academic textbooks. A comprehensive assessment was conducted on various online publications pertaining to management, organizational behavior, and other pertinent disciplines. The results of the study indicate that disputes do not always have negative implications for organizations. On the contrary, when conflicts are well handled, they may foster healthy rivalry, enhance team engagement, and facilitate improved communication. It is recommended that businesses engage in the re-education of their workers about conflict management constructs, with the aim of refuting the popular but inaccurate belief that conflict is inherently negative, detrimental, and should be completely avoided. Managers need to choose a strategy or many strategies that align with the specific nature and kind of conflict. Their study, particularly, was situated in Nigeria's service sector. However, Badejo and Lawal (2021) whose study institutions were commercial banks limited their study to conflict management strategies such as collaboration, negotiation, and mediation, in association with organisation performance. Again, Daramola and Oguntimehin (2021), in studying the impact of conflict management in the hospitality industry, considered the mediating roles of communication and job satisfaction among the employees of the organisations. Also, the study of Olumide and Oyebisi (2021), anchored in selected state-owned enterprises focuses on conflict management strategies of accommodation, compromise, collaboration, avoidance, and competition. In these studies, and even more, the dominant outcomes showed mixed significant outcomes where strategies such as the integrating and accommodating approaches were seen to have positive relationships with organisational performance. On the other hand, autocratic indices and avoidance approaches were seen to have negative relationships with organisational performance in many cases. Consequently, this study sought to bridge the gap and hypothesized thus:

H_{o1}: There is no significant relationship between conflict management on organizational performance of selected pharmaceutical companies in Lagos State, Nigeria post-pandemic.

Conceptual Model

Conflict management (X)

Figure 1: Author's Conceptual Model (2024)

The model sheds light on the relationship between conflict management and organizational performance, which is the research framework. The independent and dependent variables for this research are conflict management (X) and organizational performance (Y) respectively. This can be deduced mathematically since organizational performance is a function of conflict management; $y=f(x_1----x_n)$.

Hypothesis:

$y_{1i}=\alpha_0 + \beta_{1x1} + \mu_i$ ……………………Regression equation (1)

Methodology

The research is situated inside the pharmaceutical industry in Lagos State, Nigeria. The study used a survey research approach. The rationale for using the survey method is in its use for evaluating the perspectives, viewpoints, and sentiments of diverse cohorts, so enabling them to provide more reliable and candid feedback pertaining to the subject of investigation. This work used the research approach employed by Arokodare, and Olubiyi, (2023); Olubiyi, Adeoye, Jubril, Adeyemi, and Eyanuku (2023); Adeyemi, and Olubiyi, (2023); Olubiyi, Lawal, and Adeoye, (2022); Olubiyi, (2022a); Olubiyi, (2022b); Olubiyi, (2022c); Olubiyi, Jubril, Sojinu, and Ngari, (2022), Olubiyi, (2022), Omoyele, Olubiyi, Lanre-Babalola, Obadare, & Onikoyi, (2023); Ukabi, Uba, Ewum, and Olubiyi, (2023), and Uwem, Oyedele, and Olubiyi, (2021) with cross-sectional have adopted this method in their respective studies and found it useful. For the study population all the pharmaceutical companies in Lagos, Nigeria 75% of the leading pharmaceutical companies in Nigeria and are headquartered in Lagos State as found in National Agency for Food and Drug Administration and Control (NAFDAC) approved list of pharmaceutical companies. The research was framed within the framework of pharmaceutical firms, as a result of the intense competitiveness within the country, the presence of international operations, the substantial population size, and the availability of relevant data. The sampling units are the regular employees and top and middle-level managers of the four (4) pharmaceuticals companies namely: Emzor Pharmaceuticals Industries Ltd, Fidson Healthcare Plc, May and Baker Plc, and Greenlife Pharmaceuticals Ltd. These companies are chosen based on their listings among the top pharmaceutical companies in Nigeria as at December 2022 (Targba, 2023). Table 1 and Table 2 below present the information:

Table 1

Institutions	Non-Management Staff
Emzor Pharmaceuticals Ind. Ltd	840
Fidson Healthcare Plc	650
May and Baker Plc	255
Greenlife Pharmaceuticals Ltd	164
Total	**1909**

Source: Researchers' computation (2024)

The sample size for this study was estimated using the Yamane (1967) Sample size technique and the application of the formula produced a sample size of 389. The number of respondents from each study company was drawn proportionately from the four study institutions.

Table 2

Institutions	Non-Management Staff	Sample Selected
Emzor Pharmaceuticals Ind Ltd	840	145
Fidson Healthcare Plc	650	112
May and Baker Plc	255	44
Greenlife Pharmaceuticals Ltd	164	28
Total	**1909**	**389**

Source: Researchers' computation (2024)

Data Analysis

389 copies of the questionnaire were properly filled and returned through computer-assisted means (Google form). This represented an overall positive response rate of 98% as presented in Table 3. Bryman and Bell (2011) posit that a response rate of ≥50% is appropriate to analyze the study's findings. A response rate of 98% was deemed to be very good for this study, thus the researcher proceeded with the data analysis. The detail of the responses is shown in Table 3

Table 3: Response Rate

Response Rate	Frequency	Percent (%)
Returned and used	389	98
Unreturned	6	2
Total	395	100

Source: Researchers' computation (2024)

Table 4: Restatement of Research Objective and Research Question

Objective: Examine the relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria

Research Question: What is the relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria?

Analysis of the Research Objective

H_0: There is no significant relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria.

H_1: There is a significant relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria.

The Pearson Product-Moment Correlation Coefficient (PPMC) statistical tool was used to test the hypothesis. Data for conflict management and organisational performance were generated by adding together responses of all items under the conflict management and organisational performance sub-variables to create a composite index of conflict management and organisational performance respectively. The results of the analysis are presented in Table 4

Table 4: Correlation Analysis between Conflict Management and Organisational Performance

Correlations			
		Conflict Management	**Organisational Performance**
Conflict Management	Pearson Correlation	1	0.085
	Sig. (2-tailed)		0.094
	N	389	389
Organisational Performance	Pearson Correlation	0.085	1
	Sig. (2-tailed)	0.094	
	N	389	389

Source: Researchers' computation (2024)

Results in Table 4 revealed that conflict management has a weak positive and insignificant correlation with organisational performance in selected pharmaceutical companies in Lagos State, Nigeria (R = 0.085, p >0.005). This implies that an increase in conflict management is not significantly associated with an increase in organisational performance at selected pharmaceutical companies in Lagos State, Nigeria. The result suggests that there is a lack of proper and effective conflict management in selected pharmaceutical companies in Lagos State, leading to poor organisational performance. Therefore, the subsequent effect of no significant relationship is not rejected indicating that there was no significant relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria. Therefore, the null hypothesis was not rejected.

Discussion of Finding

This study investigated the relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria. The result of the hypothesis revealed that there was no significant relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria. This is surprising but shows a lack of effective conflict management strategies in selected pharmaceutical companies in Lagos State, Nigeria. Improper conflict management at the workplace may seriously undermine workers' performance and productivity. This situation may also put stress on the employees and cause them to lose focus on delivering on objectives and organisational priorities (CIPD Report, 2020). The finding of this study contradicts many studies on conflict management and organisational performance (Adeoye, & Adeniji, 2018; Adeoye, & Akinleye, 2021; Adesina, & Owoyemi, 2020; Badejo & Lawal, 2021; Mohammed, & Abubakar, 2018); Ekwochi, Igwe, & Agbaji, 2023; Mare, Mmbwanga, & Were, 2021; Nwokedi, Osaheghe, Okereke, & Gbenga, 2022; Onwuka, & Anichebe, 2020; Okafor & Okorie, 2021). The interesting fact is that many of the previous studies have focused on different sectors outside the pharmaceutical companies. Mohammed, & Abubakar, (2018) conducted a study on conflict management and organisational performance in Nigeria's: The mediating role of job satisfaction and found a significant positive effect of conflict management on job satisfaction and organisational performance. It also showed that effective conflict management strategies could lead to improved job satisfaction and organisational performance. Okafor and Okorie (2021) results showed that conflict management significantly affects organisational performance and that communication moderates the relationship between conflict management and organisational performance. The study also found that effective communication enhances the relationship between conflict management and organisational performance, while ineffective communication weakens the relationship.

Another study by Olumide and Oyebisi (2021) indicated that conflict management had a significant positive effect on organisational performance. Specifically, the study found that the conflict management strategies of accommodation, compromise, and collaboration had significant positive effects on organisational performance. However, avoidance and competition strategies were found to have a negative effect on organisational performance. Moreover, the finding of the study lacks support from the study of Yusuf (2021) which found a significant positive impact of conflict management on organisational performance in Nigerian manufacturing firms. Specifically, the study identified several conflict management strategies, including negotiation, collaboration, and compromise, that significantly influence organisational performance. Adebayo and Oladunni (2020) in a study in Nigeria found a significant positive relationship between conflict management and organisational performance in the banking industry. Furthermore, another study by Adesina and Owoyemi (2020) showed that there was a significant positive impact of conflict management strategies on organisational performance in Nigerian insurance companies. Additionally, the study identified key conflict management strategies that considerably influenced organisational performance, viz: collaboration, competition, and avoidance. In contrast, Adewale Oke and Akinwumi (2020) found that workplace conflict had a negative impact on organisational performance in Nigeria.

Conclusion and Recommendation

The study examined the main objective of the study which is the relationship between conflict management and organisational performance in selected pharmaceutical companies in Lagos State, Nigeria. The major findings of the study showed that conflict management had a significant and positive relationship with organisational performance (R = 0.085, p >0.005). Based on the findings, it is recommended that pharmaceutical companies in the studied area invest in improving their information and communication technology (ICT) tools to facilitate efficient and timely communication. The management of pharmaceutical companies in Lagos State, Nigeria, should prioritize the organizing of seminars and workshops on organizational conflict management periodically for the workers. This initiative will facilitate the acquisition of knowledge by employees about conflict and its efficient management, hence enhancing both individual and organizational performance. The formulation of a comprehensive business policy aimed at implementing a contemporary conflict management approach across all departments can equally be considered. This strategic initiative is crucial for enhancing organizational profitability and ensuring long-term sustainability. This policy would serve as the cornerstone for actions implemented or proposed by the companies regarding market dominance. It is advisable for pharmaceutical companies in Lagos, Nigeria, to adopt more innovative tools in order to maintain their current level of leadership. It is important for the company to diligently uphold control processes in order to effectively engage employees and foster a sense of ownership. This will ultimately enhance overall satisfaction levels. By doing so, they would be able to effectively compete with their counterparts in the industry, both within Africa and on a global scale. Consequently, this would significantly improve their overall competitiveness.

Limitations and Future Study Direction

Although the study's findings offered fresh insights into the connections between conflict management and organizational performance in selected pharmaceutical companies in Lagos State, Nigeria, the results might have been constrained by the following limitations which are duly noted. However, it is believed that a few of them can serve as valuable stepping stones for future research. The fact that this study only concentrated on pharmaceutical companies in Lagos State Nigeria limits the generalizability of its findings. It is recognized that the findings and implications of this paper are situated within Nigeria, and primarily pharmaceutical companies were the focus, which may limit the generalizability of the findings. Therefore, the cross-sectional nature of the paper prevents the author from making strong claims of causality. This study was undertaken within a limited timeframe of five to six months in the year 2023. The limited timeframe of research has resulted in a lack of full understanding of conflicts since size alone does not provide a holistic perspective.

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IMPACT OF MONETARY POLICY ON ECONOMIC GROWTH IN NIGERIA

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Abstract
As economic challenges pose serious constraints to the Nigeria financial system thus becoming more vicious on the country's economic and business climate, adjusting the monetary policy of the nation becomes imperative. This study therefore evaluates the impact of monetary policy on economic growth in Nigeria using econometric regression technique of the Ordinary Least Square (OLS). From the result of the OLS, it is observed that monetary policy rate, demand deposit, cash reserve ratio and liquidity ratio have a positive relationship with economic growth. This means that when monetary policy rate, demand deposit, cash reserve ratio and liquidity ratio are increasing, it will bring about more growth in Nigerian economy. On the other hand bank interest rate and exchange rate have a negative impact on economic growth in Nigeria. The findings of the study also show that monetary policy rate, demand deposit, cash reserve ratio, liquidity ratio, bank interest rate and exchange rate are statistically significant in explaining the economic growth in Nigeria. Although, bank interest rate and exchange rate are negative, the negativity has a significant impact in explaining the Nigerian economic growth.Based on the findings the following recommendations are made: The government should as matter of urgency make monetary policy that cuts interest rate. The will help lower the cost of borrowing thus resulting in higher investment activity and the purchase of consumer durables. It is important that the apex financial institution make and implement policies that will encourage demand deposit. This will reduce the cost of handling cash and other associated risks which will lead to increase in financial sector contribution to GDP among others.
Key words: *Monetary Policy Rate, Demand Deposit, Cash Reserve Ratio, Liquidity Ratio, Bank Interest Rate, Exchange Rate, GDP*

Introduction

The Apex bank of a sovereign country in order to achieve some macroeconomic stability or objectives, comes up with monetary policy which is a measure aimed at regulating the flow of money within a given economy. In the case of Nigeria, the Central Bank of Nigeria (CBN), acting on behalf of the Federal Government of Nigeria, takes direct actions to regulate the value, costs and supply of money in order to actualize monetary and price stability and so put the economy on the path of growth (CBN, 2013). In effect, monetary policy is the conscious and deliberate action taken by the CBN to control the flow, cost and total stock of money circulating in the country in order to achieve internal and external balance of payments and other macroeconomic objectives. However, the monetary policy of the CBN is not static but often made to reflect the economic reality of the time; therefore, it can change with each passing year as the monetary authorities reflect on the impact of the total stock of money in circulation to the economy. The need to regulate the liquidity or money in circulation is on the basis that there is a strong correlation between the quantity of money in supply and economic activities and where supply exceeds the national output it will push prices up and create high inflation in the system. Thus, due to the sensitive nature and importance of money in the economic life of citizens and the growth of the nation, stakeholders are constantly interested in the monetary policy releases from the CBN (Frank, Ogoja, & Ayaundu, 2020; Owalabi & Adegbite, 2014; Ovat, et al, 2022).

Extant literature posits that some main objectives of monetary policies have been to stabilize prices arising from inflation, maintain balance of payments equilibrium, promote employment and sustainable development (Chimobi and Uche, 2010; Daniel & Inim, 2020). Different methodologies are applied by the monetary authority to achieve its monetary policies; such as, through direct monetary controls, exchange rates, interest rates or some market mechanisms; depending on the economic realities facing the country (CBN, 2006). Ogunjimi (1997) cited in Ayodeji and Oluwole (2018) revealed three basic monetary policy decisions which could be made by monetary authorities as: the manipulation of money in circulation, the interest rate benchmark, control through a well-functioning credit market and banking system. Consequently, monetary policies depict those critical actions tailored by monetary authorities to influence the direction of activities within the monetary sector. Therefore the CBN in its traditional mandate to oversee both fiscal and monetary activities in the financial market has kept stock of the money in circulation through various means including appropriate interest rates adjustments to promote investment and growth, setting up of money markets and issuing of treasury bills, bonds etc. to mop up excess cash in the system while also creating a means of capital accumulation or asset for investors (Oseni & Oyelade, 2023; Ogundipe & Akinbobola, 2020).

Extant literature supports the view of a correlation between the quantity of money in circulation and economic activities to grow the economy (Ufoeze et al, 2018; Ovat, et al, 2022). Monetary policy by the central bank goes a long way to determine the flow of money and financial interplay in the economy by impacting on money deposit bank’s ability to provide credit facilities. Where banks are favourably disposed to give out credits to businesses owners, this enables businesses to grow and expand thereby impacting on the economy. Monetary policy also impact the money market and influences the direction of economic activity with regards to the exchange rate of the Naira to other currencies. Any fluctuations in the exchange rate greatly impacts on the prices of commodities, imports and exports. With the myriad of problems facing the country such as high interest rates and inflation resulting in high prices of commodities, unemployment, low investment and biting poverty which are militating against economic growth, there is need for the monetary authorities to come out with a monetary policy that can impact the economy of the country by effectively addressing these constraints (Balogun, 2021;. Ndife, 2020). This study therefore undertakes to examine the impact of monetary policy on economic growth in Nigeria.

Statement of Research Problem

The importance of monetary policy has become more visible today as economic challenges pose serious constraints to the financial system. With the authorities in Nigeria consistently coming up with monetary policies supposedly well thought out, it was expected that the financial sector would have played a major role in pulling the country back to the path of economic growth but the reverse has been the case. As observed in the literature, the dual nature of Nigeria's financial system has hindered the effective execution of these monetary policies. More so, up until recently when the CBN came out with a cashless policy, the payment and transaction systems in Nigeria have been cash based which increase the quantity of money in circulation and may have been responsible for the inability of monetary policies to effectively impact on the economy.

Despite the churning out of monetary policies to achieve macroeconomic goals, the country is still witnessing incidences of high rate of unemployment, ravaging poverty, high inflation, unacceptable exchange rate, high cost of importation, low export, unstable prices of commodities etc., thus casting doubts on the impact of monetary policy on Nigeria's economic growth. Many studies have been undertaken on the impact of monetary policy on economic growth in Nigeria with the general agreement that monetary policy is not the only factor responsible for economic growth thus warranting further empirical probe into the actual impact of monetary policy on economic growth in Nigeria. This study therefore investigates the impact of monetary policy on economic growth in Nigeria deploying specifically key variables of monetary policy such as monetary policy rate, demand deposit, cash reserve ratio, liquidity ratio, bank interest rate and exchange rate.

Objective of the study

The main objective of the study is to examine the impact of monetary policy on economic growth in Nigeria. Specifically, the study seeks:

i. Determine the effect of monetary policy rate on economic growth in Nigeria
ii. Ascertain the effect of demand deposit on economic growth in Nigeria
iii. Examine the effect of cash reserve ratio on economic growth in Nigeria
iv. Evaluate the effect of liquidity ratio on economic growth in Nigeria
v. Determine the effect of bank interest rate on economic growth in Nigeria
vi. Ascertain the effect of exchange rate on economic growth in Nigeria

Research hypotheses

1. H_0: Monetary policy rate have no significant impact on economic growth in Nigeria.
   H_1: Monetary policy rate have a significant impact on economic growth in Nigeria.
2. H_0: Demand deposits have no significant impact on economic growth in Nigeria.
   H_1: Demand deposits have a significant impact on economic growth in Nigeria.
3. H_0: Cash reserve ratio has no significant impact on economic growth in Nigeria.
   H_1: Cash reserve ratio has a significant impact on economic growth in Nigeria.
4. H_0: liquidity ratio has no significant impact on economic growth in Nigeria.
   H_1: liquidity ratio has a significant impact on economic growth in Nigeria.
5. H_0: Effect of bank interest rate has no significant impact on economic growth in Nigeria.
   H_1: Effect of bank interest rate has a significant impact on economic growth in Nigeria.
6. H_0: exchange rate has no significant impact on economic growth in Nigeria.
   H_1: exchange rate has a significant impact on economic growth in Nigeria.

Methodology

Theoretical framework

To conduct the investigation that examines the effect of monetary policy on economic growth, many researchers have employed a functional form of equation to write home their studies. The functional form model which various researchers have adopted in its analysis can be stated as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + ... + \beta_nX_n + \mu_i \qquad . \qquad . \qquad (1)$$

Where, Y = Dependent variable

$X_1, X_2, X_3, ..., X_n$ = Explanatory variables

$\beta_1, \beta_2, \beta_3, ..., \beta_n$ = the partial slope coefficients

β_0 = the intercept

μ_i = the error term (it is normally distributed)

In this stead and in tandem with our research objective, question and hypothesis, we shall adapt the functional form of equation which many other researchers have employed in their analysis. Let examine few research studies that have adapted the functional form model in its analyses in examining the impact of monetary policy on economic growth.

To indulge in empirical analysis between monetary policy and economic growth in Nigeria, Udude (2013) used real gross domestic product (RGDP) as endogenous variable while broad money supply (M2), interest rate (INT), exchange rate (EXR), liquidity ratio (LR) were used as the exogenous variables.

The study model is specified thus:

$$GDP = f(M2, INT, EXR, LR) \qquad . \qquad . \qquad . \qquad . \qquad . \qquad (2)$$

$$GDP = b_0 + b_1M2 + b_2INT + b_3EXR + b_4LR + \mu \qquad . \qquad . \qquad (3)$$

Where: RGDP = real gross domestic product, M2 = broad money supply, INT = interest rate, EXR = exchange rate, LR = liquidity ratio, μ= stochastic variable or error term, b0 = constant term, b1, b2, b3 and b4 = parameters to be estimated

The model employed by Chipote (2012) in its study is built based on the modification of the model in Dele (2007). The model specifies the endogenous variable (Gross Domestic Product) as a function of the money supply, repo rate, inflation and exchange rate. The model is specified as follows:

GDP = f (MS, REPO, CPI, EXC) . . . . . (4)

Where: GDP = Gross Domestic Product

MS= Money supply measured by M3

REPO = Repo Rate

CPI = Consumer Price Index

EXC = Exchange Rate

Model specification

In order to achieve a robust result in the context of this study, we adopt the knowledge gained from the above theoretical framework. The model for this study will be based on the insight gain from Udude (2013) and Chipote (2012) type of model and modifications made. This modification was the introduction of monetary policy rate, demand deposit (demand deposit is used in this study as part of money supply), cash reserve ratio and bank interest rate in the model. Thus, economic growth will be proxied by gross domestic product (GDP) as dependent on or a function of monetary policy rate (MPR), demand deposit (D3), cash reserve ratio (CRR), liquidity ratio (LQR), bank interest rate (BINT), and exchange rate (EXR). Thus, the model of this study is stated as follow;

The functional form of the model is:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6)$ . . . . . (5)

The mathematical form of the model is:

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6$. . . (6)

The econometric form of the model is:

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \mu_i$ . . (7)

Where Y = Economic growth proxy by gross domestic product (GDP)

X_1 = Monetary Policy Rate (MPR)

X_2 = Demand Deposit (D3)

X_3 = Cash Reserve Ratio (CRR)

X_4 = Liquidity Ratio (LQR)

X_5 = Bank Interest Rate (BINT)

X_6 = Exchange Rate (EXR)

β_0 = the intercept of the model

β_1 - β_6 = parameters of the regression coefficients
μ_i = disturbance error term

Description of variables

1. **Gross Domestic Product (GDP):** GDP is the market value of all officially recognized final goods and services produced within a country in a year, or over a given period of time. GDP per capital is often used as an indicator of a country's material standard of living.
2. **Monetary policy rate (MPR):** This is the rate at which the central bank or currency board uses to determine the size and rate of growth of the money supply, which in turn affects interest rates. This is maintained through actions such as increasing the interest rate, or changing the amount of money banks need to keep in the vault (bank reserves).
3. **Demand Deposit (D3):** Demand deposit refers to a type of account held at banks and financial institutions that may be withdrawn at any time by the customer. D3 is a category of the money supply that includes Negotiable Order of Withdrawal (NOW) accounts as well as physical money such as coins and currency. D3 is also funds held in an account from which deposited funds can be withdrawn at any time without any advance notice to the depository institution
4. **Cash reserve ratio (CRR):** This is a specific minimum fraction of the total deposits of customers, which banks have to hold as reserves either in cash or as deposits with the Central Bank. CRR is set according to the guidelines of the central bank of a country.
5. **Liquidity ratio (LQR):** It means a bank regulation that sets the minimum reserves each bank must hold. It expresses a bank's ability to repay short-term creditors out of its total cash.
6. **Bank interest rate (BINT):** Interest rate is employed as an explanatory variable in the course of this study because it shows the rate of interest that causes the change in banking performance. It is the rate at which interest is paid by a borrower (debtor) for the use of money that they borrow from a lender (creditor).
7. **Exchange Rate (EXR):** The rate at which a unit of the currency of one country can be exchange for a unit of the currency of another country. These variables were chosen because of the role of exchange rate in foreign exchange market to know if it has an impact on economic growth in Nigeria as a monetary policy instrument.

Method of data analysis

The economic technique employed in the study is the ordinary least square (OLS). This is because the OLS computational procedure is fairly simple a best linear estimator among all unbiased estimation, efficient and shown to have the smallest (minimum variance) thus, it become the best linear unbiased estimator (BLUE) in the classical linear regression (CLR) model. Basic assumptions of the OLS are related to the forms of the relationship among the distribution of the random variance (μ_i).

OLS is a very popular method and in fact, one of the most powerful methods of regression analysis. It is used exclusively to estimate the unknown parameters of a linear regression model. The Economic views (E-views) software will be adopted for regression analysis.

Stationarity (unit root) test:

The importance of this test cannot be overemphasized since the data to be used in the estimation are time-series data. In order not to run a spurious regression, it is worthwhile to carry out a stationary test to make sure that all the variables are mean reverting that is, they have constant mean, constant variance and constant covariance. In other words, that they are stationary. The Augmented Dickey-Fuller (ADF) test would be used for this analysis since it adjusts for serial correlation.

Decision rule: If the ADF test statistic is greater than the MacKinnon critical value at 5% (all in absolute term), the variable is said to be stationary. Otherwise it is non stationary.

Evaluation of parameter estimates

The estimates obtained from the model shall be evaluated using three (3) criteria. The three (3) criteria include:

1. The economic a priori criteria.
2. The statistical criteria: First Order Test
3. The econometric criteria: Second Order Test

Evaluation based on economic a priori criteria

This could be carried out to show whether each regressor in the model is comparable with the postulations of economic theory; i.e., if the sign and size of the parameters of the economic relationships follow with the expectation of the economic theory. The a priori expectations, in tandem with the manufacturing sector growth and its determinants are presented in Table 3.1 below, thus:

Table 1: Economic a priori expectation

Parameters	Variables		Expected Relationships
	Regressand	Regressor	
β_0	GDP	Intercept	+/-
β_1	GDP	MPR	+
β_2	GDP	D3	+
β_3	GDP	CRR	+
β_4	GDP	LQR	+
β_5	GDP	BINT	-
β_6	GDP	EXR	+/-

Source: Researchers compilation

A positive '+' sign indicate that the relationship between the regressor and regressand is direct and move in the same direction i.e. increase or decrease together. On the other hand, a '-' shows that there is an indirect (inverse) relationship between the regressor and regressand i.e. they move in opposite or different direction.

Evaluation based on statistical criteria: First Order Test

This aims at the evaluation of the statistical reliability of the estimated parameters of the model. In this case, the F-statistic, standard error, t-statistic, Co-efficient of determination (R^2) and the Adjusted R^2 are used.

The Coefficient of Determination (R^2)/Adjusted R^2

The square of the coefficient of determination R^2 or the measure of goodness of fit is used to judge the explanatory power of the explanatory variables on the dependent variables. The R^2 denotes the percentage of variations in the dependent variable accounted for by the variations in the independent variables. Thus, the higher the R^2, the more the model is able to explain the changes in the dependent variable. Hence, the better the regression based on OLS technique, and this is why the R^2 is called the co-efficient of determination as it shows the amount of variation in the dependent variable explained by explanatory variables.

However, if R^2 equals one, it implies that there is 100% explanation of the variation in the dependent variable by the independent variable and this indicates a perfect fit of regression line. While where R^2 equals zero. It indicates that the explanatory variables could not explain any of the changes in the dependent variable. Therefore, the higher and closer the R^2 is to 1, the better the model fits the data. Note, the above explanation goes for the adjusted R^2.

The F-test: The F-statistics is used to test whether or not, there is a significant impact between the dependent and the independent variables. In the regression equation, if calculated F is greater than the F table value, then there is a significant impact between the dependent and the independent variables in the regression equation. While if the calculated F is smaller or less than the table F, there is no significant impact between the dependent and the independent variable.

Evaluation based ob econometric criteria: Second Order Test

This aims at investigating whether the assumption of the econometric method employed are satisfied or not. It determines the reliability of the statistical criteria and establishes whether the estimates have the desirable properties of unbiasedness and consistency. It also tests the validity of non-autocorrelation disturbances. In the model, Durbin-Watson (DW), unit root test, co-integration test are used to test for: autocorrelation, multicolinearity and heteroskedasticity.

Test for Autocorrelation

This test is carried out to see if the error or disturbance term (μ_t) is temporarily independent. That is, the values of μ_t at every different period are not the same. It tests the validity of non autocorrelation disturbance. The Durbin-Watson (DW) test is appropriate for the test of First-order autocorrelation and it has the following criteria.

1. If d* is approximately equal to 2 (d* =2), we accept that there is no autocorrelation in the function.
2. If d*= 0, there exist perfect positive auto-correlation. In this case, if $0 < d^* < 2$, that is, if d* is less than two but greater than zero, it denotes that there is some degree of positive autocorrelation, which is stronger the closer d* is to zero.
3. If d* is equal to 4 (d*=4), there exist a perfect negative autocorrelation, while if d* is less than four but greater than two ($2 < d^* < 4$), it means that there exist some degree of negative autocorrelation, which is stronger the higher the value of d*.

Test for Multicolinearity

This means the existence of an exact linear relationship among the explanatory variable of a regression model. It is use to determine whether there is a correlation among variables.

Decision Rule: From the rule of Thumb, if correlation coefficient is greater than 0.8, we conclude that there is multicolinearity but if the coefficient is less than 0.8 there is no multicolinearity. Also, reject the null hypothesis (H_0), if any two variables in the model are in excess of 0.8 or even up to 0.8. Otherwise we reject.

Test for Heteroscedasticity

The essence of this test is to see whether the error variance of each observation is constant or not. Non-constant variance can cause the estimated model to yield a biased result. White's General Heteroscedasticity test would be adopted for this purpose.

Decision Rule: We reject H_0 if $F_{cal} > F_{tab}$ at 5% critical value. Or alternatively, we reject H_0 (of constant variance i.e., homoskedasticity) if computed F-statistics is significant. Otherwise accept at 5% level of significance.

Test for research hypotheses

This study will test the research hypothesis using t-test. The t-statistics test tells us if there is an existence of any significance relationship between the dependent variable and the explanatory variables. The t-test will be conducted at 0.05 or 5% level of significance.

Decision rule**:** Reject H_0 if $t_{cal} > t_{\alpha/2}$, (n-k). Otherwise, we accept.

Nature and source of data

All data used in this research are secondary time series data which are sourced from the CBN annual statistical bulletin.

Data Presentation, Data Analysis

Summary of Stationary Unit Root Test

Establishing stationarity is essential because if there is no stationarity, the processing of the data may produce biased result. The consequences are unreliable interpretation and conclusions. We test for stationarity using Augmented Dickey-Fuller (ADF) tests on the data. The ADF tests are done on level series, first and second order differenced series. The decision rule is to reject stationarity if ADF statistics is less than 5% critical value, otherwise, accept stationarity when ADF statistics is greater than 5% criteria value. The result of regression is presented in table 2 below.

Table 2: Summary of ADF test results

Variables	ADF Statistics	Lagged Difference	1% Critical Value	5% Critical Value	10% Critical Value	Order of Integration
GDP	-6.015868	1	-3.653730	-2.957110	-2.617434	$I(1)$
MPR	-7.702025	1	-3.653730	-2.957110	-2.617434	$I(1)$
D3	-6.276250	1	-3.653730	-2.957110	-2.617434	$I(1)$
CRR	-4.308355	1	-3.653730	-2.957110	-2.617434	$I(1)$
LQR	-6.342362	1	-3.653730	-2.957110	-2.617434	$I(1)$
BINT	-10.05319	1	-3.653730	-2.957110	-2.617434	$I(1)$
EXR	-5.229408	1	-3.653730	-2.957110	-2.617434	$I(1)$

Source: Researchers computation

Evidence from unit root table above shows that none of the variables are stationary at level difference that is, $I(0)$, rather all the variables are stationary at first difference, that is, $I(1)$. Since the decision rule is to reject stationarity if ADF statistics is less than 5% critical value, and accept stationarity when ADF statistics is greater than 5% criteria value, the ADF absolute value of each of these variables is greater than the 5% critical value at their first difference but less than 5% critical value in their level form. Therefore, they are all stationary at their first difference integration.

Presentation of Regression Result

The result of the regression test is presented in table 3 below.

Table 3: Summary of regression results

Dependent Variable: GDP
Method: Least Squares
Sample: 1999 2022
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.552512	2.671037	2.827380	0.0077
MPR	0.529802	0.184664	2.867894	0.0069
D3	0.457593	0.159260	2.872069	0.0068
CRR	0.020779	0.000300	2.920720	0.0039
LQR	0.133614	0.052661	2.533766	0.0164
BINT	-0.337062	0.102290	-3.292021	0.0018
EXR	-0.206641	0.013299	-2.503084	0.0180
R-squared	0.669167	F-statistic		12.62281
Adjusted R-squared	0.576426	Prob(F-statistic)		0.000002
S.E. of regression	2.099219	Durbin-Watson stat		1.961481

Source: Researchers computation

To discuss the regression results as presented in table 3, we employ economic a priori criteria, statistical criteria and econometric criteria.

Discussion based on economic a priori criteria

This subsection is concerned with evaluating the regression results based on a priori (i.e., theoretical) expectations. The sign and magnitude of each variable coefficient is evaluated against theoretical expectations.

From table 3, it is observed that the regression line have a positive intercept as presented by the constant (c) = 7.552512. This means that if all the variables are held constant or fixed (zero), GDP will be valued at 7.552512. Thus, the a-priori expectation is that the intercept could be positive or negative, so it conforms to the theoretical expectation.

It is observed in table 3 that all the variables have a positive impact on economic growth in Nigeria. Monetary policy rate, demand deposit, cash reserve ratio and liquidity ratio have a positive impact on economic growth in Nigeria while bank interest rate and exchange rate has a negative impact on economic growth in Nigeria, although, exchange rate was expected to have either a positive or negative impact on the Nigerian economy.

From the regression analysis, it is observed that all the variables conform to the a priori expectation of the study. Thus, table 4 summarises the a priori test of this study.

Table 4: Summary of economic a priori test

Parameters	Variables		Expected Relationships	Observed Relationships	Conclusion
	Regressand	Regressor			
β_0	GDP	Intercept	+/-	+	Conform
β_1	GDP	MPR	+	+	Conform
β_2	GDP	D3	+	+	Conform
β_3	GDP	CRR	+	+	Conform
β_4	GDP	LQR	+	+	Conform
β_5	GDP	BINT	+	-	Conform
β_6	GDP	EXR	+/-	-	Conform

Source: Researchers compilation

Discussion based on statistical criteria

This subsection applies the R^2, adjusted R^2, the S.E and the f–test to determine the statistical reliability of the estimated parameters. These tests are performed as follows:

From our regression result, the coefficient of determination (R^2) is given as 0.669167, which shows that the explanatory power of the variables is moderately high and/or strong. This implies that 67% of the variations in the growth of the economic growth are being accounted for or explained by the variations in monetary policy rate, demand deposit, cash reserve ratio, liquidity ratio, bank interest rate and exchange rate in Nigeria. While other determinants of economic growth not captured in the model explain just 33% of the variation in economic growth in Nigeria.

The adjusted R^2 supports the claim of the R^2 with a value of 0.576426 indicating that 58% of the total variation in the dependent variable (economic growth is explained by the independent variables (the regressors)). Thus, this supports the statement that the explanatory power of the variables is moderately high and strong.

The F-statistic: The F-test is applied to check the overall significance of the model. The F-statistic is instrumental in verifying the overall significance of an estimated model. The hypothesis tested is:

H_0: The model has no goodness of fit
H_1: The model has a goodness of fit
Decision rule: Reject H_0 if $F_{cal} > F_{\alpha}$ (k-1, n-k) at $\alpha = 5\%$, accept if otherwise.

Where
V_1 / V_2 Degree of freedom (d.f)
V_1 = n-k, V_2 = k-1:

Where; n (number of observation); k (number of parameters)
Where k-1 = 7-1= 6
Thus, n-k = 34-7 = 27
Therefore, $F_{0.05\,(6,27)}$ = 2.10 (From the F table) … F-table
F-statistic = 12.62391 (From regression result) … F-calculated

Since the F-calculated >F-table, we reject H_0 and accept H_1 that the model has goodness of fit and is statistically different from zero. In other words, there is significant impact between the dependent and independent variables in the model.

Discussion based on econometric criteria
In this subsection, the following econometric tests are used to evaluate the result obtained from our model: autocorrelation, heteroscedasticity and multicolinearity.

Test for Autocorrelation
Using Durbin-Watson (DW) statistics which we obtain from our regression result in table 4.2 (*see* also appendix 9), it is observed that DW statistic is 1.961591 or approximately 2. This implies that there is no autocorrelation since d* is approximately equal to two. 1.961591 tends towards two more than it tends towards zero. Therefore, the variables in the model are not autocorrelated and that the model is reliable for predications.

Test for Heteroscedasticity
This test is conducted using the white's general heteroscedascity test. The hypothesis testing is thus:
H_0: There is a heteroscedasticity in the residuals
H_1: There is no heteroscedasticity in the residuals

Decision rule: Reject H_0 if the computed f-statistics is significant. Otherwise, accept at 5%level of significance. Hence, since the F-calculated is significant, we reject H_0 and accept H_1 that the model has no heteroscedasticity in the residuals and therefore, reliable for predication.

Also from Appendix 11, we observe that the probability of F- statistic of the white test is 0.5161. Since the probability of F-test is greater than the 0.05 significance level, we reject the null hypothesis that there is a heteroscedasticity in the residuals. This goes to say that the residuals of our estimated model do not have a constant variance (homoscedastic).

Hence, the study employed the Newey-West method. This crucial technique produces Heteroscedasticity and Autocorrelation Consistent (HAC) standard errors. Therefore, notwithstanding the absence of heteroscedasticity in the residuals of our estimated model, our inferences remain untainted, since the Newey-West method has neutralized the consequences of heteroscedasticity on the standard errors.

Test for Multicolinearity

This means the existence of an exact linear relationship among the explanatory variable of a regression model. This means the existence of an exact linear relationship among the explanatory variable of a regression model. This will be used to check if collinearity exists among the explanatory variables. The basis for this test is the correlation matrix obtained using the series. The result is presented in appendix 10 and summarized in table 5 below.

Table 5: Summary of Multicollinearity test

Variables	Correlation Coefficients	Conclusion
MPR and D3	0.738959	No multicollinearity
MPR and CRR	-0.359892	No multicollinearity
MPR and LQR	0.250558	No multicollinearity
MPR and BINT	0.321337	No multicollinearity
MPR and EXR	-0.219297	No multicollinearity
D3 and CRR	-0.416732	No multicollinearity
D3 and LQR	-0.206590	No multicollinearity
D3 and BINT	0.400290	No multicollinearity
D3 and EXR	-0.323898	No multicollinearity
CRR and LQR	-0.137722	No multicollinearity
CRR and BINT	0.376963	No multicollinearity
CRR and EXR	0.775747	No multicollinearity
LQR and BINT	-0.110008	No multicollinearity
LQR and EXR	0.000132	No multicollinearity
BINT and EXR	0.488475	No multicollinearity

Source: Researchers computation

Decision Rule: From the rule of Thumb, if correlation coefficient is greater than 0.8, we conclude that there is multicolinearity but if the coefficient is less than 0.8 there is no multicolinearity. We therefore, conclude that the explanatory variables are not perfectly linearly correlated.

Test of Research Hypotheses

The t-test is used to know the statistical significance of the individual parameters. Two-tailed tests at 5% significance level are conducted. The Result is shown on table 4.5 below. Here, we compare the estimated or calculated t-statistic with the tabulated t-statistic at $t_{\alpha/2} = t_{0.05} = t_{0.025}$ (two-tailed test).

Degree of freedom (df) = n-k = 34-7 = 27

So, we have:

$T_{0.025(27)} = 2.052$ … Tabulated t-statistic

In testing the working hypotheses, which partly satisfies the objectives of this study, we employ a 0.05 level of significance. In so doing, we are to reject the null hypothesis if the t-value is significant at the chosen level of significance; otherwise, the null hypothesis will be accepted. This is summarized in table 6 below.

Table 6: Summary of t-statistic

Variable	t-tabulated ($t_{\alpha/2}$)	t-calculated (t_{cal})	Conclusion
Constant	±2.052	2.827490	Statistically Significance
MPR	±2.052	2.867994	Statistically Significance
D3	±2.052	2.872079	Statistically Significance
CRR	±2.052	2.920820	Statistically Significance
LQR	±2.052	2.533866	Statistically Significance
BINT	±2.052	-3.292031	Statistically Significance
EXR	±2.052	-2.503094	Statistically Significance

Source: Researchers computation

We begin by bringing our working hypothesis to focus in considering the individual hypothesis. From table 6, the ***t-test*** result is interpreted below;

For MPR, $t_{\alpha/2} < t_{cal}$, therefore we reject the null hypothesis and accept the alternative hypothesis. This means that MPR have a significant impact on GDP.

For D3, $t_{\alpha/2} < t_{cal}$, therefore we reject the null hypothesis and accept the alternative hypothesis. Thus, D3 do have a significant impact on GDP.

For CRR, $t_{\alpha/2} < t_{cal}$, therefore we accept the null hypothesis and reject the alternative hypothesis. This means that CRR do has a significant effect on GDP.

For LQR, $t_{\alpha/2} < t_{cal}$, therefore we accept the null hypothesis and reject the alternative hypothesis. This means that LQR do has a significant effect on GDP.

For BINT, $t_{\alpha/2} < t_{cal}$, therefore we accept the null hypothesis and reject the alternative hypothesis. This means that BINT do has a significant effect on GDP.

For EXR, $t_{\alpha/2} < t_{cal}$, therefore we accept the null hypothesis and reject the alternative hypothesis. This means that EXR do has a significant effect on GDP.

Conclusion and Recommendations

From the result of the OLS, it is observed that monetary policy rate, demand deposit, cash reserve ratio and liquidity ratio have a positive relationship with economic growth. This means that when monetary policy rate, demand deposit, cash reserve ratio and liquidity ratio are increasing, it will bring about more growth in Nigerian economy. On the other hand bank interest rate and exchange rate have a negative impact on economic growth in Nigeria. This means that when bank interest rate and exchange rate are falling, there will be increase in economic growth, although, exchange rate was expected to have either a positive or negative impact on the Nigerian economy. From the regression analysis, it is observed that all the variables conform to the a priori expectation of the study. From the regression analysis, the result show that all the variables conform to the a priori expectation of the study, where economic growth have a positive impact on Monetary policy rate, demand deposit, cash reserve ratio and liquidity ratio and a negative impact with while bank interest rate and exchange rate has a negative impact on economic growth in Nigeria.

The F-test conducted in the study shows that the model has a goodness of fit and is statistically different from zero. In other words, there is a significant impact between the dependent and independent variables in the model.

The findings of the study also show that monetary policy rate, demand deposit, cash reserve ratio, liquidity ratio, bank interest rate and exchange rate are statistically significant in explaining the economic growth in Nigeria. Although, bank interest rate and exchange rate are negative, the negativity has a significant impact in explaining the Nigerian economic growth.

Finally, the study shows that there is a long run relationship exists among the variables. Both R^2 and adjusted R^2 show that the explanatory power of the variables is very high or strong. The standard errors show that all the explanatory variables were all low. The low values of the standard errors in the result show that some level of confidence can be placed on the estimates.

Based on the findings the following recommendations are made:

1. The government should as matter of urgency make monetary policy that cuts interest rate. The will help lower the cost of borrowing thus resulting in higher investment activity and the purchase of consumer durables.
2. It is important that the apex financial institution implement policies that will encourage demand deposit. This will reduce the cost of handling cash and other associated risks which will lead to increase in financial sector contribution to GDP.
3. The apex financial institution should adjust the Cash Reserve Ratio to help manage liquidity, control inflation, and ensure stability in the banking system thus promoting economic growth and safeguarding financial stability.
4. The financial intuitions particularly the money deposit banks should strive to attract significant liquid funds to generate stronger profits, more stability, and more confidence among depositors, investors, and regulators.
5. The apex financial institution should lower the interest rate this will enable people to borrow money for business and investment consequently enhance economic growth in Nigeria

6. Considering the country's economic downturn, the government should insist on one exchange rate market and a fixed exchange rate regime. This will help increase and improve trade and output growth by reducing exchange rate uncertainty and thus the cost of hedging, and also encourage investment by lowering currency premium from interest rates.

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IMPACT OF ROAD TRANSPORTATION ON ECONOMIC GROWTH IN OYO STATE, NIGERIA.

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Abstract

Investments in road infrastructure typically result in changes in travel times, and these changes have economic implications over time. The advantages of mobility that come with higher transportation efficiency include significant time savings for other useful endeavors. The study aims to examine how road transportation affects Ibadan's economic growth in light of the aforementioned issue. The city of Ibadan was the site of the study. The research population comprises individuals that utilize road transportation in the metropolitan area of Ibadan, either as individuals or public transportation providers. Adopted was the primary data source. According to the survey report, 68.7% of the sample size, or 103 units, agreed that effective transportation can affect how much each and every road user spends on a daily basis. The free flow of goods and services is hampered by a number of issues, which further impedes a country's ability to thrive economically. The survey also showed that the majority of respondents from the study area named the transport calendar as the main obstacle to the free flow of transportation via road, accounting for 89 (59.3%) of the sample size, followed by the availability of vehicle routes, accounting for 31 units (20.7%) of the sample size. The summary of regression analysis demonstrates that there was a positive correlation between the quantity of road transportation infrastructure and all of the independent variables, including labor availability, market size, production scale, and lower access prices. 198.055 is the F-ratio, and it is statistically significant at $p<0.05$. The investigation came to the conclusion that no human activity could be accomplished without effective road transportation. According to the report, there should be sufficient infrastructure to meet high travel demand.

Keywords: *Economic growth, Transportation, GDP, Route, Mobility*

Introduction

Nigeria's road transport development history began when existing bush pathways were converted into motorable highways prior to 1910. As per Jackson & Zakariah (2022), the emergence of road transport in Nigeria was a subsequent development that skipped the stage of animal-drawn carts. Before motor cars were invented in the 1920s and 1930s, roads were not constructed. In actuality, the country's all-season road network became sufficiently developed for both passenger vehicle and truck traffic by the end of World War II (1945). The roads were planned with two main goals in mind, according to Khanan *et al*. (2021). Initially, their purpose was to expand the economic hinterlands made accessible by the government railways by establishing connections between the closest metropolitan centers and the main railway terminals. The other goal was to lessen the burden that the inland provinces bore from providing porters to the British Colonial Officers. A nation's ability to diversify its economy, increase trade, manage population growth, alleviate poverty, and enhance environmental conditions is all influenced by how well-equipped its road transport infrastructure. Good road transportation infrastructure in Nigeria is necessary to bridge the gap between the major production hubs and the final consumption locations, even though the exact relationships between infrastructure and development are still up for debate. This is because well-maintained roads increase productivity, particularly in the agricultural sector of the economy, and reduce production costs.

A dependable and effective transportation system is one of the most important factors influencing a region's economic growth. This is primarily because a well-developed transportation system allows for adequate access to the region, which is a prerequisite for the labor, housing, retail, and manufacturing markets to operate efficiently (OCHEI & MAMUDU, 2020). One important component of economic development and growth is transportation. It is a lucrative industry in and of itself, but poor transportation restricts a country's ability to distribute food and other completed commodities, link the manufacturing and agricultural sectors, and provide facilities for healthcare, education, and other infrastructure needs. For the sake of the country's prosperity, it is consequently necessary to maintain and upgrade the current transportation system and construct new infrastructure. GDP, or gross domestic product, is a measure of the pace of economic growth and an indicator of national wealth (Ekeocha *et al.*, 2021).

There is numerous cost and distributional benefits for all income levels from legalizing informal transportation and implementing laws that promote a competitive environment for both formal and informal services (Alcorn & Karner, 2021). Nigeria launched a smartphone app to manage unofficial transportation services, which contributes to improved customer safety, increased safety perception and happiness, and a greater daily income (Mogaji & Nguyen, 2023) overall. Security concerns continue to be a problem in spite of transport choices and interests, necessitating enabling policy adjustment that addresses safety concerns and promotes transportation access. The study tends to investigate the effect of transportation on economic growth based on the aforementioned issue. As a result, this research project is justified by the necessity to find a long-term solution to issues like underdevelopment, low production rates, conflicts between tribes, and religious bigotry. It also provides a feasible scenario for economic growth and addresses road infrastructure management. This study is noteworthy as a result.

Literature

Kaplan (2020) defines transportation as the movement of people and products between locations. It is a way to transport people and commodities (raw materials, manufacturing equipment, operating inventories, semi-finished items, and finished goods) to and from locations where they are required, whether for non-commercial or commercial reasons, at the desired time. Therefore, one of the most important needs that must be sufficiently met in any society in order to achieve any significant level of social interaction, cooperation, production activities, economic and other types of development, and the improvement of human welfare is the mobility (transportation of people and materials). Road transportation is sometimes referred to as the "engine and wheel of society" since it makes the world turn and work.

When we take into account the daily activities of the normal individual, it becomes clear why vehicle transportation is necessary in society. He travels by car to his business or place of employment. He receives the products he purchases by road conveyance. With the help of road transportation, he travels to church events and moves about to engage with people. For the police to properly do their jobs and maintain his peace and security, they rely heavily on road transportation (Flodén & Woxenius, 2021). Road transportation offers the necessary activities of time and location, claim Karami & Kashef (2020). Making things available when needed is what is meant by the utility of time. Daily newspaper publishing is one of the sectors where time utility is crucial. For this industry to make sure that its vendors and papers reach customers early in the morning when the news they deliver is still considered fresh, road transportation is crucial. The news gets stale and loses its worth as the day goes on.

Onokala & Olajide (2020) state that there are numerous issues with how road transportation and road transport services are run in Nigeria. The majority of these issues were brought about by the government's inadequate maintenance of the roads and the road transportation service providers' disregard for their clients' needs. Among these issues include drivers' carelessness, an insufficient quantity of transit vehicles, an inadequate road network, poor roads, the threat of highway robberies, and poor upkeep of transit vehicles.

The Harrod Domar growth hypothesis, which describes the rate of economic growth in terms of capital and savings, asserts that there is no inherent reason for an economy to grow in a balanced way (Gudieva et al., 2023), respectively. Neoclassical economists argued that the Harrod-Domar theory had shortcomings, particularly with regard to the instability of its solution, which sparked a debate in academia in the late 1950s and resulted in the development of Solow-Swan theory, which built upon the Harrod-Domar model by adding labor as a factor of production and non-fixed capital-output ratios. As a result of these developments, increasing capital intensity may now be recognized from technological advancement. Solow claims that a key tenet of the instability implications of the Harrod-Domar model is the constant proportions production function. This is furthered by his own research, which explores the inevitability of human nature. One significant criticism of Harrod's initial work is that it did not specifically use a fixed proportions production function and did not concentrate on economic growth.

The effects of road transportation as well as the trend and pattern of the length of federal roads in Nigeria between 1995 and 2014 were empirically investigated by Babalola (2020). The study's findings showed a positive correlation between road transportation and economic growth, suggesting that road transportation has had a positive impact on the real economy's manufacturing and agricultural sectors. As a result, it is assumed that road transportation directly affects economic growth. This study also shows that the government has made every effort to improve citizen welfare by building more motorable roads.

Based on an analysis of Chinese data, Zou et al. (2022) conclude that improved transportation infrastructure contributes significantly to higher economic growth levels and that public spending on building roads in impoverished areas is essential to both growth and the reduction of poverty. According to Konno et al.'s results from 2021, productive public investment in road infrastructure has a beneficial impact on Spain's relative provincial productivity performance. However, when fixed effects are taken into account, a panel of U.S. state level data suggests that there is minimal evidence of an effect from infrastructure to income growth (Rogowski et al., 2022; Hooper et al., 2021; Leduc & Wilson, 2013). The relationship between transportation infrastructure and economic growth has garnered significant attention from economists, policy makers, and politicians since the early 1990s (Banerjee et al., 2020). However, it is still unclear whether the causal relationship is from transportation infrastructure to economic growth, vice versa, or both.

One of the primary flaws in the research on the economic impact of transportation infrastructure, according to Peter et al. (2015), is that the simultaneous effects of economic growth and the expansion of the transport system have not been sufficiently taken into consideration. The direction of causality between the expansion of the transportation sector and economic growth could not be confirmed by earlier research using the Cobb-Douglas production function. Furthermore, panel or cross-sectional data regressions have generally been the basis for the majority of these investigations. A common issue with this research is that they presume or implicitly impose cross-sectional homogeneity on coefficients, which may differ between nations due to variations in institutional, social, economic, and geographic contexts. Therefore, the overall findings of these regressions only show an average association that might or might not be relevant to specific nations in the sample (Franzese & Hays, 2007).

Methodology

The research area under investigation is Ibadan, situated in the southwest region of Nigeria. It is situated 530 kilometers (330 miles) southwest of Abuja, the federal capital, and 128 kilometers (80 miles) inland northeast of Lagos. It is a well-known crossing point between the nation's coastline region and its interior. Part of the historic defensive walls that surrounded the city of Ibadan, which served as the administrative hub of British colonial control, still intact today. The Yoruba people and a number of other communities from around the nation make up the majority of the city's population. Oyo State in Nigeria has Ibadan as its capital and largest city. The research population comprises individuals that utilize road transportation in the metropolitan area of Ibadan, either as individual or public transportation providers. Moreover, the study encountered resistance in five (5) specific areas inside Ibadan, Oyo State. Mokola, Iwo Road, Ojo, Challenge, and Apete are a few such areas. The vast volume of traffic using the road transport system will determine which locations are chosen. To choose 150 respondents from five (5) chosen automobile parks in Ibadan, Oyo State, Nigeria, a multi-stage sampling technique would be used. Initially, the chosen motor parks within the research region would be divided into five groups. In the second phase, a sample size of thirty (thirty) transport operators per cluster will be chosen at random. For the aim of data analysis, the adopted primary source data as well as descriptive and inferential statistics were used. The elicited data, particularly for the socioeconomic factors and determining the available and most often used methods of transportation by the respondents, are summarized using descriptive statistics, which include the use of frequencies, percentages, and pie charts. Multiple inferential statistics were employed to assess certain aims.

Model Specification

$Y= a+b_1+b_1x_1+b_2 x_2+b_3x_3 +b_4x_4 +e$

Y= Road Transportation

a = constant

b=regression coefficients

x_1= Access to labor

x_2 = Larger market

x_3 = Scale of production

x_4 = Access costs

e = error term

Results and Discussion

Demographic characteristics of the respondents

The following table summarizes the findings of the survey, which examined the respondents' age, gender, level of education, and work experience. Table 1 below illustrates the gender representations of the field respondents. Of the 150 respondents chosen from the study region, 139 responses, or 92.7% of the sample size, were male, while the remaining 11 responses, or 7.3%, were female. This demonstrates that men made up a higher proportion of the population in the studied area.

The frequency table also showed that 39 respondents, or 26% of the sample, are between the ages of 41 and 50, while 45 respondents or 30% of the sample size, fall into the 31–40 age category. Additionally, 26 respondents, or 17.3% of the sample size, are older than 50, while the remaining 13 respondents, or 8.7% of the population, are younger than 20. Together, these 27 respondents represent 18% of the population and are between the ages of 21 and 30. This suggests that the age range of 31 to 40 years old comprises the bulk of the study participants who completely engaged.

The table also displays the respondents' educational backgrounds. According to the survey, 33 respondents, or 22.7 percent of the total population under study, had completed their primary school; 34 respondents, or 22.7 percent of the population, had completed their secondary school; and 41 respondents, or 27.3 percent of the population, had obtained a diploma. Moreover, 13 respondents, or 8.7% of the population, possessed MSC credentials, while 29 respondents, or 19.3% of the population, held a degree or an HND certificate.

The table that follows displays the respondents' work experience. Of the 150 respondents who took part in the survey, the majority of the samples, or 64 (42.7%) responses, had between one and five years of experience in relation to the impact of road transportation on Nigeria's economic growth. These were followed by 35 responses, or 23.3 percent of the total population, who had experience exceeding fifteen years, 29 responses, or eleven to fifteen years, and 22 responses, or 14.7 percent of the population, who had between six and ten years of experience. This demonstrates that the bulk of sample sizes are not novel in their respective fields.

Table 1.1 Demographic characteristics of the respondents

Variable	Frequency	Percentage
AGE		
Less than 20yrs	13	8.7
21-30 yrs	27	18
31-40yrs	45	30
41-50yrs	39	26
Above 50yrs	26	17.3
SEX		

Male	139	92.7
Female	11	7.3
Education Qualification		
Primary	33	22
Secondary	34	22.7
Diploma	41	27.3
Degree/HND	29	19.3
M.Sc	13	8.7
Working Experience		
1-5yrs	64	42.7
6-10yrs	22	14.7
11-15yrs	29	19.3
Above 15yrs	35	23.3

Source: Field work, 2024.

Influence of road transportation on economic growth.

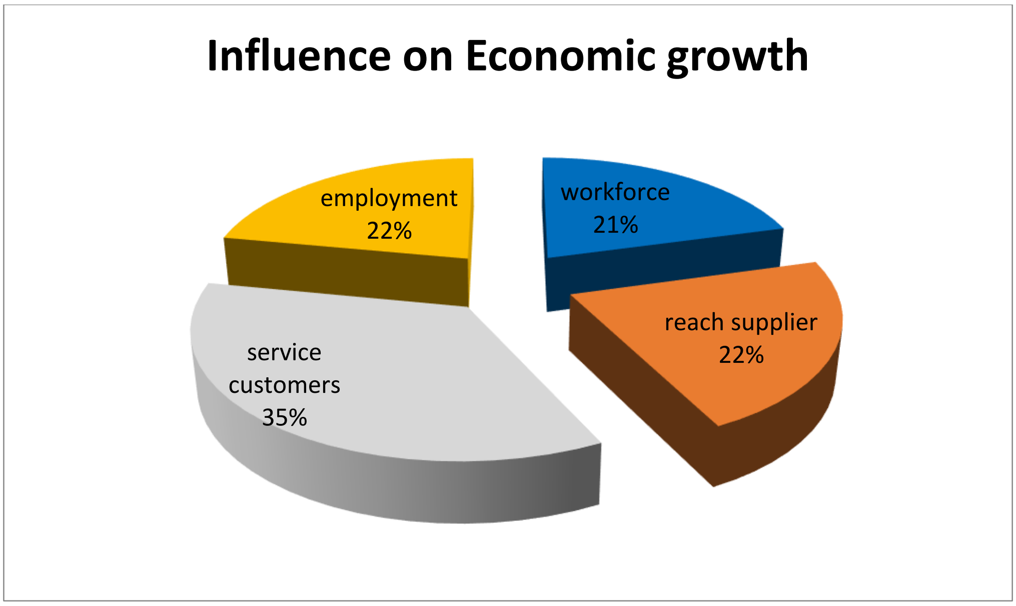
The impact of road transportation on economic growth in the research area was shown in Table 2 below. Door-to-door service delivery facilitated by road transportation enhances an area's economic development. The frequency distribution demonstrates the several facets of economic growth that were impacted by road transportation. The majority of study participants, or 53 units, (35.3%), thought that effective road transportation would improve customer service. This was followed by respondents who thought that efficient road transportation would increase employment opportunities and suppliers (33 units, or 22%), and respondents who thought that responsive road transportation would raise the standard of workforce in the study area (20.7%).

This suggests that nothing human can accomplish is possible without effective road transportation. Put differently, the research area's road transportation and economic growth are positively impacted.

Table 1.2: Influence of Transportation on Economic Growth.

Variables	Frequency	Percentage
Workforce	31	20.7
Reach supplier	33	22.0
Service customers	53	35.3
Employment opportunity	33	22.0
Total	150	100

Source: Field work, 2024.



Source: Field work, 2024.
Fig. 1.1: Chart representing Influence of road transportation on economic growth.

***Ho₁**: There is no relationship between road transportation and economic growth in Nigeria.*

In this study, the relationship between road transportation and Nigeria's economic growth was calculated for a few particular variables. All of the independent variables, including labor availability, market size, production scale, and lower access prices, exhibited a positive correlation with the quantity of road transportation infrastructure, according to the summary of regression analysis. The F-ratio is 198.055, indicating statistical significance at $p<0.05$. The results demonstrate how the various components of road transportation during travel supply had an impact on economic growth and development. The independent variable was reliant upon these parameters. The combined impact of the independent variables on the dependent variable, access to labor, is indicated by the multiple correlation coefficient R, which has a value of 0.919 and an R2 of 0.845. Greater market size, manufacturing scale, and lower entry costs, with relative beta values of 0.561, 0.561, 0.139, and 0.219, are significant at $p<0.05$. The above mentioned identified variables plays a significant influence on the economic growth of any identify area. However, it means that an effective and adaptable road transportation infrastructure can promote economic development.

The entire number of prospective customers or buyers in a specific market segment is known as the market size. Before introducing a new service or product, an organization or small business might benefit from estimating the size of the market to make sure it reaches the target customer base. Also, manufacturing scale is the amount of things produced to meet consumer demand employing assembly line techniques and cutting-edge technologies. Finally, company's inventory that was bought at cost is contrasted with the inventory's market worth in the lesser of cost or market inventory valuation technique

Table 1.3: Model Summary of Relationship between Road Transportation and Economic Growth in Nigeria.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.919[a]	.845	.841	.35157

a. Predictors: (Constant), access to labor, Larger market, scale of production, reducing access costs

Source: Field work, 2024.

Table 1.4: ANOVA of Relationship between Road Transportation and Economic Growth in Nigeria.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	97.918	4	24.480	198.055	.000[b]
	Residual	17.922	145	.124		
	Total	115.840	149			

a. Dependent Variable: Road transportation

b. Predictors: (Constant), access to labor, Larger market, scale of production, reducing access costs

Source: Field work, 2024.

Table 1.5: Coefficients of Relationship between Road Transportation and Economic Growth in Nigeria.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.876	.090		9.780	.000
	Larger market	.095	.027	.139	3.585	.000
	scale of production	.459	.089	.561	5.135	.000
	reducing access costs	.429	.087	.561	4.910	.000
	access to labor	.255	.083	.219	3.067	.003

a. Dependent Variable: Road transportation

Source: Field work, 2024.

Summary

In order to facilitate the movement of products and services from points of origin to destinations, transportation is a crucial activity. Such study is an essential component of business planning in a variety of professions, including marketing, sales, and business consultancy, since many investors carry out market sizing studies prior to starting a new company. These experts will also be better able to comprehend your objectives and suggestions if they know you have done your homework. In the same vein, lower costs per unit and mass production are made possible by large-scale manufacturing. In manufacturing, "scaling up" refers to the balanced expansion of all business process facets.

The investigation came to the conclusion that no human activity could be accomplished without effective road transportation. A well-functioning transportation network will facilitate social, political, and economic growth. It is evident that the transportation network is a crucial component of human endeavor and the cornerstone of all economic activities. Finally, an effective and responsive road transportation infrastructure can promote economic growth and development. According to the report, there should be sufficient infrastructure to handle high travel demand and policies that will protect all users of the roads from the negative effects of road traffic on economic growth.

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OFFICE MANAGERS' REWARD STRATEGIES AND PERFORMANANCE OF CONSTRUCTION FIRMS IN DELTA STATE, NIGERIA

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Abstract
This study explored the relationship between the Office Managers' reward strategies and Performance of Construction Firms in Delta State. The objective of the study focused on how various dimensions of office managers' reward strategies such as psychological rewards, financial incentives etc. interact with organizational performance in terms of quality project delivery and service timeliness of construction firms in Delta state. The method adopted was cross-sectional survey research design. The population of the study consisted of 4 (four) managers (General Manager, Project Manager, Human Resource Manager and Public Relations Manager) from 25 (twenty-five) licensed and accessible construction firms totally 100 managers as the respondents. Questionnaire was the major instrument for data collection. Out of 100 copies distributed, 73 copies only were retrieved. Pearson Product Moment Correlation Coefficient was used to test postulated hypotheses at P<0.05 alpha level. The result showed that there is correlation and significant positive relationships between psychological rewards, financial incentives etc. and overall organizational performance in construction industry in Delta State. It was concluded that office managers' reward strategies enhance organizational performance of construction firms in Delta state. It was recommended among others that management/leadership team of construction companies should continue to recognize, encourage and give financial incentives to outstanding managers to motivate them and others towards giving their best to the construction industry, etc.
Key words: *Office Manager, Reward Strategies, Construction Firms, Organizational Performance.*

Introduction

The construction industry in Delta State, a rapidly growing center, faces challenges in maintaining high standards of quality and service timeliness amid intense competition and evolving market demands. One promising avenue for construction firms to enhance their organizational performance is the implementation of comprehensive office managers' reward strategies that blend psychological support with financial incentives (Okon & Uko, 2018; Ndulue & Ibe, 2020). Psychological support encompasses a range of strategies aimed at recognizing and valuing office managers' contributions. These include offering clear career paths, providing constructive feedback, and fostering a culture of collaboration and teamwork

(Aguinis *et al.*, 2020). Such an environment can lead to increased job satisfaction, managers' engagement, and commitment to delivering quality work on time.

Financial incentives, such as performance-based bonuses, profit-sharing, and competitive compensation packages, directly motivate managers by rewarding their efforts and achievements. Research has shown that these incentives can significantly impact performance, as managers strive to meet or even exceed performance targets in pursuit of financial rewards (James & Akanbi, 2017; Pawirosumarto *et al.*, 2019). In the context of construction projects, which require precision and strict adherence to specifications and timelines, motivated managers are more likely to contribute to efficient and effective project execution.

Studies have demonstrated that a well-designed reward system can positively affect organizational performance by driving employee motivation and satisfaction, which in turn leads to higher productivity and improved quality and timeliness of projects (Pawirosumarto et al., 2019). For construction firms in Delta state, investing in a comprehensive employee reward system may be key to achieving and sustaining high performance levels in project quality and service timeliness.

Statement of Problem

The construction industry in Delta State is a significant contributor to the city's growth and economic development. Despite its importance, many construction firms in the area face persistent challenges in ensuring high levels of organizational performance, particularly in terms of delivering quality projects and meeting service timeliness.While several studies have explored the impact of employee reward strategies on organizational performance, there is limited research studies specifically focusing on the construction industry in Delta state. In particular, there is a lack of recent empirical evidence examining the relationship between a comprehensive Office managers' reward system—encompassing both psychological support and financial incentives—and its effect on quality projects and service timeliness in construction firms in Delta state. Most available studies on Office managers' reward system and organizational performance have been conducted in other sectors or different geographical areas, which may not accurately reflect the unique challenges and opportunities present in Delta state which is the focused area of this study. Therefore bridging this gap is crucial to this study.

Objectives of the Study

The aim of the study was to examine the relationship between office managers' reward system and performance in construction firms in Delta state. Specifically, the study sought to:

1. examine the relationship between psychological rewards and the quality of project of construction firms in Delta;

2. ascertain the relationship between psychological rewards and service timeliness of construction firms in Delta;
3. examine the relationship between financial incentives and the quality of project of construction firms in Delta and
4. evaluate the relationship between psychological rewards and service timeliness of construction firms in Delta.

Research Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

Ho$_1$: There is no significant relationship between psychological rewards and the quality of project of construction firms in Delta.

Ho$_2$: There is no significant relationship between psychological rewards and service timeliness of construction firms in Delta.

Ho$_3$: There is no significant relationship between financial incentives and the quality of project of construction firms in Delta.

Ho$_4$: There is no significant relationship between psychological rewards and service timeliness in construction firms in Delta.

Literature and Conceptual Review

The Concept of Office Managers' Reward System

Office managers' reward system is a strategic approach used by organizations to motivate and engage managers by recognizing their contributions and rewarding their performance. This system can have a significant impact on managers' job satisfaction, commitment, and overall productivity, which in turn influences organizational performance. Two key dimensions of an effective office managers' reward system are psychological rewards and financial incentives.

Psychological Rewards

Psychological rewards focus on fulfilling managers' intrinsic needs for recognition, appreciation, and personal growth. These rewards may include praise from Board of companies, opportunities for professional development, and the creation of a positive and supportive work environment. Research indicates that psychological rewards can boost manager's morale and foster a sense of belonging within the organization (Amakom & Chukwuma, 2018). Such rewards enhance manager's engagement and job satisfaction, leading to an improved performance and a stronger connection between employees and their work (Agwu, 2019). In addition to fostering engagement, psychological rewards can positively influence creativity and innovation within the workplace. Managers who feel valued and supported are more likely to contribute ideas and take initiative in their roles (Obi *et al.*, 2019). This is particularly important in construction firms, where problem-solving and adaptability are essential for successful project completion.

Financial Incentives

Financial incentives, on the other hand, provide tangible rewards in the form of monetary benefits such as bonuses, profit-sharing, or performance-based pay. These incentives directly compensate office managers for their efforts and achievements, serving as a powerful motivator for many individuals (Okojie & Obamuyi, 2020). Financial incentives can drive managers to reach specific performance targets and goals, thereby improving overall productivity and efficiency ((Eze *et al.*, 2020; Awe & Yinka, 2021). For organizations operating in competitive industries, maintaining a motivated and stable workforce is crucial for sustained success.

The Concept of Organizational Performance

Organizational performance in construction firms encompasses various aspects, including the successful execution of projects according to high-quality standards and within stipulated time. These two key measures—quality of project delivery and service timeliness—are essential for the success and competitiveness of construction firms (Oladunjoye & Abiodun, 2020; Akinola & Omolehin, 2021). Recent research has emphasized the importance of achieving both quality and timeliness in construction projects to meet clients' expectations and maintain a strong reputation in the industry.

Quality of Project: Quality of project delivery in construction firms refers to the adherence to established standards and specifications, ensuring that projects meet or exceed clients' expectations. High-quality projects not only enhance clients' satisfaction but also contribute to the long-term reputation and success of the construction firm (Akinola & Omolehin, 2021). In a competitive market, quality serves as a differentiator, as clients are more likely to seek out firms with a track record of delivering exceptional projects. To achieve high-quality project delivery, construction firms must invest in skilled labour, implement effective project management practices, and maintain stringent quality control measures. Additionally, fostering a culture of continuous improvement and encouraging staff input can lead to innovative solutions and superior project outcomes (Umeh *et al*., 2019).

Service Timeliness: Service timeliness refers to the ability of construction firms to complete projects within the agreed-upon time. Meeting deadlines is crucial for clients' satisfaction and the firm's reputation, as delays can lead to increased costs, contractual penalties, and potential loss of future business opportunities (Oladunjoye & Abiodun, 2020). Adhering to project schedules also helps maintain good relationships with suppliers and other stakeholders involved in the construction process. To achieve service timeliness, construction firms must employ efficient project planning and scheduling techniques. This includes setting realistic timeliness, allocating appropriate resources, and continuously monitoring progress to identify and address any potential delays (Oluwatosin *et al.*, 2021). Moreover, effective communication among team members and with clients can help manage expectations and ensure that projects stay on track.

Theoretical Review

This study was anchored on the Social Exchange Theory. The Social Exchange Theory was propounded by George Casper Homans in the year 1958 (Olannye, 2014). The Social Exchange Theory postulates that "give and take" forms the basis of almost all relationships though their proportions might vary as per the intensity of the relationships. The Social Exchange Theory is about giving something of more value to others than what has been given to you and also receiving something of higher value than you have given out (Ahiazu & Asuquo, 2016 cited in Okojie & Obamuyi, 2020). Some relevant assumptions of the theory are as follows:

i. In a relationship, every individual has expectations from his/her partners. A relationship without expectations is meaningless. Organizations have expectations from their employees just as employees also have their expectations from management (the organization);
ii. Good relationships are mutually beneficial and not supposed to be one sided. An individual invests his time and energy in relationship only when he gets something of corresponding or higher value from it (Igbinoba & Duru, 2021).

The justification of this theory as the theoretical foundation of this study is predicated on the relevance of the theory in explaining how office manager's reward system interacts with organizational performance. The theory explains that both construction firms (employer) and their office managers (employees) have their own unique expectations in their contractual relationship and that the extent to which these expectations are met will not only influence or determine the quality of relationship but will also impact on organizational performance. Construction firms expect their managers to demonstrate high level performance and commitment towards the achievement of goals and targets. On the other end, their managers expect their employer to provide reasonable reward system, enough to motivate them to work. This theory predicts that provision of reward strategies will motivate construction managers to be more committed to work which will ultimately result to better organizational performance in terms of quality of products and service timeliness.

Empirical Review

There were some empirical studies on the relationships between employee reward and motivation strategies and organizational performance. One notable among them was "The Effect of Financial Incentives on Employee Performance of Construction

Firms in Abuja" by Egwumi and Adedoyin (2019). The study revealed that there is a significant positive relationship between financial incentive and employee performance.

Also in a similar study "The Role of Financial Incentives in Enhancing Construction firms' Performance in Port Harcourt" (Igbinobi and Duru: 2021) also revealed that financial incentives enhance overall construction firm's performance.

In another study by Okwuise et.al (2023) on "Reward System and Organizational Performance", it was revealed that a good reward system provides positive assurance for fulfilling the needs and wants of employees in the workplace. It also showed that it drives the workers to more dedication and commitment in the pursuit of the corporate objectives.

Another study on "Employee Reward System and Corporate Effectiveness" by Victor et. al (2022), revealed that if individuals and groups obtain what they need and want through creating and exchanging produts and value,... it stands to increase corporate effectiveness.

Methodology

This study adopted a cross-sectional survey research method. Four (4) categories of office managers (General Manager (GM), Project Manager (PM), Human Resource Manager (HRM) and Public Relations Officer - PRO) were drawn from each of 25 (twenty-five) registered and accessible construction firms in Delta state. This gives a total population of 100 office managers as respondents. Of 100 copies of questionnaire administered, 73 (seventy-three) were retrieved. The questionnaire titled "Office Manager's Reward Strategies and Organizational Performance Questionnaire (OMRSOPQ)" was designed using a four-point rating scale format with response options of Strongly Agree(SA) = 4, Agree(A) = 3, Disagree(D)= 2 and Strongly Disagree(SD) = 1. The instrument was face-validated by two research experts in Delta state while Cronbach Alpha was used to ascertain the reliability of the instrument. Hypotheses were tested with Pearson Product Moment Correlation Coefficient at $P<0.05$ alpha level.

Results

Ho_1: There is no significant relationship between psychological rewards and the quality of project of construction firms in Delta.

Table 1: Correlation between Psychological Rewards and Project Quality

			Psychological Rewards	Quality of Project Result
Pearson	Psychological Rewards	Correlation Coefficient	1.000	.476** Rejected
		Sig. (2-tailed)	.	.000
		N	73	73
	Quality of Project	Correlation Coefficient	.476**	1.000
		Sig. (2-tailed)	.000	.
		N	73	73

***. Correlation is significant at the 0.01 level (2-tailed).*
Source: SPSS Output, 2024.

Table 1 above reveals a correlation value of 0.476 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating psychological rewards and quality of project. Since the significance value 0.00 is less than the alpha level of 0.05, the null hypothesis (Ho_1) which states that there is no significant relationship between psychological rewards and the quality of project of construction firms in Delta was rejected and the alternate hypothesis was accepted. This result indicates that there is a moderate positive relationship between psychological rewards and the quality of project of construction firms in Delta.

Ho_2: There is no significant relationship between psychological rewards and service timeliness of construction firms in Delta.

Table 2: Correlation between Psychological Rewards and Service Timeliness

			Psychological Rewards	**Service Timeliness**	**Result**
Pearson	Psychological Rewards	Correlation Coefficient	1.000	.727**	Rejected
		Sig. (2-tailed)	.	.000	
		N	73	73	
	Service Timeliness	Correlation Coefficient	.727**	1.000	
		Sig. (2-tailed)	.000	.	
		N	73	73	

***. Correlation is significant at the 0.01 level (2-tailed).*
Source: SPSS Output, 2024.

Table 2 above reveals a correlation value of 0.727 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating psychological rewards and service timeliness. Since the significance value 0.00 is less than the alpha level of 0.05, the null hypothesis (Ho_2) which states that there is no significant relationship between psychological rewards and service timeliness of construction firms in Delta was rejected and the alternate accepted. With a correlation value of .0727, the result shows that psychological rewards significantly and strongly enhance the service timeliness of construction firms in Delta.

Ho_3: There is no significant relationship between financial incentives and the quality of project of construction firms in Delta.

Table 3: Correlation between Financial Incentives and Project Quality

			Financial Incentives	Quality of Project	Result
Pearson	Financial Incentives	Correlation Coefficient	1.000	.823**	Rejected
		Sig. (2-tailed)	.	.000	
		N	73	73	
	Quality of Project	Correlation Coefficient	.823**	1.000	
		Sig. (2-tailed)	.000	.	
		N	73	73	

**. Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS Output, 2024.

Table 3 above reveals a correlation value of 0.823 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating financial incentives and quality of project. Since the significance value 0.00 is less than the alpha level of 0.05, the null hypothesis (Ho_3) which states that there is no significant relationship between financial incentives and the quality of project of construction firms in Delta was rejected and the alternate hypothesis was accepted. This result indicates that financial incentives have a strong positive relationship with the quality of project of construction firms in Delta.

Ho_4: There is no significant relationship between financial incentives and service timeliness of construction firms in Delta.

Table 4: Correlation between Financial Incentives and Service Timeliness

			Financial Incentives	Service Timeliness	Result
Pearson	Financial Incentives	Correlation Coefficient	1.000	.831**	Rejected
		Sig. (2-tailed)	.	.000	
		N	73	73	
	Service Timeliness	Correlation Coefficient	.831**	1.000	
		Sig. (2-tailed)	.000	.	
		N	73	73	

***. Correlation is significant at the 0.01 level (2-tailed).*
Source: SPSS Output, 2024.

Table 4 above reveals a correlation value of 0.831 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating financial incentives and service timeliness. Since the significance value 0.00 is less than the alpha level of 0.05, the null hypothesis (Ho_2) which states that there is no significant relationship between financial incentives and service timeliness of construction firms in Delta was rejected and the alternate accepted. With a correlation value of .0831, the result shows that there is a significant strong positive relationship between financial incentives and service timeliness of construction firms in Delta.

Discussion of Findings

Psychological Support and Organizational Performance

The test of hypotheses one and two revealed that there is a significant positive relationship between psychological support and organizational performance of construction firms in Delta. This finding agrees with the findings of Olatunde and Kelechi (2019) who found that recognizing employees' contributions can foster a sense of belonging and loyalty within organizations. This, in turn, leads to increased job satisfaction and motivation, resulting in higher productivity and better quality of project delivery in construction firms.

This finding is also in consonance with the findings of Adegboye and Ojo (2020) who found that by investing in employees' skills and providing training and development programs, construction firms can foster a culture of continuous learning and improvement. This approach not only boosts employees' confidence and competence but also enables them to contribute more effectively to the organization's goals. A supportive work environment that encourages open communication and collaboration is also essential for enhancing organizational performance. When managers feel comfortable sharing ideas and concerns, they are more likely to work together to solve problems and improve processes (Adebayo & Usman, 2021). This collaborative approach can lead to innovative solutions and efficient project execution, benefiting the overall performance of the construction firm.

Financial Incentives and Organizational Performance

The test of hypotheses three and four revealed a significant positive relationship between financial incentives and organizational performance of construction firms in Delta. This finding is in consonance with the findings of Adedokun and Adejare (2021) that financial incentives play a pivotal role in shaping organizational performance. By offering tangible monetary rewards such as bonuses, performance-based pay, and profit-sharing, construction firms can directly motivate their workforce to achieve high levels of productivity and efficiency. This direct form of motivation often leads to enhanced organizational performance through improved quality of projects and adherence to service timelines.

Similarly, this finding aligns with the findings of Oluwatosin and Adeyemi (2019) which showed that staff are rewarded based on their performance, they are more likely to invest effort into their tasks, resulting in better project outcomes. This correlation between financial incentives and employee performance can have a direct impact on the quality of project delivery. A well-structured financial incentive system can encourage managers to strive for excellence in their work, aiming to meet or exceed performance targets set by the firm. In addition to boosting individual productivity, financial incentives can foster a culture of healthy competition and collaboration within the company. For instance, profit-sharing schemes can motivate managers to work together towards the common goal of maximizing the company's profitability (Okeke & Chukwuemeka, 2020). Such collaborative efforts can lead to efficient resource utilization, timely project completion, and overall improved organizational performance.

Conclusion

The interaction between office managers' reward strategies and organizational performance of construction firms in Delta is a dynamic relationship with the potential to significantly enhance quality of projects and service timeliness. When construction firms implement effective reward systems that combine psychological support and financial incentives, they create a motivated and engaged office managerial workforce which leads to a range of positive outcomes for the firm. Psychological support such as recognition, career development opportunities, and a collaborative work environment fosters managers' job satisfaction, loyalty, and commitment resulting in high-quality project delivery and innovative solutions to complex problems.

Financial incentives, such as bonuses, performance-based pay, and profit-sharing, directly reward managers for achieving performance targets and can serve as a powerful motivator. This targeted approach can drive managers to work more efficiently and adhere to project schedules, contributing to the timeliness of services. The synergy between psychological rewards and financial incentives creates a balanced reward system that not only enhances individual manager's motivation but also promotes team cohesion and collaborative efforts. This, in turn, supports efficient resource allocation, reduces project delays, and improves overall project quality of construction firms in Delta state.

Recommendations

Based on the results and discussion of findings, the following recommendations were made:

1. Management team/Board of Directors of construction firms should create a workplace culture that values and acknowledges office managers' efforts and achievements. Regularly recognizing them for their hard work, whether through verbal praise, written commendations, or "Manager of the Month" awards, can boost morale and motivation.
2. Construction firms offering managers opportunities for skill-building and career progression can significantly enhance job satisfaction and commitment. Construction firms should invest in training programs, workshops, and mentorship initiatives that enable managers to advance their knowledge and expertise.
3. Leadership of construction firms can establish performance-based incentive programs that directly reward managers for achieving or exceeding set targets. This can include bonuses, profit-sharing, or commission structures tied to project completion and quality metrics. By offering financial rewards for meeting performance goals, firms can motivate managers to work efficiently and strive for excellence in their roles, resulting in improved project quality and adherence to service timelines.
4. Transparency and fairness in the distribution of incentives are crucial for maintaining trust and high morale. Management team of construction firms should clearly communicate the criteria for earning incentives and ensure that these criteria are applied consistently across their company. A transparent incentive system fosters a sense of equity and motivates not only managers but the entire workers to work towards shared organizational goals.

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THE MEDIATING INFLUENCE OF DEMOGRAPHIC FACTORS ON THE PURCHASE INTENTION OF ORGANIC FOOD AMONG ACADEMIC STAFF OF NIGERIAN UNIVERSITIES

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Abstract
This research concerns the mediating influence of demographic factors on the purchase intention of organic food among academic staff of Nigerian universities. Employing a quantitative research methodology, this research collected data through structured questionnaire distributed to a sample of 370 academic staff members across various universities in south-east, Nigeria, achieving a response rate of 82.16% with 304 valid responses. The research hypotheses were tested using statistical methods to assess direct and indirect effects, with a significance threshold set at the 5% level. Our analysis revealed several key findings. Firstly, there was a strong direct effect of attitudes towards organic food benefits on purchase intentions, with a coefficient of 0.6764 and a 95% confidence interval ranging from 0.6020 to 0.7509, indicating a robust positive influence. Furthermore, demographic factors were found to mediate this relationship significantly, as evidenced by an indirect effect of 0.0230 with a bootstrap confidence interval not including zero (0.0067 to 0.0461). Similarly, motivations for purchasing organic food displayed a direct negative impact on purchase intentions (coefficient -0.3857, 95% confidence interval from -0.4870 to -0.2843) and were also significantly mediated by demographic factors, showing an indirect effect of -0.0403. The study also established the significant influence of subjective norms and awareness and information sources on purchase intentions, with respective coefficients of 0.2726 and -0.3492. In both cases, demographic factors served as a significant mediator, enhancing our understanding of how individual characteristics intersect with cultural and social influences to affect behavioural outcomes in organic food markets. Barriers and challenges related to sourcing organic food emerged as another critical factor positively influencing purchase intentions, demonstrated by a direct effect coefficient of 0.3485 and confirmed mediation by demographic factors (indirect effect 0.0485). This finding suggests that overcoming such barriers may significantly boost organic food consumption among this demographic. These findings underscore the necessity for targeted educational campaigns and institutional support to navigate the identified barriers effectively and foster a more sustainable consumption pattern among academics.
Keywords: *demographic factors, organic food benefits, purchase intentions, subjective norms, barriers and challenges, awareness and information sources*

Introduction

Organic food, a product of organic agriculture, signifies the use of an *alternative* food production system that involves the use of environmentally safe, non-toxic materials and other soil building practices. Liebhardt (2003, pp. 33-34) posits that "organic agriculture I believe, is a holistic way of looking at the world and the role of human activities in it. It is the integration of our responsibilities to others, present and future generations, in the way we produce the food and fibre we all require and our duties to enhance and maintain the natural environment which is both our resource base and our own personal setting. It extends beyond the farm gate to the community, local and global. As a movement, it is a goal not fully realised and still evolving as the criteria continue to change along with our understanding of human and ecological needs. Several governments have undertaken information campaigns and promotional activities to encourage consumption of organic products".

The organisation for economic cooperation and development (OECD) (2003) reports that in a few countries, especially in Europe, government procurement policies encourage or require the purchase of organic food by public institutions such as schools and hospitals. According to the OECD), one difficulty in assessing the potential for market-based approaches and for evaluating existing measures is the lack of statistics regarding the organic market, including information on trade flows and prices, such as the transparency of prices along the production chain to understand who is getting the premium. The market of organic foods has been on the increase during the last years due to the alleged benefits of these products on human health and the environment (Lacal, 2019). In a bid to exploit the opportunities within the sector, Lacal (2019) reports that food producers and retailers invest significant effort in analysing the average qualities of the different groups of food consumers. By so doing, Lacal contends that their marketing strategies can be sharpened accordingly.

In recent years, the global discourse on sustainable consumption and environmental preservation has gained unprecedented momentum. Increasingly, individuals are recognizing the imperative to make environmentally conscious choices that contribute to a more sustainable future. Within this context, the purchase of organic food has emerged as a significant focal point, embodying both personal well-being and ecological responsibility. As the world grapples with environmental challenges, understanding the factors that drive individuals' purchase intention of organic food and the mediating role of sustainable consumption practices becomes paramount (Chu, 2018). This research aims to delve into this intricate nexus within the specific context of academic staff in the South East region of Nigeria. The consumption of organic food, characterized by its production methods that prioritize environmental sustainability and reduced chemical inputs, has garnered substantial attention due to its potential to mitigate the adverse ecological effects of conventional agriculture. With mounting concerns over climate change, pollution, and food safety, the demand for organic food has transcended mere dietary choices, embodying a conscientious response to pressing environmental concerns (Grunert et al., 2011).

However, the adoption of organic food consumption remains a complex behavioural phenomenon influenced by multifaceted factors. The interplay of individual awareness, attitudes, and perceived availability intricately shapes the intention to purchase organic food products (Verain et al., 2019). While these cognitive factors offer valuable insights, an evolving understanding within the field of sustainable behaviour highlights the pivotal role of sustainable consumption practices as potential mediators in the link between cognitive influences and actual behaviour (Lee & Hwang, 2019). Despite the growing body of literature exploring the determinants of organic food purchase intention, there remains a dearth of comprehensive research that investigates the mediating influence of sustainable consumption practices on this relationship, particularly in the Nigerian context. While previous studies have shed light on the significance of pro-environmental attitudes and their impact on environmentally friendly behaviours (Chan & Ng, 2018), the intricate interplay of sustainable consumption practices as mediators in the path from cognitive factors to actual organic food purchase intention has not been adequately examined. it is important to note that negative attitudes or barriers towards organic food also exist. Factors such as price premiums, limited availability, scepticism about organic claims, and lack of trust in organic labelling systems can hinder the development of positive attitudes towards organic food (Adegbuyi et al., 2020; Ogunnaike et al., 2019). These barriers need to be addressed to encourage wider acceptance and adoption of organic food among consumers. Overall, consumer attitudes towards organic food are shaped by a complex interplay of personal, environmental, social, and cultural factors. Theory of Planned Behaviour, sustainable consumption concepts, subjective norms, and demographic factors to provide a comprehensive understanding of the factors influencing the purchase intention. This research seeks to address this gap by unravelling the mediating role of sustainable consumption practices, such as waste reduction behaviour, energy conservation behaviour, and eco-friendly product purchases, among others, on the relationship between awareness, attitudes, perceived availability, and the actual purchase intention of organic food among academic staff in the South East region of Nigeria.

Literature Review

The conceptual framework of this research is based on the integration of relevant theories and concepts that provide a foundation for understanding the factors influencing the purchase intention of organic food among academic staff in Universities in Nigeria with emphasis, Southeast Nigeria. The framework incorporates several key elements, including consumer behaviour theories, sustainable consumption, and the role of subjective norms in shaping consumer behaviour, in this case purchase intention of organic food. The conceptual framework draws on the Theory of Planned Behaviour (Ajzen, 1991) as a foundational theory to explain the relationship between individuals' attitudes, subjective norms, and their behavioural intentions. According to this theory, attitudes towards a behaviour, subjective norms, and perceived behavioural control are determinants of behavioural intention. In the context of this study, the behavioural intention is the purchase intention of organic food. Attitudes refer to individuals' evaluations and beliefs towards organic food. Positive attitudes towards organic food are likely to increase purchase intention (Ajzen, 1991). Studies have highlighted the influence of attitudes on organic food consumption, such as the work of Egbule et al. (2019).

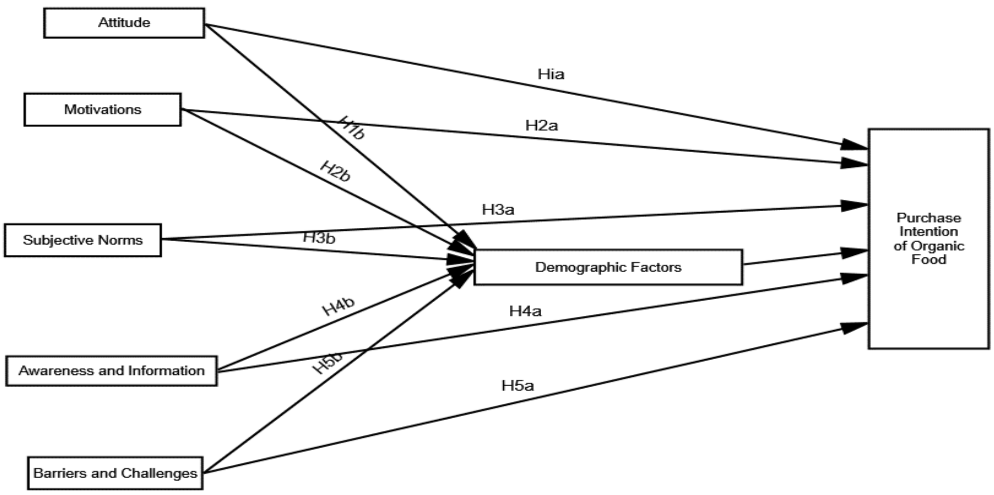

Figure 2.1: The Conceptual framework

Subjective norms encompass social influence and peer perceptions related to organic food consumption. They reflect the perceived expectations and opinions of others regarding organic food. These norms can significantly influence individuals' purchase intention (Ajzen, 1991). Subjective norms play a crucial role in shaping individuals' attitudes and behaviours. Idemudia (2011) explored the influence of subjective norms on sustainable consumption behaviours in Nigeria. This study acknowledges the significance of subjective norms, including social influence and peer perceptions, in influencing the purchase intention. Perceived behavioural control refers to individuals' perceived ease or difficulty in purchasing organic food. It is influenced by factors such as availability, accessibility, and affordability of organic food products. Higher levels of perceived behavioural control are associated with increased purchase intention (Ajzen, 1991). Onyene et al. (2017) investigated the role of perceived behavioural control in consumer decision-making. Additionally, the framework incorporates the concept of sustainable consumption, which emphasizes the importance of environmentally and socially responsible consumer choices (Vermeir & Verbeke, 2006). Sustainable consumption aligns with the principles of organic food consumption, as organic food is perceived to be more environmentally friendly and socially responsible compared to conventional food (Saher & Sarpong, 2017). Furthermore, the conceptual framework considers the impact of demographic factors such as age, gender, educational level, and income on the purchase intention of organic food. These factors have been identified in previous research as potential influencers of consumer behaviour and purchasing decisions (Onyene et al. 2017). Overall, the conceptual framework integrates the Theory of Planned Behaviour, sustainable consumption concepts, subjective norms, and demographic factors to provide a comprehensive understanding of the factors influencing the purchase intention of organic food among academic staff in Universities in Nigeria with emphasis, Southeast Nigeria.

Attitudes towards Organic Food: Several empirical studies conducted among consumers consistently show positive attitudes towards organic food. A study by Ahmed et al. (2020) found that consumers expressed favourable attitudes towards organic food, with health and environmental benefits being the primary drivers. Another survey by Zayed, Gaber, & El Essawi (2022) reported that consumers held positive perceptions of organic food products, citing health consciousness and ethical considerations as significant influencers. Several studies have found that consumers generally have positive attitudes towards organic food, perceiving it as healthier and more environmentally friendly (Chryssohoidis & Krystallis, 2005; Hughner et al., 2007). However, some studies have also revealed that attitudes may vary based on individual factors such as education, income, and health consciousness (Saba & Messina, 2003; Roitner-Schobesberger et al., 2008).

Motivations for Organic Food Consumption: Multiple research studies have indicated that health and environmental concerns are the main motivations driving consumers to consider purchasing organic food. A study by Paul & Rana (2012) revealed that consumers identified health as their primary motivation for choosing organic food. Similarly, Prigita and Alversia (2022) reported that consumers were motivated by environmental considerations when making organic food choices.

Subjective Norms: Empirical evidence consistently supports the influence of subjective norms and social influence on the purchase intention of organic food among academic staff. A study by Varshneya et al. (2017) found that 70% of consumers indicated that the opinions of their peers and family members strongly influenced their decision to purchase organic food products. Additionally, the research by Pang et al. (2021) demonstrated that consumers considered the recommendations of their colleagues when buying organic food.

Awareness of Organic Food Benefits: Numerous empirical studies have shown that consumers exhibit a high level of awareness regarding the health and environmental benefits associated with organic food consumption. A study by

Wojciechowska-Solis and Barska (2021) reported that 70% of consumers had a comprehensive understanding of organic food's nutritional advantages.

Information Sources: Empirical findings consistently highlight online platforms and family networks as the primary sources of information for consumers regarding organic food products. A study by Kamboj et al. (2023) reported that 60% of consumers used online platforms and social media to gather information about organic food, while 45% relied on family members for recommendations and advice. Additionally, the research by Pandey et al. (2019) demonstrated that 40% of consumers sought information from reputable health and wellness websites.

Demographic Factors: Studies suggest that demographics can play a role, with factors such as education level and income positively influencing purchase intention (Thogersen, 2004; Singh & Verma, 2017). The synthesis of empirical studies on the purchase intention of organic food among consumers consistently supports positive attitudes towards organic food, motivated by health and environmental concerns. Social influence from peers and family members, as well as a high level of awareness through online platforms and family networks, play a vital role in shaping purchase decisions. Policymakers and practitioners can leverage these findings to design effective interventions and awareness campaigns, encouraging sustainable consumption behaviours and environmentally conscious choices among academic staff in the region.

Purchase Intention of Organic Food: Purchase intention refers to an individual's willingness or readiness to buy a particular product or service (Ibrahim & Hamid, 2020). It is influenced by various factors, including personal attitudes, subjective norms among others. Purchase intention refers to their inclination to purchase products that align with sustainable principles and practices (Kotler & Keller, 2016; Olalekan & Olajide, 2021). Leyva-Hernández (2021) study analysed the mediating effect of desire on the relationship between attitude and purchase intention Mexico. The purpose of the study was to contribute to the literature on socially and environmentally responsible and ethical consumers, through the understanding of the mediating effect of desire, which they added as an extension of the TPB. They found that when the benefits of organic food products to the consumer and the environment, then consumer desire is higher, and also purchase intention.

Based on the above review, the following hypotheses are formulated for the study:

Formulation of Research Hypotheses

The following hypotheses are formulated for the study and they are stated in null forms only.

H_{01a}: There is no significant relationship between attitudes to organic food benefits and the intention of academic staff to purchase organic food products.

H_{01b}: Demographic factors will not mediate the relationship between attitudes to organic food benefits and the intention of academic staff to purchase organic food products.

H_{02a}: There is no significant relationship between motivations and intention to purchase organic food by academic staff.

H_{02b}: Demographic factors will not the significant relationship between motivations and intention to purchase organic food by academic staff.

H_{03a}: There is no significant relationship between subjective norms and the purchase intention of organic food among academic staff.

H_{03b}: Demographic factors does not mediate the significant relationship between subjective norms and the purchase intention of organic food among academic staff.

H_{04a}: There is no significant relationship between awareness and information sources and the purchase intention of organic food among academic staff.

H_{04b}: Demographic factors does not mediate the significant relationship between awareness and information sources and the purchase intention of academic staff.

H_{05a}: There is no significant relationship between barriers and challenges to sourcing organic food and the purchase intention of academic staff.

H_{05b}: Demographic factors does not mediate the significant relationship barriers and challenges to sourcing organic food and the purchase intention of academic staff.

Methodology

This study adopts a quantitative research design to examine the purchase intention of organic food among academic staff in Nigeria with emphasis universities. The research design includes a cross-sectional survey that collects data from participants using a structured questionnaire. The population of the study in this research is the academic staff of Nigerian universities with emphasis on the universities in the southeast geopolitical zone. One federal, one state and one private university will be selected from the five states that make up the southeast zone of Nigeria bringing the total number of universities to be studied to (15) fifteen universities. Thus, three universities in each state with emphasis on academic staff served as the study's respondents because there are currently no sampling frames, databases, or records of sustainable or self-described organic food consumers in Nigeria or southeast that could be surveyed. Thus, the population of the study, though is made of academic staff of university academic staff, there is no database of those of them that are organic food consumers. The population of the study is infinite or unknown. Academic staff serve as proxy and potential substitute consumer group because previous studies in the sustainable consumption and organic food purchase intention domains. Ukenna et al., (2018) and Keleş, (2017) used academic staff as respondents; as a result, the choice of academic staff in this research is consistent with the evidence in the literature on sustainable consumption and organic food purchase intention. Additionally, there is a presumption that academic staff members are agents of societal behavioural change; this puts them in a position to spread and transmit innovation to the larger society much more quickly and easily. Participants were selected from three different universities within the Nigeria with emphasis region to ensure a diverse representation of academic staff. The sampling process involved approaching potential participants through university departments and obtaining their voluntary participation in the study. Efforts were made to ensure adequate representation of various disciplines and departments to capture a comprehensive understanding of the research variables.

This study is based on lecturers in select federal universities in southeast Nigeria the proportion of the academic staff interested in buying organic food is unknown hence this study has an unknown population, hence the use of Krejcie-Morgan formula for sample size determination 0f 370 which is the sample size for the study. The targeted respondents received a total of 370 copies of questionnaires-200 in person and 170 online-in a total of 200 and 170 questionnaires, respectively. Ethical considerations were taken into account during the sampling process, including informed consent, privacy, and confidentiality of participants' information. Participants have the right to withdraw from the study at any time without consequences. A structured questionnaire was used as the primary data collection instrument. The questionnaire consists of two sections: demographics information and variables related to consumer behaviour and purchase intention. The questionnaire was created using previously validated scales from the marketing literature. Six items from (Zayed et al., 2022) were specifically used to assess consumer attitudes. Six items were adapted from (Magnusson et al., 2019) to assess consumer motivation. Furthermore, four items were adapted from (Ahmed et al., 2020) to measure consumers' subjective norms. Four items were borrowed from Bakir and Eren (2019) to represent the barriers. Four and three items were borrowed from (Akbar et al., 2020; Kardes et al., 2008) to measure awareness and information source, respectively. Finally, four items adapted from (Kamboj et al., 2023) were used to assess purchase intention. Complex multivariate relations include models where relationships among only a certain set of variables can be estimated (Hair et al. 2022). Indirect effects refer to the situation in which one variable affects another through a mediating variable. It is the *why* of the relationships between IVs and DV. The analysis was done with Regression PROCESS 4.0, while the preliminary analysis will be tested with the SPSS version 25 software.

Reliability Analysis

Reliability refers to the consistency of data overtime and in this study, we were concerned with internal consistency reliability. Accordingly, factor analysis was utilized in testing the internal consistency of the dataset before the main analysis. The factor analysis results are shown.

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.515
Bartlett's Test of Sphericity	Approx. Chi-Square	11218.334
	Df	561
	Sig.	.000

The KMO and Bartlett's Test are preliminary tests used in factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance among variables that might be common variance. The value of .515 suggests that the sampling is moderately adequate for a factor analysis. Bartlett's Test of Sphericity compares correlation matrix (a matrix of Pearson correlation coefficients) to the identity matrix. In other words, it tests whether or not the observed variables intercorrelate at all using the chi-square test. The Approximate Chi-Square value of 11218.334, with 561 degrees of freedom and a significance level of .000, indicates that the observed correlation matrix is not an identity matrix, which means there are some relationships between the variables that can be investigated further with factor analysis. The results suggest that factor analysis may be suitable for the data, as indicated by the moderate KMO value and the significant Bartlett's Test.

Communalities

	Initial	Extraction
AtOF1	1.000	.870
AtOF2	1.000	.761
AtOF3	1.000	.814
AtOF4	1.000	.708
AtOF5	1.000	.687
MfOFC1	1.000	.793
MfOFC2	1.000	.767
MfOFC3	1.000	.650
MfOFC4	1.000	.772
MfOFC5	1.000	.696
SubN1	1.000	.918
SubN2	1.000	.772
SubN3	1.000	.890
SubN4	1.000	.866
SubN5	1.000	.819
AoIS1	1.000	.814
AoIS2	1.000	.810
AoIS3	1.000	.829

AoIS4	1.000	.756
BandC1	1.000	.839
BandC2	1.000	.791
BandC3	1.000	.756
BandC4	1.000	.889
BandC5	1.000	.741
DeFact1	1.000	.829
DeFact2	1.000	.800
DeFact3	1.000	.792
DeFact4	1.000	.855
DeFact5	1.000	.724
PIoOF1	1.000	.905
PIoOF2	1.000	.820
PIoOF3	1.000	.804
PIoOF4	1.000	.815
PIoOF5	1.000	.737

Extraction Method: Principal Component Analysis.

The table presents communalities for various factors extracted through Principal Component Analysis (PCA) in a research study. Communalities represent the proportion of variance in each observed variable that is accounted for by the extracted factors. Initially, all variables had communalities of 1.000, indicating that each variable perfectly represented its underlying construct. However, after extraction through PCA, communalities decreased slightly for each variable, reflecting the proportion of variance explained by the extracted factors. For instance, the variable "AtOF1" initially had a perfect communality of 1.000, but after extraction, its communality reduced to 0.870, suggesting that approximately 87.0% of its variance is explained by the extracted factors. Similarly, other variables show reductions in communalities post-extraction, ranging from 0.650 to 0.918. These reduced communalities indicate that while the extracted factors capture a significant portion of the variance in each variable, there is still some unexplained variance remaining. This residual variance could be due to measurement error, unique features of the variables not captured by the extracted factors, or other factors not included in the analysis. To determine if any items need to be eliminated in further analysis based on communalities, we typically look for variables with very low communalities, as these suggest that the variable is not well-explained by the extracted factors and may not be contributing much to the overall structure of the data. In this case, none of the variables have extremely low communalities (below 0.5, for example), which would typically raise concerns about their validity or relevance to the analysis. The total variance explained table is a statistical technique used to emphasize variation and bring out strong patterns in a dataset. The table lists the eigenvalues associated with each principal component, along with the percentage of variance that each component explains and the cumulative percentage of variance explained. In this PCA output, the first component has an eigenvalue of 8.047, explaining 23.668% of the variance within the data. This is the largest eigenvalue, indicating that the first component captures the most variance. The second component has a lower eigenvalue of 3.407, contributing an additional 10.020% to the variance explained, bringing the cumulative total to 33.688%. This pattern continues, with each subsequent component explaining a smaller portion of the variance. By the time we reach the fifth component, the cumulative percentage of variance explained is over 50%, specifically 58.310%. This suggests that the first five components together capture more than half of the variance in the data. As we move further down the table, the eigenvalues and the corresponding percentage of variance explained by each component decrease. The last few components contribute very little to the variance explained, with the final component contributing only 0.010% to the total variance. Overall, the PCA results suggest that a few components are sufficient to capture a significant portion of the variance in the data, which is often the goal in dimensionality reduction techniques like PCA. The above suggest that all items merit further analysis and that none needed to be eliminated.

Validity Analysis

Discriminant Validity The degree to which two conceptually similar concepts are distinct. The empirical test is again the correlation among measures, but this time the summated scale is correlated with a similar, but conceptually distinct, measure (Hair, et al. 2019). We validate measurement instruments by considering criteria such as face validity, content validity, predictive validity, concurrent validity, and criterion-related validity. But even if we meet these tests of validation, our work can be panned if an instrument we have developed is low in discriminant validity (Hayes, 2022). Statistics like correlations and confirmatory factor analysis are used in testing discriminant validity. In this research, we used confirmatory factor analysis. To confirm and validate discriminant validity using the provided data from a confirmatory factor analysis (CFA), we need to ensure that each factor (or latent variable) in the model is distinct and measures different constructs. We can assess discriminant validity primarily by looking at the factor covariances and ensuring they are not too high, which would suggest that factors are measuring distinct constructs. The estimated correlations (covariances) between factors are significantly lower than 1, which indicates that factors are measuring different constructs. The factor loadings are strong across most indicators for their respective factors, with statistically significant z-values and tight confidence intervals. The model seems to have an acceptable fit based on the significant p-value (<.001) for the factor model. However, the chi-square value and degrees of freedom are not commented upon for significance directly but typically, a lower chi-square value relative to degrees of freedom and a significant p-value indicate a good model fit.

The analysis suggests that the factors demonstrate good discriminant validity and that all data merit further analysis.

Hypotheses Testing

Hypotheses One:

H_{01a}: There is no significant relationship between attitudes to organic food benefits and the intention of academic staff to purchase organic food products.

H_{01b}: Demographic factors does not mediate the relationship between attitudes to organic food benefits and the intention of academic staff to purchase organic food products.

To test and validate the hypotheses H01a and H01b with the provided data, we can analyze the direct and indirect effects at the 5% level of significance.

- **H01a: Direct Effect of X on Y**
  - Effect: **0.6764**
  - Standard Error (se): **0.0378**
  - t-value: **17.8811**
  - p-value: **0.0000**
  - Lower Level Confidence Interval (LLCI): **0.6020**
  - Upper Level Confidence Interval (ULCI): **0.7509**

Given that the p-value is less than 0.05, we reject H01a, indicating a significant relationship between attitudes to organic food benefits and the intention of academic staff to purchase organic food products.

H01b: Indirect Effect of X on Y via 'Defact'
  - Effect: **0.0230**
  - Bootstrap Standard Error (BootSE): **0.0103**
  - Bootstrap Lower-Level Confidence Interval (BootLLCI): **0.0067**
  - Bootstrap Upper-Level Confidence Interval (BootULCI): **0.0461**

Since the confidence interval does not include zero, we reject H01b, suggesting that demographic factors do mediate the relationship between attitudes to organic food benefits and the intention of academic staff to purchase organic food products. The data supports the existence of both a direct and an indirect significant relationship, contrary to the null hypotheses H01a and H01b.

H_{02a}: There is no significant relationship between motivations and intention to purchase organic food by academic staff.

H_{02b}: Demographic factors will not the significant relationship between motivations and intention to purchase organic food by academic staff.

To test and validate the hypotheses H02a and H02b using the provided data, we'll look at the **p-values** and **confidence intervals**:

For H02a:

- The direct effect of X on Y is **-0.3857** with a standard error (se) of **0.0515**.
- The t-value is **-7.4893**, and the p-value is **0.0000**.
- The lower and upper limits of the 95% confidence interval (LLCI and ULCI) are **-0.4870** and **-0.2843**, respectively.

Given that the p-value is less than the 5% level of significance (0.05), we **reject** the null hypothesis H02a. There **is** a significant relationship between motivations and intention to purchase organic food by academic staff.

For the indirect effects (H02b):

- The effect of demographic factors (Defact) on the relationship between motivations and intention to purchase organic food is **-0.0403** with a bootstrap standard error (BootSE) of **0.0180**.
- The bootstrap confidence interval does not include zero (BootLLCI = **-0.0777**, BootULCI = **-0.0070**).

Since the confidence interval does not contain zero, we would **reject** the null hypothesis H02b. This indicates that demographic factors **do** have a significant indirect relationship with motivations and intention to purchase organic food by academic staff. Based on the provided data, both hypotheses H02a and H02b are rejected at the 5% level of significance, suggesting significant relationships in both cases.

H_{03a}: There is no significant relationship between subjective norms and the purchase intention of organic food among academic staff.

H_{03b}: Demographic factors does not mediate the significant relationship between subjective norms and the purchase intention of organic food among academic staff.

To test and validate the hypotheses H03a and H03b with the provided data, we'll look at the significance of the direct and indirect effects:

For H03a:

- The **direct effect** of subjective norms (X) on the purchase intention of organic food (Y) is **0.2726** with a standard error (se) of **0.0550**.
- The t-value is **4.9593**, which is significant at the **p-value** of **0.0000** (less than the 5% significance level).
- The 95% confidence interval does not include zero (LLCI = **0.1644**, ULCI = **0.3808**), indicating a significant positive effect.

Therefore, we reject $H_0$3a as there **is** a significant relationship between subjective norms and the purchase intention of organic food among academic staff.

For $H_0$3b:

- The **indirect effect** (mediation effect) of demographic factors (Defact) is **0.0306** with a bootstrap standard error (BootSE) of **0.0165**.

- The bootstrap confidence interval (95%) ranges from **0.0035** to **0.0689**, which does not include zero, suggesting that the indirect effect is significant.

Thus, we reject H03b as well, since demographic factors **do** mediate the relationship between subjective norms and the purchase intention of organic food among academic staff. The hypotheses H03a and H03b are not supported by the data provided.

H$_{\mathbf{04a}}$: There is no significant relationship between awareness and information sources and the purchase intention of organic food among academic staff.

H$_{04b}$: Demographic factors does not mediate the significant relationship between awareness and information sources and the purchase intention of academic staff.

To test and validate the hypotheses H04a and H04b using the provided data, we'll look at the significance of the direct and indirect effects of X on Y.

For H04a, which states there is no significant relationship between awareness and information sources and the purchase intention of organic food among academic staff, we consider the direct effect of X on Y:

- Direct effect: \text{Effect} = -0.3492
- Standard error (se): 0.0458
- t-value: -7.6269
- p-value: 0.0000
- Lower limit confidence interval (LLCI): -0.4393
- Upper limit confidence interval (ULCI): -0.2591

Given that the p-value is 0.0000, which is less than the 5% level of significance, we reject the null hypothesis H04a. There is a significant negative relationship between awareness and information sources and the purchase intention of organic food among academic staff.

For H04b, regarding the mediation of demographic factors, we look at the indirect effect(s) of X on Y through the mediator 'Defact':

- Indirect effect: \text{Effect} = -0.0316
- Bootstrap standard error (BootSE): 0.0116
- Bootstrap lower limit confidence interval (BootLLCI): -0.0558
- Bootstrap upper limit confidence interval (BootULCI): -0.0107

Since the confidence interval does not include zero, we can conclude that there is a significant indirect effect of X on Y through 'Defact'. This suggests that demographic factors do mediate the relationship between awareness and information sources and the purchase intention of organic food among academic staff, leading us to reject the null hypothesis H04b.

H$_{05a}$: There is no significant relationship barriers and challenges to sourcing organic food and the purchase intention of academic staff.

H_{05b}: Demographic factors does not mediate the significant relationship barriers and challenges to sourcing organic food and the purchase intention of academic staff.
To test and validate the hypotheses H05a and H05b with the provided data, we'll look at the significance of the direct and indirect effects:

For **H05a**:

- The direct effect of X on Y is **.3485** with a standard error (se) of **.0565**.
- The t-value is **6.1700**, which is significant at the **p-value** of **.0000** (less than .05).
- The 95% confidence interval does not include 0 (LLCI = **.2373**, ULCI = **.4597**), indicating a significant relationship.

Therefore, we reject H05a and conclude that there **is** a significant relationship between barriers and challenges to sourcing organic food and the purchase intention of academic staff.
For **H05b**:

- The indirect effect of X on Y through the mediator (Defact) is **.0485** with a bootstrap standard error (BootSE) of **.0184**.
- The bootstrap confidence interval (BootLLCI = **.0169**, BootULCI = **.0900**) does not include 0, suggesting the indirect effect is significant.

Since the indirect effect is significant, demographic factors **do** mediate the relationship between barriers and challenges to sourcing organic food and the purchase intention of academic staff. Thus, we reject H05b.

Discussions, Conclusion and Implications

The findings of this study reveal intriguing insights into the purchase intention of organic food among academic staff in Nigerian universities, particularly focusing on the mediating influence of demographic factors. To provide a comprehensive discussion, we will integrate the results with the works of various authors who have explored related topics in the fields of consumer behaviour, sustainability, and food preferences.

H01a and H01b: Attitudes to Organic Food Benefits and Demographic Factors.

The rejection of H01a implies a significant relationship between attitudes towards organic food benefits and the purchase intention among academic staff. This finding aligns with the research conducted by Alagarsamy et al. (2021), who emphasized the importance of attitudes in shaping consumer behaviour towards organic products. The positive attitudes towards organic food benefits likely contribute to the intention to purchase among academic staff, reflecting a growing awareness and appreciation for the health and environmental advantages associated with organic consumption.
Moreover, the rejection of H01b suggests that demographic factors serve as mediators in the relationship between attitudes and purchase intention. This finding resonates with the research by Amin and Tarun (2020), who explored the influence

of demographic variables on consumer preferences for organic food. Demographic characteristics such as age, income, and educational level may moderate the impact of attitudes on purchase intention, highlighting the need for targeted marketing strategies tailored to specific demographic segments within the academic staff population.

H02a and H02b: Motivations and Demographic Factors

The rejection of H02a underscores the significance of motivations in driving the purchase intention of organic food among academic staff. This finding is consistent with the research conducted by Ali et al. (2023), who identified various motivational factors such as health consciousness, environmental concerns, and ethical considerations influencing consumer choices towards organic products. The intrinsic motivations among academic staff likely play a crucial role in shaping their purchase intentions, reflecting a desire to align their consumption patterns with personal values and beliefs.

Furthermore, the rejection of H02b indicates that demographic factors mediate the relationship between motivations and purchase intention. This finding is in line with the findings of Leyva-Hernández et al. (2021), who examined the role of demographic variables in moderating the effects of motivations on organic food consumption. The interaction between motivations and demographic characteristics highlights the complex nature of consumer behaviour, suggesting that targeted interventions aimed at addressing specific demographic segments may enhance the effectiveness of promotional efforts in stimulating organic food purchases among academic staff.

H03a and H03b: Subjective Norms and Demographic Factors

The rejection of H03a affirms the significant influence of subjective norms on the purchase intention of organic food among academic staff. This finding echoes the research conducted by Liu et al. (2021), who emphasized the role of social factors in shaping consumer behaviour towards sustainable food choices. The subjective norms prevalent within academic circles likely contribute to the normalization of organic food consumption, fostering a culture of sustainability and environmental responsibility among faculty members.

Moreover, the rejection of H03b suggests that demographic factors act as mediators in the relationship between subjective norms and purchase intention. This finding is consistent with the findings of Zia et al. (2022), who investigated the moderating effects of demographic variables on social influences in consumer decision-making processes. The interplay between subjective norms and demographic characteristics underscores the importance of social contexts in shaping consumer preferences for organic food, highlighting the need for targeted interventions aimed at leveraging social networks to promote sustainable consumption behaviours among academic staff.

H04a and H04b: Awareness and Information Sources

The rejection of H04a underscores the negative relationship between awareness and information sources and the purchase intention of organic food among academic staff. This finding is consistent with the research conducted by Brandão and de Miranda (2022), who explored the impact of information dissemination on consumer attitudes towards organic products. Despite the growing awareness of organic food benefits among academic staff, the availability of information sources may not necessarily translate into higher purchase intentions, reflecting potential barriers such as affordability and accessibility.

Furthermore, the rejection of H04b indicates that demographic factors mediate the relationship between awareness and purchase intention. This finding resonates with the findings of Nosi et al. (2019), who investigated the moderating effects of demographic variables on information processing and decision-making in consumer behaviour. The influence of demographic characteristics on the interpretation and utilization of information sources underscores the need for targeted communication strategies tailored to the diverse needs and preferences of academic staff, thereby enhancing their awareness and understanding of organic food options.

H05a and H05b: Barriers and Challenges to Sourcing Organic Food

The rejection of H05a highlights the significant relationship between barriers and challenges to sourcing organic food and the purchase intention of academic staff. This finding is consistent with the research conducted by Bo ́squez et al. (2022), who identified various obstacles such as availability, affordability, and convenience hindering consumer access to organic products. The presence of barriers and challenges among academic staff underscores the importance of addressing structural constraints to promote organic food consumption within university settings, emphasizing the need for collaborative efforts between stakeholders to overcome supply chain inefficiencies and enhance market accessibility.

Moreover, the rejection of H05b suggests that demographic factors mediate the relationship between barriers and purchase intention. This finding is supported by the research conducted by Lockeretz (2003), who examined the role of demographic variables in moderating consumer responses to market constraints. The interaction between barriers and demographic characteristics highlights the diverse needs and preferences of academic staff, necessitating targeted interventions aimed at addressing specific challenges faced by different demographic segments, thereby fostering a conducive environment for organic food consumption within university campuses.

Conclusion

This study set out to investigate the influence of attitudes, motivations, subjective norms, awareness, and barriers on the purchase intentions of organic food among academic staff at Nigerian universities, while examining the mediating role of demographic factors. Through a comprehensive analysis involving direct effects and mediation tests, several key findings have emerged that enrich our understanding of the determinants behind organic food purchase intentions within this specific demographic.

The study confirms that positive attitudes towards the benefits of organic food are a strong predictor of purchase intentions. This relationship was not only direct but also amplified subtly by demographic variables, suggesting that personal benefits resonate strongly with individuals, possibly reflecting an awareness of health and environmental benefits associated with organic food consumption.

Interestingly, motivations showed a negative direct relationship with purchase intentions. This counterintuitive finding could imply that while academic staff might be motivated by certain ideals or external pressures, these do not necessarily translate into actual purchase behaviors. This aspect was further complicated by demographic influences, indicating a divergence between what individuals are motivated by and what they ultimately act upon, potentially due to practical barriers such as availability and price.

The influence of societal pressures or norms was found to positively affect purchase intentions. This suggests that the social environment within universities, including peer influences and cultural factors, plays a significant role in shaping buying decisions. The mediating role of demographic factors highlights that different groups may perceive these social pressures differently.

Contrary to expectations, greater awareness and access to information about organic food negatively impacted purchase intentions. This might suggest an overload of information or misinformation that confuses potential buyers or paints an unattractively complex picture of organic food procurement. The mediation analysis indicated that demographic characteristics could exacerbate this effect, possibly reflecting varying levels of education and access to reliable information across different demographic groups.

The direct positive relationship between perceived barriers and purchase intentions was another unexpected outcome, suggesting that the recognition of challenges associated with buying organic food might actually strengthen resolve or intent among some members of the academic community. This could be interpreted as a commitment to overcome these barriers, influenced by demographic contexts such as age, income levels, and family commitments.

Recommendations

Based on the findings of the study on the mediating influence of demographic factors on the purchase intention of organic food among academic staff of Nigerian universities, the following recommendations are proposed for future research and practical implementation:

Marketers should develop targeted marketing campaigns that consider the significant role of attitudes, subjective norms, and demographic factors. Since attitudes towards organic food significantly influence purchase intentions, marketing efforts should highlight the specific benefits valued by different demographic groups within the academic community. Given the negative impact of overwhelming or confusing information on purchase intentions, it is essential to improve the clarity and accessibility of information regarding organic food. Universities and organic food producers could collaborate to create educational programs and workshops that demystify organic food purchasing and consumption.

Identify the main barriers faced by academic staff in purchasing organic food, such as cost, availability, and convenience. Initiatives could include establishing organic food co-ops within university campuses, partnering with local organic farmers for direct supply routes, or offering group discounts to increase affordability and accessibility. Leverage the positive impact of subjective norms by fostering a community-oriented approach towards organic food consumption. Initiatives could include peer-led discussions, shared experiences, and testimonials within the university setting to normalize and encourage the purchase of organic foods.

Since demographic factors mediate the relationship between various psychological factors and purchase intentions, it is crucial to design interventions that are sensitive to these differences. For instance, tailored messaging for different age groups, academic positions, and cultural backgrounds can help to address the specific needs and preferences of these groups. Future research should consider longitudinal studies to track changes in attitudes and purchasing behaviors over time, particularly in response to interventions or changes in market conditions. Additionally, comparative studies involving other educational institutions or sectors can provide broader insights and validate the findings from this study. To better understand the unexpected negative impact of motivations and awareness on purchase intentions, qualitative research methods such as interviews and focus groups should be employed. These can provide deeper insights into the personal reasons behind these trends, helping to refine further interventions.

Policymakers should consider creating supportive policies that encourage organic farming practices and reduce the price gaps between organic and conventional foods. Additionally, policy initiatives could focus on improving the logistics and supply chain issues that hinder the availability of organic products. Explore the use of technology to ease the acquisition of organic foods, such as mobile apps for direct ordering from organic farms or platforms for sharing resources and knowledge about organic food sourcing among academic staff.

Limitations of the Study

The study on the impact of demographic factors on the purchase intentions of organic food among academic staff at Nigerian universities provides insightful findings; however, it also faces several limitations that could affect the generalizability and interpretation of its results:

The study sample is limited to academic staff at Nigerian universities, which may not be representative of the general population. This specificity restricts the ability to generalize findings to other groups, including non-academic staff, other demographic sectors, or different cultural contexts. As the study employs a cross-sectional design, it captures data at a single point in time. This design limits the ability to infer causality or examine how relationships between attitudes, demographic factors, and purchase intentions might evolve over time. The study is geographically confined to Nigerian universities. Differences in availability, affordability, and cultural perceptions of organic food in other regions of Nigeria or in different countries might lead to different findings.

The study primarily uses quantitative methods, which may overlook nuanced motivations and perceptions that qualitative data could reveal. Deeper, qualitative insights might provide a more comprehensive understanding of why certain demographic factors mediate the relationship between attitudes and purchase intentions. The study might not have employed or discussed potential non-linear relationships or interaction effects among the variables, which could offer a deeper understanding of the dynamics at play.

Economic variables such as income levels are grouped into broader demographic factors, potentially oversimplifying the nuanced impact economic status has on the ability to purchase organic foods.

These limitations suggest areas for future research, including longitudinal studies, expanding the demographic scope, incorporating additional relevant variables, and using mixed-methods approaches to capture a fuller picture of the factors influencing organic food purchase intentions. Addressing these limitations could enhance the robustness and applicability of the findings to broader contexts.

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Institutional Quality and Health Outcomes: Empirical Evidence from Nigeria

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Abstract

Poor quality of institutions is detrimental to the performance of health sector. This study investigated the nexus between institutional quality and health outcomes in Nigeria. Time series secondary data were sourced form world development indicators and world governance indicators from 1988 to 2022. The study employed the Auto-regressive Distributed Lag Model. The short run result revealed that government effectiveness and political stability both have a negative and significant impact on maternal mortality rate in Nigeria while control of corruption on the other hand has a significant positive impact on life expectancy. The long-run result revealed that all the institutional quality indicators except control of corruption are positive and significant on both health outcomes. Based on the findings, the study recommended that efforts should be made to enhance control of corruption, strengthening the rule of law, promoting political stability, combating violence and terrorism, and improving government effectiveness. These policy measures can positively impact maternal health outcomes and overall life expectancy by ensuring transparent and accountable healthcare systems, equal access to justice, peaceful environments, and effective governance of healthcare resources.

Keywords*: Maternal mortality, life expectancy, Corruption, Rule of law, Political stability, Terrorism, Government effectiveness.*

Introduction

Institutional quality encompasses various aspects such as legal framework, protection of individual rights, and effective government regulation and services (Bruinshoofd, 2016). Assessing a country's institutional quality involves evaluating factors like the strength of enacted laws, enforcement mechanisms, business environment, property rights protection, transparency, democratic practices, and social and economic safeguards for citizens (Ogbebor, 2021).

Prioritizing institutional quality is crucial for any nation, as poor quality can impede advancements in healthcare delivery, especially in developing countries (Rizvi, 2019). Strong institutions correlate with efficient fund management and allocation, fostering a more stable business environment (Abubakar, 2020). Nigeria serves as a notable case study, grappling with institutional challenges such as corruption, governance weaknesses, and inadequate funding, hindering the provision of quality healthcare (Uzochukwu et al., 2016). Effective governance is indispensable for optimal functioning of national healthcare systems. Underfunding, insufficient regulatory oversight, and governance opacity can foster corruption and compromise healthcare quality. Globally, a significant portion of healthcare spending, approximately $455 billion annually, is lost to fraud and corruption (Gee and Button, 2015). Corruption also contributes to approximately 1.6% of annual deaths in children under 5 worldwide (Hanf et al., 2011).

Nigeria faces substantial health challenges, characterized by high morbidity and mortality rates, low life expectancy (55 years), and elevated maternal mortality ratios (512 per 100,000 live births) (WHO, 2021). Additionally, the country grapples with a heavy burden of communicable and non-communicable diseases, exemplified by the 2020 COVID-19 pandemic, with over 160,000 confirmed cases and 2,000 deaths reported (WHO, 2021). Furthermore, diseases like HIV/AIDS, tuberculosis, and malaria remain prevalent (WHO, 2016). Maternal mortality, under-five mortality, and maternal death rates are also alarming (World Bank, 2017), with poor institutional quality identified as a significant contributor to these health challenges (Uneke et al., 2012). Inadequate leadership, governance deficiencies, and weak accountability systems in the healthcare sector exacerbate these issues (Amedari et al., 2021). Primary healthcare suffers due to poorly enforced procurement laws, weak governance, inadequate healthcare worker remuneration, and transparency mechanisms (Amedari et al., 2021).

Extant studies have identified that quality government and economic institutions have a long way in improving the health care of a nation. For instance, Kibra and Toufique (2023) found that improvements in indicators of institutional quality such as voice and accountability, quality of regulation and rule of law have a positive long term impact on the quality of life. Sharma, Sharma and Tokas (2022) found that an improvement in the quality of economic institutions has a favourable effect on health. They further highlighted the importance of an efficient legal system, a stable macroeconomic environment, and fewer regulations on improving health outcomes in the E.U. countries. The problem of poor health sector performance in Nigeria is compounded by a lack of rigorous empirical research that can provide evidence-based solutions to the institutional challenges facing the sector. There is a dearth of literature on institutional quality and health outcome relationship especially from the Nigerian perspective as majority of the extant literatures only examined this relationship in a cross-country study (Kibra & Toufique, 2023; Suhaibu, Andani & Anafo, 2022, Sharma et al. 2022; Tibrewal & Chaudhuri, 2022; Rhemat, Majeed & Zainab, 2020). This study therefore seeks to critically investigate the impact of institutional quality on health outcomes in Nigeria.

Our results show that long-run relationship exists among the variables. The short run result shows that government effectiveness and political stability both have a significant negative impact on maternal mortality rate in Nigeria while control of corruption on the other hand has a significant positive impact on Life expectancy. The long-run result shows that all the institutional quality indicators except control of corruption are positive and significant on health outcomes. Therefore, the outcome of this study would provide more information, understanding and serve as a guide to policy makers and would help the government to identify practical policy solutions that can help improve institutional quality and health outcomes in the country. This study would also be of immense benefits as it will contribute to the existing literatures on institutional quality and health sector performance in Nigeria which will aid further studies in the area of health. Thus, the rest of the paper is structured as follows: section two which draws insight from relevant literature and the theoretical framework; section three comprises of the methodology employed while discussion of results and the summary of findings are presented in section four. Finally, section five concludes the study with appropriate policy recommendation.

Literature Review

Empirical Literature Review

Limited studies have been done on institutional quality and health outcomes in Nigeria, however some of the related studies reviewed are discussed as follows:

In a recent study, Kibra and Toufique (2023) examined the nexus between institutional governance and quality of life using a panel data set constructed for 21 developing countries. The study adopted the ARDL model. The findings showed that an improvements in indicators of institutional quality such as voice and accountability, quality of regulation and rule of law have a positive long term impact on the quality of life.

Similarly, Suhaibu et al. (2022) used data from 2000 to 2019 on 20 sub-Saharan African countries to model the impact of Institutional Quality on Living Standards in a VAR framework, upon satisfactory data suitability tests. The impulse response functions and forecast error variance decomposition estimates provide evidence that Institutional quality does not directly impact living Standards but does so through its effects on financial development (FDI). As the forecast horizon moves from 1 to 5 forecast periods, Institutional Quality accounts for about 7.13% of FDI shocks, while FDI explains about 0.55% of Living Standard, and Living Standards account for about 1.13% of FDI shocks. Ultimately, Institutional Quality impacts Living Standards through FDI.

In a bid to examine the effect of the quality of economic institutions on health outcomes for the E.U. countries, Sharma et al. (2022) did a panel data analysis using data from World Bank and the Fraser Institute from 2000 to 2018 and employed the fixed effects and random effects models. The findings revealed that an improvement in the quality of economic institutions has a favourable effect on health. Specifically, the findings highlight the importance of an efficient legal system, a stable macroeconomic environment, and fewer regulations on improving health outcomes in the E.U. countries.

In order to examine the effect of institutional factors on the quality of Ghana's healthcare delivery, Amporfu, Nonvignon & Ampadu (2013) utilized new survey data from malaria outpatients, health workers and administrators from sixty two health facilities in three regions across the country. They employed the ordered logistic regressions. The results showed that job satisfaction and involvement of health workers in decision making are important for the improvement of process quality. Job satisfaction also had a significant positive effect on all process quality indicators while the involvement of health workers in decision making also had a positive effect on attitude of health workers.

In a bid to investigate the role of institutional quality in the relationship between health expenditure and labour force participation (LFP) in Africa, Opeloyeru, Faronbi and Rafiu (2021) did a panel data analysis on 39 African countries for the period between 2000 and 2018 using Panel Fixed Effects with Driscoll and Kraay standard errors and two-stage System Generalized Method of Moments (GMM). The findings revealed that government health expenditure yields an increasing effect on total, female, and male LFP. The institutional quality was found to be detrimental to LFP. The magnitude of the positive effect of government health expenditure on LFP is reduced by the interaction of institutional quality with government expenditure.

In a bid to empirically investigate the impact of institutional quality on the effectiveness of public healthcare mechanisms around the world, Tibrewal and Chaudhuri (2022) did a panel data regression analysis for 173 countries over the period 2002-2018. The percentage of out-of-pocket expenditure from total health expenditure was taken as a proxy – the higher this percentage, the more people seem to rely on private institutions, implying lower effectiveness of government facilities. Their findings revealed a positive effect of institutional quality, and reaffirm the expected positive impact of government expenditure on healthcare quality.

Rhemat et al. (2020) investigated the impact of institutional quality effect on population health outcomes. The explanatory variables employed were government stability, corruption, law and order, democratic accountability and bureaucracy quality. Whereas for the population health proxies are infant mortality rate and life expectancy. The sample of the study consist of 105 countries. Five years' average data from 1984 to 2012 was taken from the Political Risk Services Group and World Development Indicators 2015. The study employed econometric techniques like Fixed Effects, Random Effects and GMM. The findings revealed that population health is positively affected by the institutional quality.

Alimi and Ajide (2021) investigated the role of institutions in environment–health outcomes nexus in sub-Saharan African countries over the period 1996–2016. The study employed different surrogates for capturing the three key variables of concern. These include institutions consisting of control of corruption, government effectiveness, and regulatory quality; environment comprising of carbon emissions and ecological footprints; and health outcomes involving human longevity, child mortality and health expenditures respectively. Using a system of generalized method of moments. The findings revealed that environmental degradation captured with carbon emissions and ecological footprint was found to be significant on human life expectancy by substantial statistical magnitudes. In addition, carbon emission was found to amplify the infant mortality rates, even when the variable interacts with institutional quality variables like government ineffectiveness and poor regulatory quality.

Ouedraogo, Dianda and Adeyele (2020) identified the institutional dimensions that are most relevant to the improvement of health outcomes in sub-Saharan Africa. They integrated institutional quality measures into a health production model. The model was estimated using the Two-stage least squares method on a panel of 45 countries observed over the period 1996-2018. Their findings revealed that the most relevant institutional dimensions that improve health outcomes in the region are by order: rule of law, control of corruption, government effectiveness, voice and accountability and political stability and absence of violence.

Using a sample of 20 South, East Asian and Pacific developing countries for the period 1995-2017. Rizvi (2019) examined the effect of health expenditures on economic growth while taking into account the quality of health institutions, keeping in view the fact that it’s not just the level rather the quality of expenditures or institutions that matters. The study employed the standard neoclassical Solow Growth Model at steady-state level as theoretical framework and made a production function adding institutional quality proxy by government effectiveness along with other variables like health expenditure, primary education completion rate, population growth etc. Economic growth was found to increase by 5% if health expenditure adjusted for the quality of government expenditures increased by 100%.

Theoretical Framework

This study utilized the New Institutional Economics (NIE) theory, highlighting the significance of institutions in shaping economic outcomes across countries. According to North (1994), institutions play a crucial role in determining economic performance variations. Williamson (1998) observed that NIE is inherently interdisciplinary, encompassing various areas such as property rights analysis, legal and economic analysis, public choice theory, constitutional economics, collective action theory, transaction cost economics, principal-agent theory, relational contract theory, and comparative economic systems.

Unlike neoclassical economics, the NIE framework does not presuppose institutions but treats them as subjects of study, considering their implications for economic behavior (Richter, 2005). NIE views institutions as internally determined, recognizing their role in facilitating development in some countries by promoting efficient behavior among agents, while others struggle due to ineffective institutions that fail to deter abuse and inefficiency (Leite et al., 2012). By integrating transaction costs into its analysis, NIE expands neoclassical economics' understanding of growth and development, highlighting the link between institutions and production costs (Commons, 1992).

Gagliardi (2008) argues for the necessity of institutions in reducing transaction costs, thus fostering coordination and enabling agents to derive greater benefits from collective action. NIE emphasizes that agents respond differently to incentives and that the institutional framework significantly influences expected outcomes. The focus on institutions stems from the recognition that they shape the incentive structure crucial for efficient economic performance (North, 1990).

According to NIE, countries require two distinct sets of institutions for development: those facilitating exchange by reducing transaction costs and promoting trust through contracts, enforcement mechanisms, commercial norms, shared values, and human capital accumulation; and those influencing the state and powerful actors to safeguard private property and individuals through constitutions, electoral rules, laws governing speech and education, and legal and civic norms (Shirley, 2005). Key institutions of interest to NIE include the institutional environment encompassing polity, judiciary, contract, and property laws, as well as governance institutions involving markets, hybrids, firms, and bureaus (Williamson, 1998).

Methodology

Data Measurement and Sources

Poor institutional quality can cause severe restrictions on improving health with conveyance of health care services in case of developing countries. (Rizvi, 2019). This forms the motivation for this study. The study utilized time series data which span the period of 34 years (1988-2022). Data on maternal mortality rate and life expectancy were sourced from World Development Indicators while those of Control of corruption, Government effectiveness, political stability and absence of violence and terrorism and Rule of Law were sourced from the World Governance Indicators. The study engaged six variables with maternal mortality rate and life expectancy as the dependent variables for the respective models.

Maternal mortality ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births. Life Expectancy (LEXP) is the average number of additional years that a person of a given age can expect to live. Control of Corruption (COR) captures the perceptions of the extent to which public power is exercised for private gain including both petty and grand forms of corruption, as well as capture of the states by elites and private interests. Rule of law (ROL) captures perception of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence. Government effectiveness (GOV) captures the perceptions of the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation and the credibility of the government's commitment to such policies. Lastly, political stability and absence of violence and terrorism (POL) measures the perceptions of the likelihood of political instability and or politically motivated violence and terrorism. Both, Control of corruption, rule of law, government effectiveness and political stability indices are on a scale of -2.5 to 2.5 with higher values showing improvement in the index.

Model Specification and Estimation Procedure

The model for this study is closely related to the study of Ouedraogo, Dianda and Adeyele (2020). Hence, the baseline for this study is specified as:

$$HO_t = f(\mathrm{COR}, \mathrm{ROL}, \mathrm{GOV}, \mathrm{POL}) -----------------(1)$$

where HO denotes health outcome components (maternal mortality rate and life expectancy) which are the dependent variables for models 1 and 2 respectively) while COR, ROL, GOV, and POL represents (control of corruption, rule of law, government effectiveness, voice and accountability and political stability and absence of violence respectively) are the explanatory variables.

Equations (1) can be explicitly specified as:

$$MMR_t = \alpha_0 + \alpha_1 COR_t + \alpha_2 ROL_t + \alpha_3 GOV_t + \alpha_4 POL_t ------(2)$$

$$LEXP_t = \beta_0 + \beta_1 COR_{t-i} + \beta_2 ROL_{t-i} + \beta_3 GOV_{t-i} + \beta_4 POL_{t-i} --- (3)$$

This study employed most advance technique, Autoregressive Distributed Lag, commonly known as ARDL bound tests given by Pesaran, Shin and Smith (2001) aimed at examining how health outcomes will be achieved in the long-run, given the improvement in institutional quality. This technique has several advantages on other techniques like Engle and Granger technique [1987] and Johansen Cointegration [1988]. ARDL technique does not only overcome the weaknesses of these two techniques but it has also numerous other benefits. ARDL is more suitable in in case of small sample size (Pesaran, & Shin, 1999). Also, ARDL can be used whether variables are purely I(0), purely I(1) or the mixture of both I(0) and I(1) (Pesaran, & Pesaran, 1997). Furthermore, it captures appropriate number of lags in DGP (Data generating process) particularly in general to specific process as is reported by Laurenceson and Chai [2003]. Fourth, the error correction model can be obtained from bound testing approach through simple OLS transformation. ECM shows short run to long run adjustment mechanism without the loss of long run information (Pesaran, & Shin, 1999). However, ARDL cannot be used if any of the variable under investigation is stationary at second difference i.e. I(2) as bound testing approach is based on I(0), I(1) or mixture of these two sets. To confirm that none of the variable is I(2), we check the unit root property of each variable. For this, we employed ADF (Dickey, & Fuller, 1981) and PP (Phillips, & Perron, 1988).

Model 1

The ARDL Bound Cointegration Model 1 is formulated as follows:

$$\Delta MMR_t = \omega_0 + \gamma T + \delta_1 MMR_{t-1} + \alpha_2 COR_{t-1} + \alpha_3 ROL_{t-1} + \alpha_4 GOV_{t-1} + \alpha_5 POL_{t-1} + \sum_{i=1}^{m} \varphi_i \Delta MMR_{t-i} + \sum_{i=0}^{n} \beta_{1i} \Delta COR_{t-i} + \sum_{i=0}^{n} \beta_{2i} \Delta ROL_{t-i} + \sum_{i=0}^{q} \beta_{3i} \Delta GOV_{t-i} + \sum_{i=0}^{k} \beta_{4i} \Delta POL_{t-i} + \varepsilon_{1t} \text{ ---------------- } [4]$$

The Error Correction Model 1 is formulated as follows:

$$\Delta MMR_t = \omega_0 + \sum_{i=1}^{m} \varphi_i \Delta MMR_{t-i} + \sum_{i=0}^{n} \beta_{1i} \Delta COR_{t-i} + \sum_{i=0}^{P} \beta_{2i} \Delta ROL_{t-i} + \sum_{i=0}^{q} \beta_{3i} \Delta GOV_{t-i} + \sum_{i=0}^{k} \beta_{4i} \Delta POL_{t-i} + \partial ECT_{t-1} + \varepsilon_{1t} \text{ ------ } [5]$$

The long run form of equation (6) is estimated as follows:

$$MMR_t = \omega_0 + \delta_1 MMR_{t-1} + \alpha_2 COR_{t-1} + \alpha_3 ROL_{t-1} + \alpha_4 GOV_{t-1} + \alpha_5 POL_{t-1} + \varepsilon_{1t} \text{ ------------- } [6]$$

Model 2

The ARDL Bound Cointegration model 2 is formulated as follows:

$$\Delta LEXP_t = \pi_0 + \eta T + \rho_1 LEXP_{t-1} + \gamma_1 COR_{t-1} + \gamma_2 ROL_{t-1}$$
$$+ \gamma_3 GOV_{t-1} + \gamma_4 POL_{t-1} + \sum_{i=1}^{m} \theta_i \Delta LEXP_{t-i} + \sum_{i=0}^{n} \sigma_{1i} \Delta COR_{t-i}$$
$$+ \sum_{i=0}^{P} \sigma_{2i} \Delta ROL_{t-i} + \sum_{i=0}^{q} \sigma_{3i} \Delta GOV_{t-i} + \sum_{i=0}^{k} \sigma_{4i} \Delta POL_{t-i} + \varepsilon_{2t} --[7]$$

The Error Correction Model 2 is given as:

$$\Delta LEXP_t = \sum_{i=1}^{m} \theta_i \Delta LEXP_{t-i} + \sum_{i=0}^{n} \sigma_{1i} \Delta COR_{t-i} + \sum_{i=0}^{P} \sigma_{2i} \Delta ROL_{t-i}$$
$$+ \sum_{i=0}^{q} \sigma_{3i} \Delta GOV_{t-i} + \sum_{i=0}^{k} \sigma_{4i} \Delta POL_{t-i} + \tau ECT_{t-1} + \varepsilon_{2t} --------[8]$$

The long run form for model 2 is stated as follows:

$$LEXP_t = \rho_1 LEXP_{t-1} + \gamma_1 COR_{t-1} + \gamma_2 ROL_{t-1}$$
$$+ \gamma_3 GOV_{t-1} + \gamma_4 POL_{t-1} + \varepsilon_{2t} ------[9]$$

Where ECT= Error corretion term ω_0 and π_0 are the intercept of Model 1 and 2 respectively, φ_i and θ_i are the coefficients of the lagged values of the dependent variable for model 1 and 2 respectively, $\alpha_1 - - - \alpha_4$ and $\gamma_1 - - - \gamma_4$ are the long run coefficients of model 1 and 2 respectively. $\beta_{1\,i}$ ---- $\beta_{4\,i}$ and σ_{1i} ------σ_{4i} are the short run coefficients of model 1 and 2 respectively, ∂ and τ are the coefficients of the error correction term for model 1 and 2 respectively, Δ is the Difference operator.

4.0 RESULTS AND DISCUSSIONS

4.1 Presentation and Analysis of Descriptive Statistics

Table 1 reveals the summary statistics of the variables. These include the mean, median, maximum value, minimum value, standard deviation and normality.

Table 1 Descriptive Statistics

Variables	Mean	Median	Max.	Min.	Std.	Jaque- B.	Obs.
Maternal Mortality Rate	1115.38	1105	1400	850	178.76	3.1418	34
Life Expectancy	49.159	47.986	55.5	45.843	3.4013	3.7711	34
Control of Corruption	-1.1926	-1.1892	-0.9009	-1.5021	0.1306	0.3425	34
Rule of Law	-1.0807	-1.1094	-0.0934	-1.5125	0.2537	48.320*	34
Government Effectiveness	-0.9894	-1.001	-0.11	-1.2048	0.1872	277.12*	34
Political Instability	-1.5756	-1.7105	-0.5882	-2.2111	0.4685	3.1727	34

** indicates that variable is not normally distributed at 5%*

Source: Author's Compilation, 2023

The statistical overview of maternal mortality rates (MMR) and life expectancy in Nigeria highlights concerning trends in health outcomes. With an average MMR of 1115 per 100,000 live births, ranging from 1400 to 1105, and an average life expectancy of 49 years, ranging from 56 to 48 over the study period, it is evident that Nigeria faces significant health challenges. These figures underscore the urgent need for targeted interventions to improve healthcare delivery and maternal health services in the country. Furthermore, the analysis of institutional quality reveals a particularly alarming finding: the average index of governance indicators is negative, indicating the poor quality of institutions in Nigeria. This underscores the imperative for the government to prioritize policies aimed at enhancing institutional quality to foster socio-economic development and improve public health outcomes. The Jaque bera statistics shows that of all the variables employed in the study, only rule of law and government effectiveness are not normally distributed at 5% level of significance.

Correlation Matrix

These section present the relationship among the variables. It also checks the presence of multicollinearity in the model with the aid of the Variance Inflation Factor (VIF).

Table 2 Correlation Matrix and Variance Inflation Factor

Variables	MMR	LEXP	COR	ROL	GOV	POL
MMR	1.0000					
LEXP	-0.9381	1.0000				
COR	-0.5819	0.5951	1.0000			
ROL	-0.0236	0.2219	0.3515	1.0000		
GOV	0.5009	-0.4071	-0.2924	-0.0367	1.0000	
POL	0.8909	-0.7937	-0.3768	0.0678	0.3887	1.0000
VIF	-	-	1.23	1.38	1.44	1.43
1/VIF	-	-	0.8130	0.7246	0.6944	0.6993
Mean VIF			1.37			

Source: Author's Compilation, 2023

From the table 2, it can be seen that POL has a strong positive correlation with MMR and a strong negative correlation with LEXP. Also, COR has strong negative correlation with MMR and a strong positive correlation with LEXP. There is also a very strong negative relationship between MMR and LEXP. And lastly, there is a moderately positive correlation between GOV and MMR. The correlation among the explanatory variables is weak. This is also evident by the mean variance inflation factor of 1.37 which is significantly below the threshold of 5. Based on this, we can conclude that there is no evidence of multi-collinearity in the model.

Pre-Estimation Test

To avoid having a spurious result, it is always important to examine the econometric properties of the variables we are employing in the model. This section helps to test for the presence of unit root within the variables using both the Augmented Dickey-Fuller and Phillips-Perron Unit root tests.

Table 3 Unit Root Test Result

Variables	Level	1^{ST} Difference	I(d)	Level	1^{ST} Difference	I(d)
	ADF Test Statistic	ADF Test Statistic		PP Test Statistic	PP Test Statistic	
MMR	-3.2280^{c**}	-	I(0)	-5.7978^{c**}	-	I(0)
LEXP	-	-4.5866^{b**}	I(1)	-3.900^{b**}	-	I(0)
COR	-4.0923^{b**}	-	I(0)	-	-4.9886^{a**}	I(1)

ROL	-	-3.7021^{a**}	I(1)	-	-7.4990^{a**}	I(1)
GOV	-4.3238^{a**}	-	I(0)	-4.2615^{a**}	-	I(0)
POL	-	-6.3927^{a**}	I(1)	-	-6.6689^{a**}	I(1)

Note: The term ADF implies Augmented Dickey Fuller the superscript (a) implies model with constant, (b) implies model with constant and trend while (c) implies model with no constant and trend. While the asterisks ***, **, * signify stationarity at 1%, 5% and 10% level of significance respectively. I (d) represents the order of integration, where I(0) denotes stationary at levels and I(1) represents stationary at first difference.

Source: Author's Compilation, 2023.

Model Estimation and Discussions

1 Lag Length Criteria

To estimate the model for the study, it is always appropriate to determine the optimal lag length so as to avoid any error of omission of important lags or error of including any irrelevant lags.

Table 4 Optimal Lag Length Selection for Model 1

Lag	LR	FPE	AIC	SC	HQ
0	NA	0.0076	9.3160	9.5472	9.3913
1	180.88	2.83e-05	3.6936	5.0814	4.1461
2	57.932*	9.00e-06	2.4100	4.9541*	3.2393
3	34.810	6.54e-06*	1.7022*	5.4028	2.9085*

Source: Author's Compilation, 2023.

Table 5 Optimal Lag Length Selection for Model 2

Lag	LR	FPE	AIC	SC	HQ
0	NA	0.004755	8.840645	9.071933	8.915039
1	188.6734	1.29e-05	2.906611	4.294341	3.358977
2	56.00177*	4.51e-06	1.719426	4.263597*	2.548762
3	35.94630	3.04e-06*	0.935909*	4.636521	2.142216*

Source: Author's Compilation, 2023.

Three of the criteria in table 4 and 5 i.e. Final prediction error, the Akaike information criterion and Hannan-Quinn information criterion all suggested an optimal lag length of 3 for both model one and two which necessitated the employment of a lag length of 3 for the ARDL model.

4.3.2 Cointegration Test

This section helps to check if there is a long run relationship between institutional quality and health outcomes.

Table 6 ARDL Bound Cointegration Test Result

Test- statistic	Value	Critical Values of I(0) Bound at 5% Level of Significance	Critical Values of I(1) Bound @5% Level of Significance
Model 1			
F-statistic	6.0149	3.47	4.57
T- Statistic	-6.0951	-3.41	-4.36
Model 2			
F-statistic	7.3945	3.47	4.57
T-statistic	-6.9534	-3.41	-4.36

Source: Author's Compilation, 2023.

From the bound cointegration test result, the absolute value of both the f-statistic and t-statistic are greater than the critical value of the upper bound. Hence we are rejecting the null hypothesis of no levels relationship and therefore conclude that the variables have a long-run relationship.

4.3.3 Long Run, Short Run and Error Correction Estimates (Parsimonious)

This section presents the short run, long-run and error correction estimates of the ARDL model based on a lag length of two for both the dependent and explanatory variables. The Parsimonious ARDL (2 2 2 2 2) model is presented in Table 7.

Table 7 Long Run, Short Run and Error Correction Estimates (Parsimonious)

Source: Author's Compilation, 2023.

***, **, * signify stationarity at 1%, 5% and 10% level of significance respectively

	Dependent Variable: MMR_t		Dependent Variable: $LEXP_t$	
Variables	**Coefficients**	**T-statistics**	**Coefficients**	**T-statistics**
Short-run				
ΔMMR_{t-1}	0.6526	5.0123***	-	-
ΔMMR_{t-2}	0.3693	2.3485**	-	-
$\Delta LEXP_{t-1}$	-	-	4.8180	5.0143***
$\Delta LEXP_{t-2}$	-	-	5.7588	5.8165***
ΔCOR_t	-	-	-0.4263	-4.8570***
ΔCOR_{t-1}	-	-	0.7043	5.8853***
ΔCOR_{t-2}	-	-	0.3251	3.9675***
ΔROL_t	-10.2426	-1.4939	0.0954	2.3681**
ΔROL_{t-1}	-	-	-0.1378	-3.8830***
ΔGOV_t	36.0018	2.3367**	0.2773	5.3350***
ΔGOV_{t-1}	-	-	-0.3057	-4.7267***
ΔGOV_{t-2}	-	-	-0.1095	-2.5801***
ΔPOL_{t-1}	-50.0056	-4.9404***	-	-
ΔPOL_{t-2}	-23.2436	-2.6026**	-	-
ΔECT_t	-0.5423	-6.0951***	-0.4154	-13.410***
Long-run				
COR_t	-34.7825	-0.7762	-6.7886	-8.7209***
ROL_t	48.3138	2.8126**	0.3212	0.7481
GOV_t	179.8843	3.3694***	1.7766	5.4519***
POL_t	91.3190	5.5181***	3.4370	3.5348***

Table 7 indicates that previous values of MMR and LEXP both exert a significant positive influence on their current values. For instance, an increase of one unit in the one and two-period lags of MMR typically results in current MMR increasing by 0.6526 and 0.3693 units respectively. Similarly, a one unit increase in the one and two-period lag of LEXP leads to an average increase in current LEXP by 4.8180 and 5.7588 units respectively. Both the one and two-period lags of COR exhibit a significant positive impact on LEXP, with an increase of one unit in both leading to a 0.7043 and 0.3251 unit increase in LEXP respectively. However, the current value has a significant negative impact on LEXP, with a one unit increase causing a 0.4263 unit decrease in LEXP.

Although ROL shows a negative impact on MMR in the short run, it is statistically insignificant, with a one unit increase causing a 10.2426 unit decrease in MMR. However, its impact on LEXP is positive and statistically significant at 5%, with a one unit increase causing a 0.0954 unit increase in LEXP. It's one period lag is negative and significant on LEXP, resulting in a 0.1378 unit increase for every unit decrease in its value. The current value of GOV has a positive and significant impact on both MMR and LEXP, with a one unit increase causing an average increase of 36.0018 units in MMR and 0.2773 units in LEXP respectively. Additionally, a one and two-period lag of GOV has a negative and significant impact on LEXP, with a one unit increase in their values resulting in an average decrease of 0.305676 and 0.109466 units in LEXP respectively.

Furthermore, the current value of POL negatively impacts MMR, but it is not statistically significant based on the p-value. However, the one and two-period lags of POL have a negative and significant impact on MMR. For instance, a one unit increase in the one-period and two-period lag of POL results in a decrease of 50.0056 and 23.2437 units in MMR respectively. Finally, the coefficients of the error correction term (-0.5423 and -0.4154 for model one and two respectively) suggest that approximately 54% and 42% of the deviations in the short run will be corrected in the long run. The negative coefficient of ECT indicates correct alignment, and the p-values also suggest statistical significance at 1%.

In the long run, Table 7 reveals that ROL, GOV, and POL demonstrate a positive and significant impact on MMR and LEXP, except for ROL, which shows an insignificant impact on LEXP. For instance, a one unit increase in ROL, GOV, and POL leads to an average increase of 48.3138, 179.8843, and 91.3190 units in MMR respectively. However, these increases only result in a 0.3212, 1.7766, and 3.4370 unit increase in LEXP respectively. Conversely, COR exhibits a negative and insignificant impact on MMR in the long run, with a one unit increase resulting in a decrease of 34.7825 units in MMR. However, its impact on LEXP over the long run is statistically significant at 5%, with a one unit increase resulting in a 6.7886 unit increase in LEXP.

Model Diagnostic Test

This section helps to check for model diagnostics to know if our model is good for prediction. It helps to check for the reliability of our estimates.

Table 8 Summary of Diagnostics Test Results

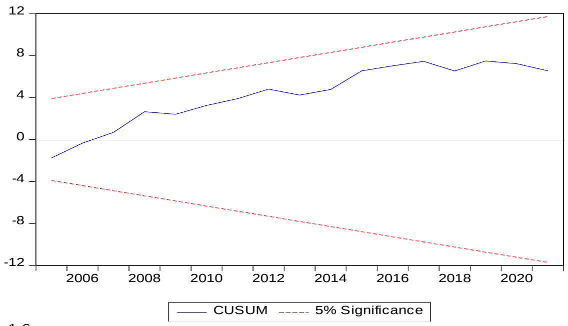
Test	Model 1	Model 2
R^2	0.9983	0.9925
Adjusted R^2	0.9970	0.9868
D.W Statistic	2.3030	2.2445
Prob (f-statistic)	0.0000	0.0000
Prob (Jaque-Bera)	0.7309	0.4542
Breusch-Godfrey (LM serial correlation)	0.07	0.2399
Breusch-Pagan Godfrey (Heteroscedasticity)	0.6743	0.7749
Ramsey Reset Test (Linearity)	0.3431	0.0987

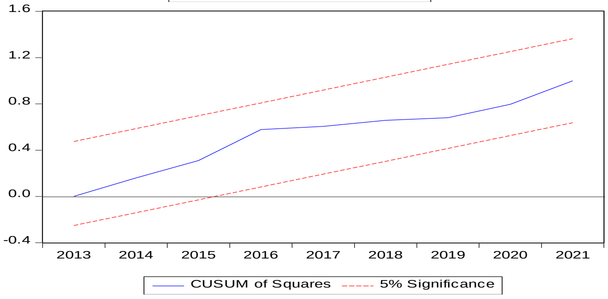
Source: Authors compilation from E-views 10

Different diagnostics and stability tests are performed to check the perfectness of the model. Among them, serial correlation, residuals distribution and heteroscedasticity are important. The stability of the coefficients can be checked through CUSUM and CUSUMSQ given by Brown et al. (1975). The plot graphs of CUSUM and CUSMSQ statistic remains within the bounds at 5% significance level, then we can say that the coefficients in the model are stable. These diagnostic tests (Table 8) confirm the perfectness of our model. The D.W statistics of 2.30 and 2.24 show that there is no evidence of auto-correlation in models 1 and 2 respectively. The probability of F-statistics of 0.0000 for both models show that the overall model is statistically significant. The Breusch-Godfrey probability of 0.07 and 0.2399 shows no evidence of serial-correlation in the model at 5% level of significance. The Jarque-bera probability of 0.7390 and 0.4542 show that both models are normally distributed at 5% level of significance. The Breusch-Pagan-Godfrey probability of 0.6743 and 0.7749 shows no evidence of heteroscedasticity, and the Ramsey reset probability of 0.3431 and 0.0987 revealed that both models are linear and correctly specified at 5% level of significance. The CUSUM (Fig. 1 models 1 and 2) and CUSUMSQ (Fig. 1 models 1 and 2) under consideration fall within the five percent critical bound. All lines remain between the upper and lower bounds suggesting that the parameter estimates do not exhibit any structural breaks or instability over the study period. This show that all coefficients in the model are stable.

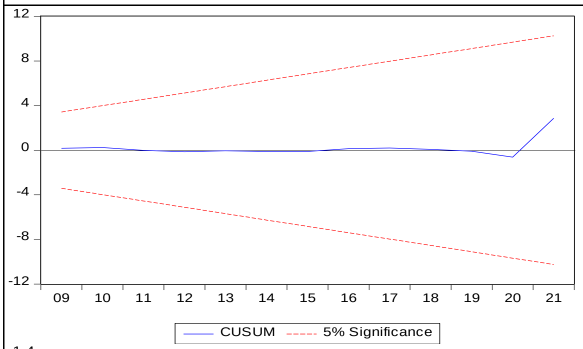
Stability test

Model 1





Mode 2



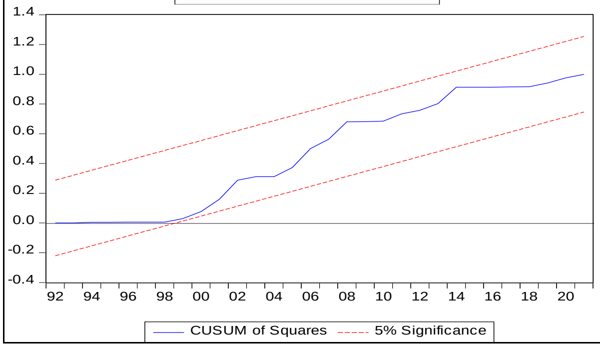


Figure 1 CUSUM and CUSUM of Squares

Source: E-views 10

Discussion of Findings and Policy Implications

This study examined the dynamic relationship between institutional quality and health outcomes in Nigeria. The ARDL bound test showed an evidence of a long-run relationship between institutional quality and health outcomes in Nigeria. The short-run and long-run impact of the institutional quality indicators on health outcomes are discussed below with their policy implications.

Firstly, previous values of MMR and LEXP both exert a positive and significant influence on their current values which implies that policies that attempt to improve maternal mortality rate and life expectancy will to a great extent influence the variables in the future. Both the one and two-period lags of COR exhibit a significant positive impact on LEXP suggesting the need for policy makers to address corruption cases within the healthcare system so as to improve the overall life expectancy. Policies focusing on enhancing transparency, reducing embezzlement, and promoting ethical practices in healthcare can contribute to better health outcomes. ROL shows a negative impact on MMR in the short run, but the impact is statistically insignificant, however, its impact on LEXP is positive and statistically significant suggesting the need for the government to ensure that legal frameworks and institutions are effectively implemented and enforced to reduce maternal mortality rates and improve the life expectancy of the people. The current value of GOV has a positive and significant impact on both MMR and LEXP suggesting that policies focused in improving government effectiveness will go a long way in improving maternal mortality rate and life expectancy in Nigeria. The insignificant negative impact of rule of law on MMR is in contrast to what Sharma et al. (2022) found in their study. The significant positive impact of GOV on LEXP is in tandem to the works of Naher et al. (2020) and Ouedraogo et al. (2020).

One and two-period lags of POL have a negative and significant impact on MMR suggesting the need to ensure political stability and absence of violence and terrorism. Policies should focus on promoting stability through measures such as promoting democratic governance, peaceful political transition as well as investing in security measures, implementing strategies to prevent and responds to violence, protecting women's rights and ensuring a safe environment for maternal healthcare provision. This findings is in line with the findings of Ouedraogo et al. (2020). The coefficients of the error correction term suggests that about 54% and 42% of the short-run deviation in MMR and LEXP respectively will be corrected in the long-run suggesting a high speed of adjustment from the short-run disequilibrium to long-run equilibrium. The negative coefficient of ECT conform to economic theory, and the p-values also suggest statistical significance at 1%.

In the long run, ROL, GOV, and POL demonstrate a positive and significant impact on MMR and LEXP, except for ROL, which shows an insignificant impact on LEXP implying that policies aimed at improving rule of law, government effectiveness and enhancing political stability will to a large extent improve the health outcomes in the long-run. In addition, COR was negative but insignificant on MMR in the long-run. The insignificant negative impact of COR is in line with studies by Ouedraogo, et al. (2020) and Kibra and Toufique (2023). Finally, the post-estimation carried out shows that the two models are a good fit with the explanatory variables explaining 99.83% and 99.25% of the changes in MMR and LEXP respectively. The two models are also free from autocorrelation. In addition, they are linearly specified and free from heteroscedasticity.

Conclusion and Policy Recommendations

This study examined the impact of institutional quality on health outcomes in Nigeria, specifically focusing on maternal mortality rate (MMR) and life expectancy (LEXP). The analysis utilized the ARDL model to investigate both the short-run and long-run relationship between institutional quality variables (Control of Corruption, Rule of Law, Political Stability, Absence of Violence and Terrorism, and Government Effectiveness) and the health outcome variables. The study highlights the need for targeted interventions to improve institutional quality in Nigeria's healthcare system. Efforts should focus on enhancing control of corruption, strengthening the rule of law, promoting political stability, combating violence and terrorism, and improving government effectiveness. These policy measures can positively impact maternal health outcomes and overall life expectancy by ensuring transparent and accountable healthcare systems, equal access to justice, peaceful environments, and effective governance of healthcare resources. By implementing appropriate policies and interventions to improve institutional quality, the country can strive towards better maternal health and increased life expectancy, ultimately leading to improved well-being and quality of life for its population.

Based on the findings, the study recommended that anti-corruption measures like promoting transparency, and enforcing accountability can help reduce corruption levels. This could positively impact maternal mortality rates and life expectancy. Also, policies and initiatives should focus on strengthening the rule of law in Nigeria. This includes ensuring equal access to justice, promoting legal reforms, and enhancing the efficiency and effectiveness of the judicial system. In addition, there should be improvement in public service delivery, optimizing resource allocation, and promoting efficient governance structures. This can help to improve government effectiveness and hence improve health outcomes. Government should also promote peaceful political transitions, address conflicts, and maintain social stability.

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EXPLORING THE ROLE OF JOB SHARING AND FLEX TIME IN ENHANCING ORGANIZATIONAL PERFORMANCE

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Abstract
This study investigates the relationship between job sharing and customer satisfaction and the relationship between flex time and employee retention within media firms. Using a survey design, the study examines the impact of these workplace flexibility practices on organizational performance. The study used a census sampling technique and 211 respondents were selected from media firms in Anambra State. The primary data were generated using a structured questionnaire. The analysis was performed using the Pearson correlation coefficient. The result showed a significant positive relationship between job sharing and customer satisfaction, and between flex time and employee retention. The study concludes that these flexible work arrangements can enhance employee engagement and satisfaction, thereby improving overall organizational performance. Based on these, the study recommends that media firms should actively promote job sharing as a strategy to improve customer satisfaction. This can help employees maintain a work-life balance, leading to better job performance and higher customer satisfaction. Secondly, firms should implement flex time policies to retain top talent. Hence allowing employees to choose their work hours, firms can reduce turnover rates and increase employee loyalty.
Keywords: *Job sharing; Flex time; Customer satisfaction; Employee retention.*

Introduction

Workplace flexibility has become increasingly important in today's dynamic work environment (Bal & De Lange, 2015). According to Kossek, Hammer, Thompson, and Burke (2014), Workplace flexibility is a mutually advantageous arrangement where both employees and employers agree on the specifics of when, where, and how work is carried out to fulfil the organization's needs. This flexibility can be formalized through official HR policies or offered informally at the discretion of the employer. Workplace flexibility can boost employee commitment and retention and is crucial in aligning individual needs with organizational goals. Scholars across various fields have studied workplace flexibility as a significant variable in analyses related to individual, family, work, and community outcomes (Halinski & Duxbury, 2020). Workplace flexibility can take various forms, such as job sharing, flex time, telecommuting, and compressed workweeks. These practices are increasingly being adopted as companies recognize their potential to enhance employee satisfaction, improve retention rates, and ultimately boost organizational performance.

Job sharing is one form of workplace flexibility where two or more employees share the responsibilities of a single full-time position. This arrangement allows employees to balance their professional and personal lives more effectively, which can lead to higher job satisfaction and productivity (Ugwuoke, 2019). For organizations, job sharing can also result in increased customer satisfaction, as employees who are less stressed and more engaged are likely to provide better service.

Flex time, another common flexibility practice, allows employees to choose their working hours within certain limits. This approach helps employees manage their time better, accommodating personal commitments and preferences. Studies have shown that flex time can significantly reduce employee turnover by improving work-life balance and increasing job satisfaction (Allen, Golden, & Shockley, 2015). For organizations, retaining skilled employees through flexible work arrangements is essential for maintaining continuity and reducing the costs associated with hiring and training new staff. Despite the potential benefits of flextime, there has been limited research linking it directly to organizational performance, particularly in developing economies where resource conversion and output improvements remain challenging.

The media industry has experienced profound transformations, characterized by rapid growth in job opportunities and significant shifts in labour market structures and work organization. It has been pivotal in fulfilling society's needs for information, entertainment, communication, and creativity, while also promoting the value of heritage, expression, and diversity. Additionally, the media supports democratic processes, leading to changes in Nigerian media companies by keeping everyone informed about past and current events in the country. Media firms, in particular, face challenges in maintaining high levels of customer satisfaction and employee retention.

Media firms often operate under tight deadlines and high pressure, which can lead to employee burnout and high turnover rates. Implementing workplace flexibility practices such as job sharing and flex time can help address these issues by creating a more supportive work environment that meets the needs of both employees and customers. Galinsky, Matos, and Sakai-O'Neill (2013) suggested that workplace flexibility can aid employees in effectively returning to work. Additionally, strong customer service performance can enhance customer satisfaction. Media organizations with flexibility models diversify their recruitment and offer various flexible working arrangements which improves performance in areas such as information sourcing, advertising, and service delivery, leading to greater customer satisfaction and retention of productive employees.

There is a notable difference in opinions regarding the impact of flexible work arrangements on performance. For instance, Irawan and Sari (2020) found that flexible work arrangements do not significantly affect employee productivity. In contrast, Mungania, Waiganjo, and Kihoro (2016), among others, have concluded that flexible work schedules significantly enhance the performance of textile businesses in Rivers State.

The need to study the relationship between job sharing, flex time, and their respective impacts on customer satisfaction and employee retention arises from the growing importance of employee well-being in organizational success. As companies increasingly recognize the value of a satisfied and loyal workforce, the implementation of flexible work practices becomes a strategic imperative. This study focuses on two specific aspects of workplace flexibility: job sharing and flex time, and their impact on customer satisfaction and employee retention, respectively. The specific objectives of the study are:

1. To ascertain the extent of the relationship between job sharing and customer satisfaction.
2. To ascertain the extent of the relationship between flex time and employee retention.

Conceptual Review

Workplace Flexibility

Workplace flexibility has become a critical factor in the modern work environment, particularly as organizations strive to balance the needs of their employees with the demands of the market. Flexibility in the workplace can allow employees to adjust or rebalance their workloads, exercising external control over their work tasks. This active engagement helps align jobs with individual personalities (Kooij, 2015). However, flexibility can also lead to increased job demands, requiring employees to work more hours and put in additional effort, thereby involving internal control mechanisms. From this perspective, workers may become passive recipients of work demands. Bal and Jansen (2016) argue that flexibility is not just a personal attribute but can also be a characteristic of the job, workplace, or organization. Workplace flexibility enables employees to choose how, when, and where they perform their work, aligning with self-set goals, often related to work-life balance. This contrasts with an employer-centric view, which sees flexibility as serving organizational goals. According to Kossek et al. (2014), workplace flexibility refers to arrangements where employees have some control over their work schedules, locations, and methods for personal and professional reasons.

Bal and Jansen (2016) emphasize that workplace flexibility from an employee's perspective includes:

- When: Flexible work schedules, including start and end times, workdays, and breaks. It also encompasses options for part-time work or reduced hours.

- Where: The location of work, which may include working from the office, home, or any other relevant place.
- How: The distribution of tasks and responsibilities, allowing for flexibility in task allocation within teams according to individual needs and preferences.

Kossek et al. (2014) describe workplace flexibility as a mutually beneficial arrangement where employees and employers agree on work conditions to meet organizational needs. Flexibility can be formalized through HR policies or be informal and discretionary. It includes:

i. Policies and practices on work time, scheduling, and location.
ii. Alternative work arrangements such as flextime, telework, and part-time work.
iii. Job design changes that grant employees more control over their work.
iv. Informal practices like occasional flextime or working from home with supervisor permission.
v. Mobile work and the use of technology to work outside the primary worksite.

Job Sharing

Job sharing involves two or more employees sharing the responsibilities of a full-time position, allowing them to balance work and personal commitments. It has been linked to increased job satisfaction and productivity (Ugwuoke, 2019). It involves two or more employees splitting the responsibilities of a single full-time position, with each person managing interdependent tasks and sharing joint responsibilities. The term “top sharing” specifically refers to job sharing in high-responsibility roles, such as managerial positions. This arrangement allows the pair to work fewer hours each week while providing the organization with continuous full-time coverage for that role (Branine, 2004). Byars and Rue (2008) describe job sharing as a setup where two or more part-time employees collectively perform a job typically held by one full-time employee. Job sharing can involve split duties, equally shared responsibilities, or a combination of both. This arrangement allows employees to divide tasks based on their skills and interests, leveraging their strengths while minimizing their weaknesses. From an organizational perspective, job sharing helps in retaining key and valuable employees effectively.

Ridgley, Hunt, Harp and Scott (2005) describe job sharing as an arrangement where two or more employees collectively perform the duties of a single full-time position. While the role typically involves two people, it is not restricted to just two; it can be shared among more individuals. Benefits such as holidays, pay, and pensions are distributed on a pro-rata basis among the job sharers. The employees usually share a job description, and although the role is often divided equally, this is not mandatory. Several patterns can be applied to job sharing, with the 50:50 split being the most common:

1. Alternate Week: Each partner works for a set number of weeks and then takes the same number off. This is useful where travel time and costs are significant.
2. Split Day: One partner works mornings while the other works afternoons. This pattern is common but less practical if travel time and costs are an issue.
3. Split Week: Each partner works half the week, typically 2.5 days per week, which is the most common pattern according to the Equal Opportunities Commission (EOC).
4. Overlapping Week: Each partner works three days a week, with an overlap of one day. This ensures some continuity and coverage.
5. Simultaneously for 2 or 3 Days per Week: Both partners work the same days at the same time, providing a solid communication framework but potentially less effective for customer interactions.
6. No Fixed Schedule: This rare option offers high flexibility but requires excellent cooperation between partners.

Job sharing offers several potential benefits, including:

a. Improved Quality and Increased Output: The combination of skills, experience, and creativity from two individuals can enhance the overall quality and productivity of work.
b. Enhanced Learning Opportunities: Partners with different strengths and experiences can learn from each other and provide mutual coaching, enriching their professional development.
c. Broader Role Access: Job sharers can engage in a wider range of roles and responsibilities compared to those limited to traditional part-time positions.

Flex Time

Flex time allows employees to choose their work hours within a specified range, contributing to a better work-life balance. It is believed to improve employee retention by accommodating personal needs (Ugwuoke, 2019). Al-Rajudi (2012) defines flextime as a work schedule where employees' workdays are structured around mid-day hours when all key personnel are present. It typically involves a scheduling program for full-time employees that allows them to choose their start and end times each day, as long as they complete their tasks within the required number of hours (Nabe-Nielsen, Garde, Aust, & Diderichsen, 2012). Flextime is one of many flexible working arrangements used by organizations worldwide to accommodate various employee needs. Omotayo, Abiodun, and Fadugba (2012) suggest that allowing employees to choose their work hours positively impacts organizational performance by providing employees with a sense of freedom in determining their work schedules. Flextime can enhance individual convenience, reduce work stress, and improve mental and physical well-being, leading to more effective and efficient work (Abid & Barech, 2017). Flexibility encompasses not only variations in time and place but also job sharing, career breaks, part-time work, and term-time working.

Flextime arrangements can improve employee retention and decrease absenteeism and tardiness (Al-Rajudi, 2012). Organizing teamwork can help by allowing employees to cover for one another when absent. Job sharing further supports this by having two part-time employees share a full-time role, which can enhance customer satisfaction and overall organizational performance.

Customer Satisfaction

Customer satisfaction is essential for a successful organization, but the importance of employee satisfaction cannot be overlooked, as it is crucial for achieving the organization's vision and mission. Satisfied employees are more likely to create satisfied customers, as job satisfaction influences the quality of services employees provide, ultimately affecting their job performance (Kozielski, 2017). A satisfied customer is more likely to remain loyal to a company, thereby enhancing overall performance (Evangelos & Yannis, 2010). A satisfied customer can also serve as a valuable resource for advertisement through positive word-of-mouth. When companies aim to improve customer service, they often focus on providing more facilities and quickly resolving customer needs. However, forward-thinking organizations prioritize employee satisfaction first, recognizing that it directly impacts customer satisfaction.

Studies show that employee satisfaction leads to customer satisfaction, which is a critical performance indicator. Satisfied employees tend to be more committed to their organization and its customers, driving the success of the employer and enhancing the quality of customer service (Amoopour, Hemmatpour, & Mirtaslimi, 2014). Customer satisfaction is considered a baseline for standardized excellence in performance for many businesses and helps identify potential market opportunities (Evangelos & Yannis, 2010).

Employee Retention

Sandhya and Kumar (2011) define employee retention as a process in which employees are fully encouraged to stay with the organization for an extended period. It involves implementing strategies to ensure employees remain with the organization for as long as possible (Griffeth & Hom, 2001). Employee retention reflects the organization's ability to retain employees it values, aiming to maintain a competitive edge over its rivals (Akhter, Malik, Khwaja, & Mehmood, 2018).

Employee retention is a strategic plan or set of decisions implemented by organizations to effectively retain their competitive workforce, thereby enhancing firm performance (Gberevbie, 2010). Employees today are dynamic and have numerous opportunities available to them. When they feel dissatisfied with their current job or employer, they are likely to seek other opportunities. Therefore, it is the employer's responsibility to retain the best employees. Failing to do so may result in losing valuable talent. A good employer should know how to attract and retain employees (Peggy & Bernard, 2016).

Sinnott, Madison, and Pataki (2000) argue that effective employee retention involves a systematic effort to create and nurture an environment that encourages employees to stay with the organization. This is achieved by implementing policies and practices that address the diverse needs of employees. Consequently, organizations often focus on retaining key employees for a long period or at least until the completion of specific projects or tasks (Suhasini & Babu, 2013).

Theoretical Framework

This study is anchored on the Perceived Organizational Support Theory by Eisenberger et al. (2002), which posits that employees who perceive high levels of organizational support are more likely to be committed to their organization, leading to improved performance and reduced turnover. Perceived organizational support (POS) is defined as an employee's perception that the organization values their contributions and cares about their well-being. Erdogan and Enders (2007) describe POS as the extent to which an individual believes that the organization appreciates their input, cares for their well-being, and provides the necessary help and support.

Perceived organizational support theory is connected to three key categories of favourable treatment received by employees: organizational rewards and positive job conditions, fairness, and supervisor support. These factors contribute to favourable outcomes, such as increased job satisfaction, employee commitment, and enhanced organizational performance, aligning with the principles of organizational support theory (Rhoades & Eisenberger, 2002). The theory emphasizes the importance of the care, support, incentives, and working conditions an employee experiences in the organization. Employees are inclined to assess what benefits they gain from working in the organization.

Those who perceive that the organization genuinely cares for their well-being are more likely to reciprocate by engaging in pro-social behaviours directed towards the organization, developing a stronger sense of organizational commitment, and ultimately increasing their performance (Beheshtifar & Herat, 2013).

Empirical Review

Previous studies have shown that job sharing can lead to higher customer satisfaction as employees are more motivated and focused. Flex time has been found to significantly reduce employee turnover, particularly in industries where work-life balance is a critical concern (Ugwuoke, 2019).

Nurudeen, Afolayan, Lawal, and Opele (2024) investigated the impact of flexible work arrangements (FWAs) on employee performance, specifically examining the moderating role of perceived organizational support (POS). The study focused on private hospitals in Lagos State, with a sample of 248 completed questionnaires from a population of 2,886 hospitals. The study found a positive relationship between flexible work arrangements, such as shift work and flexi-time, and employee performance in private hospitals. This suggests that flexibility in work schedules and arrangements contributes positively to how well employees perform their tasks. Perceived organizational support was identified as a moderating factor in the relationship between flexible work arrangements and employee performance. This indicates that the positive effects of FWAs on performance are enhanced when employees perceive that their organization supports and values their well-being.

Agbanu, Tsetim, and Suleman (2023) investigated the impact of flexible work arrangements on the productivity of sales representatives in book publishing companies in Nigeria. The study utilized a cross-sectional survey approach, collecting data from sales representatives across ten book publishing companies in Nigeria. Convenience sampling was used, resulting in 162 valid responses out of 200 distributed questionnaires. The study measured flexible work arrangements and employee productivity using a four-point Likert scale. The reliability of the instruments was confirmed with a Cronbach Alpha between 0.70 and 0.80, indicating acceptable internal consistency. Face and content validity were used to ensure the relevance and clarity of the instruments. Data analysis was conducted using descriptive statistics (mean and standard deviation) and Pearson Product Moment Correlation Coefficient, with SPSS version 22.0. The results indicated that all forms of flexible work arrangements-flexi-time, job sharing, part-time work, and telecommuting-have a significant positive relationship with both employee effectiveness and efficiency.

Nayanathara and Karunarathne (2021) conducted a study on the impact of flexible work arrangements on employee performance, focusing on executive-level employees in Sri Lanka's IT industry. The study sought to examine how flexible work arrangements influence employee performance, addressing a gap in the literature by focusing on executive-level employees in the IT sector in Sri Lanka. Data were collected from 169 executive-level employees working in three IT firms located in the Western Province of Sri Lanka. The researchers used descriptive statistics, correlation, and regression analysis to evaluate the impact of flexible work arrangements on performance, employing SPSS for data analysis. The study found a significant positive impact of flexible work arrangements on employee performance. The results suggested that improvements in flexible work practices are associated with enhanced employee performance.

Ramakrishnan and Arokiasamy (2019) investigated the impact of flexible working arrangements on employee performance among white-collar workers in Malaysia. The researchers employed a quantitative research design; and, in this study, the independent variable is the flexible working arrangements, and the dependent variable is employee performance. The study found that flexible working arrangements have a positive impact on employee performance.

Whyman and Petrescu (2015) conducted a study examining workplace flexibility practices (WFPs) in small and medium-sized enterprises (SMEs) and their relationship with performance indicators such as redundancies, absenteeism, and financial turnover. Utilizing a survey research method, the study analyzed primary data collected in 2009 from SMEs in Lancashire, UK, during the credit crunch recession. The analysis, using correlation and regression techniques, revealed that innovative SMEs that adopt advanced employment practices, such as employee discretion, training, participative arrangements, and job security, tend to have lower redundancy rates among permanent employees. Additionally, training, job security, and family-friendly practices were associated with reduced absenteeism, cutting down by up to six days per worker annually. The study also found that job security and profit-related pay were linked to higher financial turnover. While staff pay freezes were associated with higher turnover, they negatively impacted redundancy and absenteeism rates. Conversely, management pay cuts or freezes were linked to lower financial turnover. The study suggested that while policy-enforced spending cuts may have limited benefits for SMEs, other strategies might be more effective.

Mwebi and Kadaga (2015) investigated the effects of flextime work arrangements on employee performance in commercial banks located in Nairobi's central business district, where such arrangements are prevalent due to the demanding nature of the banking sector. Using a descriptive survey design, they sampled 291 respondents from a population of 1,074 employees across various roles (management, supervisory, clerical, secretarial, and support staff) using proportionate stratified sampling. Analysis was performed using SPSS and inferential statistics, specifically correlation analysis, to assess the relationship between flextime and employee performance. The study found a positive correlation between flextime work arrangements and employee performance, with a correlation coefficient of $r = .344$ and a significance level of $p < .005$. This indicates that flextime arrangements are positively associated with improved employee performance.

Methodology

The study adopts a survey research design to collect data on the impact of job sharing and flex time on customer satisfaction and employee retention, respectively. The research work was carried out in Anambra State which is one of the five South Eastern States in Nigeria. The media companies under study were based in three major cities of the state which are Onitsha, Nnewi and Awka cities of Anambra State, Nigeria. The population of the study was two hundred and eleven. The population of the study consists of employees from media firms, with a size of 211 respondents. Complete enumeration was employed for the study due to the manageable size of the population, making this technique both feasible and practical. This approach is justified as it allows for comprehensive data collection, eliminating the potential for sampling error and bias, thereby ensuring accurate and reliable results. By including every member of the population, complete enumeration provides detailed insights and a full representation of perspectives and experiences, particularly within the media sector in the three cities. This method captures the entire range of responses, leading to a more thorough understanding of the study's focus.

Methods of Data Collection

This study relied on primary sources of data was adopted. The primary data was sourced through a structured questionnaire. The questionnaire was structured on a 5-point Likert scale, which was divided into two sections A and B, which relate to workplace flexibility and performance.

Validity of the Instrument

The data collection instrument underwent content and face validity, which was conducted by evaluators from the Business Administration Department. These experts provided valuable input, which was incorporated into the instrument, ensuring its validity. The evaluators assessed the instrument's relevance, comprehensiveness, and clarity to ensure it addressed all necessary aspects and was free of ambiguity. They also reviewed the structure, readability, and grammar to ensure the instrument was user-friendly and effectively captured the intended data. Based on their feedback, the instrument was refined and subsequently certified as valid, ensuring its effectiveness for the study.

Reliability of the Instrument

The reliability of an instrument measures its consistency when used by a researcher. To assess this, Cronbach's alpha was calculated using SPSS version 20. A sample of 30 questionnaires, representing 20% of the population, was distributed, collected, and analyzed. The resulting Cronbach's alpha coefficient was 0.953, which is well above the acceptable threshold of 0.70. Therefore, the instrument was deemed reliable, indicating that it consistently measures the intended variables.

Table 1: Reliability statistics

Cronbach's Alpha	N of Items
.917	30

Source: SPSS, Ver. 20

Method of Data Analysis

The data were analyzed using descriptive statistics, and Pearson's Product Moment Correlation Coefficient was employed to test the hypotheses, specifically to explore the relationship between workplace flexibility and the performance of media companies. A significance level of 5% was used, with a confidence interval of 95%. The analysis was conducted using the SPSS Statistical Software Package Version 20.

Decision Rule

The study adopted a 5% level of significance, which was used to interpret the result obtained in testing the hypothesis. Therefore if the probability (p-value) is less than the significant level of (p-value<0.05), the research hypothesis will be accepted and if otherwise (p-value>0.05), the research hypothesis will be rejected and the null hypothesis will be accepted.

Data Analysis

Demographic Information

The background information of the respondents using structured questionnaires is shown below:

Table 2: The category and profile of respondents

Category	Subcategory	Number of Respondents	Percentage (%)
Total Respondents		211	100%
Gender	Male	160	76%
	Female	51	24%
Managerial Cadre	Senior Managerial Cadre	84	40%
	Mid-Managerial Cadre	74	35%
	Low Managerial Cadre	53	25%
Duration of Service	0-5 years	53	25%

Category	**Subcategory**	**Number of Respondents**	**Percentage (%)**
	6-10 years	74	35%
	11-15 years	32	15%
	16-20 years	32	15%
	21 years and above	20	10%

Source: Field Survey (2023)

The study surveyed a total of 211 respondents, representing 100% of the population under consideration. Out of the total respondents, 160 (76%) were male, indicating a significant male dominance within the workforce of the media companies surveyed. 51 respondents (24%) were female, highlighting fewer women in the workforce. The male dominance (76%) in the workforce, could indicate underlying cultural or industry-specific factors that influence gender representation. The managerial cadre showed that 84 respondents (40%) occupied senior management positions, suggesting that a substantial portion of the workforce holds high-level responsibilities. 74 respondents (35%) were in mid-management roles, indicating a significant presence of middle-level managers. And, 53 respondents (25%) were in lower managerial positions, reflecting that a smaller proportion of the workforce holds lower-level managerial roles.

The duration of service showed that 53 respondents (25%) had been with the organization for 0-5 years, showing a quarter of the workforce is relatively new. 74 respondents (35%) had 6-10 years of service, representing the largest group, indicating that a significant number of employees have moderate experience within the organization. And, 32 respondents (15%) had 11-15 years of service, reflecting a smaller group of employees with more extensive experience.

Another 32 respondents (15%) had been with the organization for 16-20 years, similar to the 11-15 years group, indicating a consistent retention of more experienced staff. Lastly, 20 respondents (10%) had over 21 years of service, representing the most experienced and longest-serving segment of the workforce. The largest group of employees has 6-10 years of service (35%), suggesting that these companies have been successful in retaining employees for a moderate duration. The smaller groups in the higher duration categories (11-15 years, 16-20 years, and 21 years and above) suggest that while there is some retention of experienced staff, a significant portion of employees either move on or retire after a decade or so. The 25% of employees with 0-5 years of service indicates a steady influx of new talent, which is crucial for innovation and growth.

Test of Hypotheses

Test of Hypothesis One

Ho_1: There is a significant relationship between Job Sharing and Customer Satisfaction.

Table 3: Correlation results on job sharing and customer satisfaction

		JOBSHARE	CUSTSAT
JOBSHARE	Pearson Correlation	1	.973
	Sig. (2-tailed)		.000
	N	211	211
CUSTSAT	Pearson Correlation	.973	1
	Sig. (2-tailed)	.000	
	N	211	211

***. Correlation is significant at the 0.01 level (2-tailed).*
Source: SPSS, Ver. 20

The Pearson Correlation Coefficient between Job Sharing (JOBSHARE) and Customer Satisfaction (CUSTSAT) is 0.973. This suggests that as job-sharing practices increase or improve, customer satisfaction tends to increase as well. The p-value (Sig. 2-tailed) associated with the correlation is 0.000. Given the Pearson correlation coefficient of 0.973 and the p-value of 0.000, we reject the null hypothesis (Ho_1). Thus, there is a significant positive relationship between job sharing and customer satisfaction.

Test of Hypothesis Two

Ho_2: There is a significant relationship between Flex Time and Employee Retention.

Table 4: Correlation result on flex time and employee retention

		FLEXTIME	EMPRET
FLEXTIME	Pearson Correlation	1	.984
	Sig. (2-tailed)		.000
	N	211	211
EMPRET	Pearson Correlation	.984	1
	Sig. (2-tailed)	.000	
	N	211	211

Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS, Ver. 20

The Pearson Correlation Coefficient between Flex Time (FLEXTIME) and Employee Retention (EMPRET) is 0.984. This coefficient, suggests that as flexibility in working hours increases, employee retention improves significantly. The p-value (Sig. 2-tailed) associated with this correlation is 0.000. Given the Pearson correlation coefficient of 0.984 and a p-value of 0.000, we reject the null hypothesis (Ho_2). Thus, there is a significant and strong positive relationship between flex time and employee retention.

Discussion of Findings

The analysis reveals a Pearson correlation coefficient of 0.973 between job sharing and customer satisfaction, with a significance level of 0.000. This high correlation indicates a strong positive relationship between the two variables. As job-sharing practices are implemented and improved, customer satisfaction tends to increase significantly. This can be attributed to several factors. Job sharing allows employees to better manage their work-life balance, potentially leading to higher job satisfaction, motivation, and performance. Motivated and satisfied employees are likely to provide better service, which in turn enhances customer satisfaction. The high correlation coefficient and the statistically significant p-value support the idea that job sharing is an effective strategy for improving customer satisfaction. This aligns with previous studies that have linked job sharing to higher employee motivation and better service delivery (Ugwuoke, 2019).

Hypothesis two shows a Pearson correlation coefficient of 0.984 between flex time and employee retention, with a significance level of 0.000. The results indicate that flexibility in working hours is strongly associated with improved employee retention. The positive correlation implies that as organizations offer more flexible working hours, employees are more likely to stay with the company. Flex time allows employees to manage their work schedules around personal commitments, reducing stress and improving work-life balance. This flexibility can lead to higher job satisfaction, reduced turnover, and increased loyalty. This is consistent with the findings of other studies, such as those by Agbanu, Tsetim, and Suleman (2023) and Mwebi and Kadaga (2015), which highlight the positive impact of flexible work arrangements on employee performance and retention.

Conclusion

The study concludes that both job sharing and flex time have significant positive impacts on customer satisfaction and employee retention, respectively. Both hypotheses are supported by the data. These findings underscore the importance of flexible work arrangements in enhancing both customer and employee outcomes. Organizations implementing job sharing and flex time practices are likely to see positive effects on their overall performance and employee satisfaction. Media firms should consider implementing these flexible work arrangements to enhance their performance.

The study therefore makes the following recommendations:

1. Media firms should actively promote job sharing as a strategy to improve customer satisfaction. This approach can help employees maintain a work-life balance, leading to better job performance and higher customer satisfaction.
2. Firms should implement flex time policies to retain top talent. By allowing employees to choose their work hours, firms can reduce turnover rates and increase employee loyalty.

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PUBLIC DEBTS AND ECONOMIC DEVELOPMENT IN NIGERIA (1980-2023)

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Abstract
The main objective of the study is to examine the effects of public debt on economic development. Human development index was used to proxy economic development while external debt, internal debt and debt servicing were used to proxy public debt. This study employs ex post facto research design using time series data for the periods under study (1980-2023). Data for this study is completely secondary in nature, sourced from various issues of Central Bank of Nigeria (CBN) Statistical Bulletins and World Development Indicator (WDI). The ARDL long-run estimates show that while External Debt (EXD) has a negative but statistically insignificant effect on human development, Debt Servicing (DTS) significantly harms human development by diverting resources from key sectors. Internal Debt (IND) has a small, statistically insignificant positive effect, suggesting it does not meaningfully impact human development on its own. Overall, high debt servicing costs negatively affect long-term growth, indicating a need for better management of both external and internal debt. To address the findings, focus on three key recommendations: 1) Improve management of debt servicing costs to prevent resource diversion from critical sectors like education and healthcare. 2) Reallocate resources to enhance human development by funding essential services despite debt obligations. 3) Increase transparency in debt management to build trust and ensure that debt practices support long-term growth and development.
Keywords: economic development, public debt, external debt, inter debt, debt servicing, Nigeria

Introduction

Governments most times embark on borrowing from different sources in order to finance projects they intend to deliver. Government borrowing is a loan taken that is included in the budget document as capital receipt. Public debt is essentially the total amount of money borrowed by the federal government to pay for public services and benefits. The government announces an annual borrowing program in the Budget because tax and non-tax revenue is insufficient to fund the government's spending program (Economic times, 2020). Government borrowing becomes necessary, according to Abdulkarim and Saidatulakmal (2021), when government revenue sources are insufficient to finance growing government expenditures. Borrowing at a reasonable rate to fund public and infrastructure development is the key to accelerating economic growth and development. However, excessive borrowing without proper investment planning can result in a high debt burden and interest payments, which can have a number of negative consequences for the economy. Most governments have massive outstanding debts as a result of this process over the years (Joy & Panda, 2020).

Nigeria has struggled with a higher debt service to revenue ratio since the recession in 2016, as revenues have fallen in direct correlation with the drop in oil prices. In 2019, Nigeria's government spent 2.45 trillion Nigerian Naira on debt service, out of total revenue of N4.1 trillion, for debt service to revenue ratio of 59.6 percent. The rising cost of Nigeria's debt profile breached a new milestone with the country's debt service as a percentage of revenue rising to 83 percent in 2020. This suggests that 83 percent of the revenue generated in 2020 was used to meet debt service obligations and this is worrisome. In 2020, the government spent N1.76 trillion to service domestic debt, compared to a budget of N1.87 trillion. A total of N553 billion was spent on foreign debts, compared to a target budget of N805.47 billion. Lower interest rates on foreign borrowing, as well as very limited borrowing from the foreign debt market during the year, are likely to have contributed to the decrease. Instead of the budgeted N272.9 billion, the government only contributed N4.58 billion to the sinking fund. The sinking fund is required to set aside funds that will be used to pay down other loans in the future, such as bonds. The government's constant borrowing from the domestic market was preventing private businesses in need of credit from obtaining financing for expansion and growth (Ogunjimi, 2019). According to Izuaka (2021), Nigeria's debt situation will worsen in 2022, with the government borrowing N5.012 trillion to finance a budget deficit of N6.3 trillion and a budgeted total budget of N16.39 trillion. Complicating the country's debt situation, which is becoming increasingly unmanageable. While the government claims that its debt-to-GDP ratio is within a safe range of 23%, it has spent the majority of its earnings to service mounting debt for years. In the first five months of 2021, the government spent N1.8 trillion on debt servicing, accounting for nearly 98 percent of total revenue generated during the same period. As of March 31, the country's total debt was N33.11 trillion Izuaka (2021).

When a country spends a large portion of its revenue servicing massive debts, it leaves little money to fund critical infrastructure, which has a negative impact on growth and development. Furthermore, according to the National Bureau of Statistics (NBS) 2019 Poverty and Inequality in Nigeria report, 40.1 percent of Nigeria's population, or nearly 83 million people, live below the country's poverty line of N137,430 ($381.75) per year, highlighting the country's low levels of wealth in Africa's largest economy (Abdulkarim & Saidatulakmal, 2021). A nation's road to economic growth and development is hampered by an increasing domestic debt profile. The cost of servicing the debt may rise beyond the economy's ability to cope, posing a threat to the country's ability to meet its fiscal and monetary policy goals (Soludo, 2003).

Nigeria is currently one of the most heavily indebted countries in Sub-Saharan Africa, with a slowed GDP growth rate, slowed export growth, rapidly dwindling income per capita, and rising poverty levels. The majority of these countries, including Nigeria, have been caught in a cycle of hasty and distress borrowing that they are unable to service. Worse still, their primary exports' world prices are deteriorating, necessitating more borrowing (Ogunjimi, 2019). As a result, the purpose of this research is to look into the impact of public debt on Nigeria's economic development.

Borrowing at a reasonable rate to fund public and infrastructure development is the key to accelerating economic growth and development. However, excessive borrowing without proper investment planning can result in a high debt burden and interest payments, which can have a number of negative consequences for the economy. Most governments have massive outstanding debts as a result of this process over the years (Joy & Panda, 2020).

In Nigeria, government debt is clearly increasing, resulting in a large debt with high servicing costs and a negative impact on the economy. In the first five months of 2021, the government spent N1.8 trillion on debt servicing, accounting for over 98 percent of the revenue generated during the same period. The country's total debt was N33.11 trillion as of March 31, and another N5.012 trillion is expected to be borrowed in 2022 to cover an N6.3 trillion budget deficit with a proposed total budget of N16.39 trillion. To Soludo (2003), a rising debt burden may limit the government's ability to invest more productively in infrastructure, education, and public health. According to Nigeria's Poverty and Inequality Report, 40.1 percent of the country's population, or nearly 83 million people, live below the poverty line of N137,430 ($381.75) per year. These are serious issues that require immediate attention, which is why the purpose of this study is to investigate the impact of public debt on economic development in Nigeria.

Based on the above, we therefore put forward the following hypotheses:

H01*:* External debt have no significant effect on human development index in Nigeria.

H02*:* Internal debt have no significant effect on human development index in Nigeria.

H03*:* Debt servicing have no significant effect on human development index in Nigeria.

Conceptual Clarifications

Public Debt

Public debt refers to how much a country owes to lenders outside its shore (Dairu, 2017). Public debt also called national debt includes the totality of debt owed by government of a nation internally and externally. External debts are those obligations of government to international institutions such as IMF and AfDB (Udoka & Lari, 2011). Internal debts are debt obligations of government owed to residents of the country. The accumulation of debts or borrowings (internal and external) is as a result of accumulation of a country's budget deficits resulting from government spending more than it takes in through the instrumentality of taxation (Orgah, 2013). Joyade and Oni (2016) viewed that while internal debt (borrowing) of a country may not have significant burden on her citizen as payment of the interest and principal to service the debt involves a transfer of purchasing power from a section of the citizens to another and therefore productive, external component of public debt on the other hand is counter-productive involving greater burden as interest charges and repayment of the principal sum involves transfer of resources to creditors/lenders abroad..

External Debt

This involves a country borrowing from another country, for example, Nigeria borrowing money from foreign countries or issuing a Euro bond to finance capital projects. Due to the scarcity of resources and the law of comparative advantage, countries depend on each other to foster economic growth and achieve sustainable economic development (Adepoju *et al*., 2007). The funds can be borrowed either from the foreign government or businessmen and private citizens of the foreign country. External debt is widely believed to enhance economic growth and development (Osinubi *et al*., 2006). That is the basic reason why the debt is usually borrowed in the first place. The necessity for government to borrow in order to finance a deficit budget has led to the development of external debt (Osinubi, *et al*., 2006).

Internal Debt

This consists of government borrowing from within her domestic economy. This type of debt, unlike the external borrowing does not increase the total resources available to that country. There is simply a transfer of resources from one end to the other for public services purpose (Nurudeen & Usman, 2010). Also, the interest payment only transfers resources from the taxpayers to the bondholders. Internal debt only effects a transfer of purchasing power among the citizens of the country, thus there is no giving up of real output to another country. Instruments used for internal debt include treasury bills, treasury certificate, treasury bonds, development stock and Federal Government of Nigeria bonds. The oppressive burden of internal debt has service fostered the initiative to borrow externally at cheaper rates of interest. According to the Debt Management Office, internal debt burden in Nigeria presently, exceeds ₦6tn.

Debt Servicing

Debt service is the amount needed to cover the repayment of principal and payment of interest on a loan for a particular period. Debt servicing are the required payments of both principal and interest in respect of outstanding debts (International Monetary Fund, 2003). Merriam-Webster (2019) defines debt servicing as the disbursement from the sinking fund of the amount of interest and principal due yearly on long-term loan. Debt servicing is the amount paid in respect of principal and interest due on existing loan (Business Dictionary, 2019). Adesola (2009) defines debt servicing as the amount needed for the redemption of principal and payment of interest due on a loan at certain period of time.

Economic Development

Economic development encompasses progress in providing livelihood on a sustainable basis, access to education and basic healthcare for the majority of the population (Belshaw & Livingstone, 2002:3). The meaning of the term "development" becomes clearer with the understanding of the term "economic growth". By economic growth, economists generally mean the increase over time in a country's real output per capita. Economic growth has over time been regarded as an all-important goal of economic policy with a robust study occasioned to clarify how this aforesaid goal can attained (Fadare, 2010).

The process of developing wealth for the benefit of a community is known as economic development. It's more than an employment program; it's an investment in your community's economic growth and improved wealth and quality of life (California Association for Local Economic Development (CALED), 2021). Economic development strategies used to focus on industrialization and infrastructure, but since the 1960s, they have become more concerned with poverty alleviation (Finnemore, 1996). Improvements in a range of sectors or indicators, such as literacy rates, life expectancy, and poverty rates, are often associated with economic development (Pritchett *et al*., 2013). Economic development is the transformation of simple, low-income national economies into modern industrial economies (Myint & Krueger, 2000). The human development index (HDI), which is published on a regular basis by the United Nations Development Programme (UNDP) in its Human Development Report, is the most well-known indicator of development. The HDI is a composite indicator that ranks countries based on how well they perform across three categories. Specifically, life expectancy, education, and GDP per capita in PPP dollars (UNDP, 2011).

Human Development Index

HDI is an objective metric of human development in that it relies on indicators that can be observed and compared meaningfully across contexts. This distinguishes it from other human development metrics that include indicators of subjective well-being (such as happiness or life satisfaction). The longevity and education components of HDI have substantial theoretical underpinning in Amartya Sen's notion of basic functioning and capabilities, and have been buttressed in more recent theories of human need (Gough, 2015). HDI has been promoted through the United Nations Development Program's annual reports, and has become the single most widely-used indicator of human development. The principles behind HDI informed the Millennium Development Goals, which were launched in 2000.

Theoretical Review

Ricardo's Public Debt Theory

Ricardo shares Smith's views on the unproductive character of state expenditures and on the notion that their financing via public borrowing decreases the investible product and, therefore, it becomes detrimental to society's capacity to accumulate wealth. Nevertheless, many modern economists attribute to him the idea of the equivalence of the two forms of financing in the so-called Ricardian Equivalence Theorem. This theorem ascribes to Ricardo the view that taxation and public borrowing constitute essentially equivalent forms of financing public expenditures. The rationale behind this view is that the government is expected at some future time to redeem its debt. If we now suppose a closed economy the repayment of debt will take place via increased future taxation, which means that on the basis of the rational expectations hypothesis individuals increase their savings buying the bonds that have been issued by the government. In other words, the amount of savings matches the size of public deficit and, therefore, the interest-rate remains the same, which means that there is no crowding out effect of private investments from public expenditures and, therefore, the overall demand remains the same together with the other real variables of the economy. There is a similar operating mechanism in the case of an open economy, where the redemption of public debt takes place via the sale of assets to international institutional agents. Such a possibility raises, once again, the question of the limited future government income and, hence, the inevitable future increase of taxation (Tsoulfidis, 2007).

Empirical Review

Iheduru et al. (2023) studied public debt and human development in Nigeria covering the period 2003-2021. The study evaluated the effect public debt have on human development in Nigeria. The study disaggregated the variables into total debt, foreign debt, domestic debt and human development index. Data were obtained from Central Bank of Nigeria Statistical Bulletin and United Nations Development Programme (UNDP) Human Development Report for the concerned period. The Augmented Dickey Fuller test of stationarity and Johansen co-integration test which were conducted revealed that the annual time series data were stationary and had long causality among the variables. Statistical result from Vector Error Correction Model indicated that Total Debt have positive but insignificant effect on Human Development, Foreign Debt have positive and significant effect on Human Development, while Domestic Debt have negative and insignificant effect on Human Development in Nigeria.

Eke and Akujuobi (2021) carried out an empirical study of the effect of public debt on economic growth in Nigeria for a period of 38 years, covering 1981 to 2018. The ex-post facto research design with a co-integration approach was used in analyzing the data. The study revealed that a positive significance exists in the short run between public debt and economic growth. In addition, it was revealed that external debts have a negatively significant effect on economic growth. Furthermore, the study revealed that eternal borrowings in Nigeria are not optimally used for infrastructural development in Nigeria that will stimulate economic growth.

Abdulkarim and Saidatulakmal (2021) evaluated the influence of government debt on Nigeria's economic growth. Using annual data from 1980 to 2018 and the Autoregressive Distributed Lag approach, Real GDP, domestic debt, external debt, debt service payment, foreign reserve position, interest rate, gross fixed capital creation, and foreign direct investment were the variables of research. External debt was found to be an obstacle to long-term growth while having a growth-enhancing effect in the short run. Domestic debt had a large favorable long-term influence on growth while having a negative short-term impact. Debt service payments slowed growth both long and short term, proving the debt overhang effect. According to the conclusions, the government should invest the borrowed monies in diversifying the economy's productive base.

Sylvester (2020) carried out a study on external debt and economic growth nexus: Empirical evidence from Nigeria. The aim was to examine the relationship between external debt and economic growth for policy analysis on public finance and public debt management. Data collected on the country’s external debt and GDP growth rate were analyzed using root test and cointegration long run tests. The results showed that debt overhang variable and crowding out effect variable depress the level of investment affecting adversely, the economic growth of the country.

Ajayi and Edewusi (2020) examined the effect of public debt on economic growth of Nigeria. Specifically, the study determined the impact of domestic debt on the economic growth of Nigeria; assessed the effect of external debt on the economic growth of Nigeria and analyzed the relationship between public debt and the economic growth of Nigeria. Secondary time series data spanning thirty-seven years (1982- 2018) was gathered in the study. Data gathered in the study was estimated using descriptive statistics, unit root test, Johansen co-integration test and vector error correction model. Findings from the study suggests that external debt exerts a negative long run and short run effect on economic growth of Nigeria and domestic debt was ascertained to exert positive long run and short run effect on economic growth of Nigeria. Based on these findings, the study suggested that policy makers should integrate appropriate measures towards ensuring suitable management of domestic debts; government should ensure that contracted national debts are directed towards encouraging investment in the country and government through necessary monitoring committees should ensure that national debts are directed toward the provision of basic amenities and services required for the development of communities and societies of the nation.

Omodero (2019) tried to find out the effect of external debt on the Nigeria's economic growth. The relevant variables used in the study were nominal GDP, external loan stock, external debt servicing, inflation rate, and exchange rate. The study period covers 1997 to 2017 and the ordinary least square estimation technique of multiple regressions was used for the purpose of data analysis. It was found that the external loan exerts a significant negative effect on economic growth, while the foreign loan servicing has a strong and positive significant effect on GDP growth. Momodu (2015) x-rayed the correlations between loan servicing and growth in GDP of Nigeria. The study adopted ordinary least square multiple regression technique and found that debt servicing has significant impact on economic growth. The study also revealed that debt services to Paris club of creditors, and that debt services to promissory notes holders were positively related to GDP, while debt services to London club of creditors and other creditors showed a negative significant relation to economic growth.

Mhlaba et al. (2019) found a significant negative impact of public debt on economic growth. Saungweme and Odhiambho (2019) study indicated a unidirectional causal relationship from economic growth to public debt in Zambia. Alagba and Eferakeya (2019) found that domestic debts of the Federal government of Nigeria is positive and statistically significant to economic growth of Nigeria while foreign debts contribute less to the economic growth of the country. Cost of debts servicing is significant and has a negative effect on economic growth.

Methodology

This study employs ex post facto research design using time series data for the periods under study (1980-2023). Data were sourced from various issues of Central Bank of Nigeria (CBN) Statistical Bulletins and World Development Indicator (WDI).

Model Specification

HDI = a0 + a1EXDit + a2INDit + a3DTSit + eit

Where;

HDI = Human Development Index
EXD = External Debt
IND = Internal Debt
DTS = Debt Servicing
ào = constant Terms
a1...a3 = coefficient Terms
i = No of Firms
t = Time Period ranging from 1980 – 2023.

The study's parameter estimation will be done based on the Autoregressive Distributed Lag (ARDL) model. Pesaran, Shin and Smith (2001) developed the ARDL bounds testing approach to investigate long-run cointegration relationships among variables. This flexible model, also known as the Autoregressive Distributed Lag (ARDL) approach, involves estimating the following equation to determine the relationship between variables. The bounds testing approach involves estimating the following equation as postulated by Epor (2024):

$$\Delta HDI = \alpha_0 + \alpha_1 HDI_i + \alpha_2 EXD_{t-i} + \alpha_3 IND_{t-i} + \alpha_4 DTS_{t-i} + \sum_{i=1}^{a} \beta_i \Delta HDI_{t-i} + \sum_{i=0}^{b_1} \partial_j \Delta EXD_{t-j} + \sum_{i=0}^{b_2} \varphi_k \Delta IND_{t-k} + \sum_{i=0}^{b_3} \theta_l \Delta DTS_{t-l} + \mu_t$$

where, the terms associated with the summation signs in the above models above (ie, β_i, ∂_j, φ_k, θ_l) represent the short-run dynamic coefficients; whereas $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ are the long-run coefficients, and are the optimum lag lengths and is the white noise error term. In this study, the appropriate lag order of each series of the ARDL model is determined using the Akaike information criterion (AIC).

The hypothesis of the bounds test is specified as:

$$H_0: \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5 = \alpha_6 = \alpha_7 = \alpha_8$$
$$H_1: \alpha_1 \neq \alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \alpha_5 \neq \alpha_6 \neq \alpha_7 \neq \alpha_8$$

According to Pesaran, Shin and Smith (2001), The ARDL bounds test, using the Wald test (F-statistic), can be used to determine cointegration or inconclusiveness. If the F-statistics fall below the lower bound critical value, the null hypothesis is accepted, if it exceeds the appropriate upper bound critical values, the null hypothesis is rejected.

Long-run and Short-run ARDL Estimation

Once cointegration is established between public debt and investment, the conditional ARDL long-run model can be estimated as specified:

$$\Delta HDI_v = \alpha_0 + \alpha_1 HDI_{t-i} + \alpha_2 EXD_{t-i} + \alpha_3 IND_{t-i} + \alpha_4 DTS_{t-i} + \epsilon_t$$

Where,

ω_0	=	intercept
α_1–α_4	=	coefficients of long-run estimates
ϵ_t	=	error term of long-run estimates

In the next step, we will obtain the short-run dynamic parameters by estimating an error correction model associated with the long-run estimates. This is specified as follows:

$$\Delta HDI_v = \alpha_0 + \sum_{i=1}^{a} \beta_i \Delta HDI_{t-i} + \sum_{i=0}^{b_1} \partial_j \Delta EXD_{t-j} + \sum_{i=0}^{b_2} \varphi_k \Delta IND_{t-k} + \sum_{i=0}^{b_3} \theta_l \Delta DTS_{t-l} + \mathbf{\Omega} ECT_{t-1} + \psi_t$$

Where,

ECT	=	error correction term derived from equation 4, and
$\mathbf{\Omega}$	=	the speed of adjustment.
ψ_t	=	error term of the short-run model

The error correction model shows the speed of adjustment needed to restore the long run equilibrium following a short run shock. The **Ω** is the coefficient of the error correction term in the model and must be negative and significant for the return back to long-run equilibrium to hold (Pesara, Shin & Smith, 2001).

Data Analysis and Results

The data employed for this study have been summarized below using descriptive analysis in the form of mean, standard deviation, minimum and maximum. The number of observations (43) represent the years covered by the study. The provided data presents a detailed view of four economic indicators: Human Development Index (HDI), External Debt (EXD), Debt servicing (DTS), and Internal debt (IND), each with distinct statistical characteristics. Human Development Index (HDI), with a mean of 2.51 and a median of 2.29, reflects a generally low level of human development across the observations. The range from 0.57 to 7.05 highlights considerable variation in HDI scores, with a standard deviation of 1.53 indicating moderate dispersion around the mean. The positive skewness of 0.94 suggests that while most HDI values are clustered around the lower end, there are a few higher values that extend the distribution's tail. The kurtosis of 3.43, close to the normal distribution’s kurtosis of 3, implies a relatively normal peak, though the Jarque-Bera statistic of 6.70 indicates some deviation from normality, suggesting a distribution that is not perfectly symmetrical.

External Debt (EXD) data show a mean of 16.06 and a median of 9.21, with values ranging from 1.06 to 50.61. The high standard deviation of 15.47 reflects significant variability in external debt levels. The skewness of 0.79 indicates a right-skewed distribution, meaning that there are a few exceptionally high debt values stretching the tail of the distribution. The kurtosis of 2.30 is below the normal level, pointing to a flatter distribution with fewer extreme values. The Jarque-Bera statistic of 5.38 suggests that the distribution deviates from normality, though not as markedly as some other variables.

Table 1: Descriptive statistics

	HDI	EXD	DTS	IND
Mean	2.51	16.06	0.46	10.18
Median	2.29	9.21	0.04	9.50
Maximum	7.05	50.61	3.38	22.99
Minimum	0.57	1.06	0.00	5.02
Std. Dev.	1.53	15.47	0.82	3.74
Skewness	0.94	0.79	2.12	1.01
Kurtosis	3.43	2.30	6.85	4.37
Jarque-Bera	6.70	5.38	58.85	10.63
Observations	43	43	43	43

Source: Authors' computation from CBN Statistical Bulletin

The Debt servicing (DTS) exhibits a mean of 0.46 and a median of 0.04, with a maximum of 3.38 and a minimum of 0.00. This variable shows a high degree of right skewness (2.12), indicating that while most observations are clustered around the lower end, there are a few very high ratios that heavily influence the distribution. The standard deviation of 0.82 underscores the high variability, and the kurtosis of 6.85 reveals a distribution with heavy tails and a pronounced peak, suggesting that extreme values are more common than in a normal distribution. The Jarque-Bera statistic of 58.85 confirms significant deviations from normality, highlighting the presence of a skewed and leptokurtic distribution. Internal debt (IND), with a mean of 10.18 and a median of 9.50, ranges from 5.02 to 22.99. The standard deviation of 3.74 indicates a notable spread in production levels. The skewness of 1.01 points to a moderate right skew, with a distribution that has more values clustered around the lower end but some higher values stretching the tail. The kurtosis of 4.37 suggests a distribution with a higher peak and heavier tails compared to a normal distribution. The Jarque-Bera statistic of 10.63 indicates that the data deviates from normality, though the deviations are less extreme compared to DTS.

Overall, these indicators reveal varying degrees of distributional characteristics, with DTS showing the most pronounced deviations from normality due to its high skewness and kurtosis, while HDI and EXD exhibit relatively more stable distributions with moderate deviations from normality.

Correlation Analysis

The correlation analysis provides insights into the relationships among Human Development Index (HDI), External Debt (EXD), Debt servicing (DTS), and Internal debt (IND). The correlation between HDI and External Debt is 0.4039, indicating a moderate positive relationship. This suggests that higher levels of external debt are somewhat associated with better human development outcomes, although the correlation is not particularly strong. A similar moderate positive correlation of 0.4136 exists between HDI and Debt-to-Savings Ratio (DTS), implying that as the debt-to-savings ratio increases, there is a tendency for HDI to also rise. This suggests a somewhat positive association, although the strength of this relationship is moderate. However, the correlation between HDI and Industrial Production (IND) is weaker at 0.2396, showing only a slight positive relationship. This indicates that while there is some association between higher human development and increased industrial production, it is relatively weak.

Table 2: Correlation analysis of variables for Nigeria

Correlation Probability	HDI	EXD	DTS	IND
HDI	1			
EXD	0.4039	1		
DTS	0.4136	0.0451	1	
IND	0.2396	0.5075	0.3052	1

Source: Authors' computation from CBN Statistical Bulletin

When examining External Debt (EXD), it shows a very weak correlation of 0.0451 with the Debt-to-Savings Ratio (DTS), suggesting that changes in external debt have minimal impact on the debt-to-savings ratio. In contrast, EXD and IND exhibit a more substantial connection with a correlation coefficient of 0.5075. This moderate to strong positive correlation indicates that as external debt increases, industrial production tends to rise as well, reflecting a more pronounced relationship compared to other variables. Lastly, the correlation between Debt servicing (DTS) and Industrial Production (IND) is 0.3052. This suggests a weak to moderate positive relationship, indicating that higher debt-to-savings ratios are modestly associated with increased industrial production, but the association is not very strong.

Overall, the analysis reveals that EXD and IND have the strongest relationship among the variables, indicating a notable connection between external debt and industrial production. In contrast, the relationships involving HDI show moderate correlations with both EXD and DTS, and weaker connections with IND. The minimal correlation between EXD and DTS suggests little interaction between these two financial metrics.

Stationarity Tests:

The ARDL models don't require pre-testing for unit root problems, as they can accommodate I(0) and I(1) variables or mutually cointegrated variables. However, they don't accommodate series of order 2, necessitating unit root tests (Epor, 2024).

The order of integration of time series was investigated using the Augmented Dickey and Fuller test.

Table 3: Stationarity Tests at Levels and First Difference

Variables	ADF Tests: Levels		ADF Tests First		Order of Integration
	ADF Test Statistic	p-values	ADF Test Statistic	p-values	
HDI	-2.9704	0.1524	-7.7801	0.0000***	*I(1)*
EXD	-3.1070	0.1189	-6.5318	0.0000***	*I(1)*
DTS	-9.3707	0.0000***			*I(0)*
IND	-1.6311	0.7634	-3.5801	0.0007***	*I(1)*

*, **, *** are significance at 10%, 5% and 1%

Source: Authors' computation from CBN Statistical Bulletin

The ADF tests represented in table 3 rejected the null hypothesis of the presence of unit root at levels for debt servicing because its test statistic was greater than 3.0 and produced a probability less than 5%. So DTS series is integrated of order zero, that is *I*(0). On the other hand, the ADF test fails to reject the null hypothesis of no unit root for HDI, EXD and IND at levels. However, they became stationary at first difference, making them integrated of order one, that is *I*(1).

It has been established by Pesaran, Shin and Smith (2001) that the bounds technique allows a mixture of I(1) and I(0) variables as regressors. Based on this ground, we proceed to perform the ARDL bounds test for cointegration.

ARDL Bounds Test for Cointegration

In this section, we proceed to investigate long-run cointegration, where public debt and human development index are tested as the dependent variable. The calculated F-statistics report is in Table 4. The estimated F-statistics of the ARDL bound testing to be compared with the critical value proposed by Pesaran, Shin and Smith (2001).

Table 4: ARDL Bounds Tests for Public investment-public debt models in Nigeria

F-statistic	5.306198	I(0)	I(1)
Sig. level	10%	2.97	3.74
	5%	3.38	4.23
	2.5%	3.8	4.68
	1%	4.3	5.23

Source: Authors' computation from CBN Statistical Bulletin

The study reveals that the public debt-human development model has long-run cointegration, with all F-statistics exceeding critical values from ARDL bounds tests. When human development was used as the dependent variable, the model provided higher F-statistics values at the 5% significance level (5.306198 > 4.23), indicating that government debts have long-term linkages with human development during 1980-2023.

ARDL Short-run Error Correction and Long-run Model Estimates

The ARDL ECM model output provides valuable insights into the short- and long-run dynamics of the variables in question. The constant (C) is highly significant with a coefficient of 4.8521, indicating a positive baseline effect on the dependent variable when all other variables remain unchanged. This suggests a strong underlying relationship in the data, potentially related to economic or developmental factors, depending on the specific model. The lags of the Human Development Index (HDI) show mixed results. While the first lag (D(HDI(-1)0)) is insignificant, with a probability value of 0.5950, the second and third lags are significant at the 1% and 5% levels, respectively. This indicates that changes in HDI from two and three periods ago positively and significantly impact the dependent variable, with the second lag having a larger effect (0.4061) than the third (0.2829). This delayed effect suggests that improvements in human development take time to influence economic outcomes or other key indicators captured by the dependent variable.

Table 5: The ARDL-ECM for public debt-human development model

ARDL ECM Estimates			ARDL Long-run Estimates		
Variable	Coefficient	Prob.	Variable	Coefficient	Prob.
C	4.8521	0.0000***	EXD	-0.0221	0.3455
D(HDI(-1))	0.0703	0.5950	DTS	-1.8783	0.0122**
D(HDI(-2))	0.4061	0.0036***	IND	0.0459	0.4932
D(HDI(-3))	0.2829	0.0304**	@TREND	-0.1887	0.0001***
D(EXD)	0.0249	0.0307**			
D(DTS)	1.8682	0.0016***			
D(DTS(-1))	1.2090	0.0609*			
ECT(-1)*	-0.6674	0.0000***			
R-squared	0.6552				
Adjusted R-squared	0.5774				
Prob(F-statistic)	0.0000				
Durbin-Watson stat	2.1495				

Source: Authors' computation from CBN Statistical Bulletin

Changes in external debt (EXD) also have a statistically significant positive effect on the dependent variable, though the magnitude is small (0.0249). This could imply that increases in external debt are associated with modest short-term improvements, potentially due to the inflow of foreign capital or investment. Debt servicing (DTS) shows a much more pronounced effect, with the current changes (D(DTS)) being highly significant and having a large positive coefficient (1.8682). The one-period lag of DTS also has a positive impact, though its significance is marginal at the 10% level. These findings suggest that domestic trade is a key driver of short-term changes in the dependent variable.

The error correction term (ECT(-1)) is highly significant and negative (-0.6674), confirming the existence of a long-run equilibrium relationship between the variables. The coefficient indicates that approximately 67% of any deviation from this long-run equilibrium is corrected in the next period, reflecting a relatively quick adjustment process. This suggests that while short-run fluctuations occur, the system tends to revert to its long-run path fairly quickly. The model itself appears to fit the data well, with an R-squared value of 0.6552, meaning that the model explains about 65.52% of the variation in the dependent variable. The adjusted R-squared, which accounts for the number of predictors, remains high at 57.74%, indicating the robustness of the model. The highly significant F-statistic further supports the overall significance of the model, while the Durbin-Watson statistic (2.1495) suggests no serious issues with autocorrelation in the residuals. Overall, the ARDL ECM model highlights the importance of human development, external debt, and debt servicing in influencing the dependent variable, both in the short run and in maintaining long-run equilibrium. The model's strong fit and quick adjustment to long-run equilibrium provide confidence in its explanatory power.

Diagnostic Tests

To ensure the validity of the estimates of the parsimonious models above, tests to verify the extent of the affirmation or violations of the assumptions of Least Squares estimates (of which the ARDL is part of) were carried out. They include the Breusch-Godfrey Serial Correlation LM, Heteroscedasticity and Jarque-Bera Normality tests.

Diagnostic Tests

Test statistics	p-values	Decision
Jarque-Bera test for Normality	0.6366	Nomarlly distributed
Breusch-Godfrey Breusch-Godfrey Serial Correlation LM Test	0.7803	No serial correlation
Breusch-Pagan-Godfrey Heteroskedasticity Test	0.0577	Homoskedastic distribution

Source: Authors' computation from CBN Statistical Bulletin

Since the p-values of the Jarque-Bera statistics for the public debt-human development model is greater than 0.05 (ie, 0.6366 > 0.05), we conclude that there is no statistical evidence of the presence of no normality in the public debt-human development for Nigeria. Similarly, as the p-value of the Breusch-Godfrey Serial Correlation LM test statistics for the public debt-human development model is greater than 0.05 (ie, 0.7803 > 0.05), we conclude that there is no statistical evidence of the presence of serial correlation in the public debt-human development model for Nigeria. And finally, as the p-values of the Breusch-Pagan-Godfrey Heteroskedasticity Test statistics for the public debt-human development model is greater than 0.05 (ie, 0.0577 > 0.05), we conclude that there is no statistical evidence of the presence of heteroskedasticity in the public debt-human development model for Nigeria.

Findings

The discussion of findings will be based on the ARDL long-run estimates. The ARDL long-run estimates presented provide insights into the long-term relationships between the human development and public debt variables. In the first, **External Debt (EXD)** has a negative coefficient (-0.0221), suggesting that, in the long run, an increase in external debt slightly reduces the human development variable, though this effect is statistically insignificant with a probability value of 0.3455. This implies that external debt does not have a significant long-term impact on the dependent variable in this model. The negative effect agrees with the earlier finding of Omodero (2019). The fact that external debt (EXD) is statistically insignificant implies that, in the long run, external borrowing does not have a major impact on the dependent variable. This could indicate that Nigeria's debt-financed expenditures may not be effectively translating into productive investments or growth. It highlights the need for better management and utilization of external funds to ensure that borrowing is directed toward growth-enhancing projects.

Debt servicing (DTS) shows a significant negative effect on the dependent variable, with a coefficient of -1.8783 and a probability value of 0.0122, which is significant at the 5% level. This indicates that, in the long run, an increase in domestic trade or supply negatively affects the dependent variable. The relatively large coefficient suggests that debt servicing exerts a strong and adverse influence over time, possibly indicating inefficiencies or structural issues within domestic markets that negatively impact long-term growth or development. This agrees with Ajayi and Edewusi (2020) and Omodero (2019). The significant negative effect of debt servicing on human development in Nigeria suggests that a large portion of government revenue is being diverted away from critical sectors like education, healthcare, and social welfare, limiting investment in human capital. This underinvestment stunts economic growth, exacerbates poverty, and increases inequality, as fewer resources are available to improve education and health outcomes. Over time, this leads to a less productive workforce and weakens long-term development prospects. Additionally, high debt servicing costs constrain the government's ability to implement pro-growth policies, creating a cycle where debt hampers both short-term social welfare and long-term economic competitiveness.

Internal debt (IND) has a small positive coefficient (0.0459) but is statistically insignificant with a probability value of 0.4932. This indicates that internal debt has no significant long-run impact on the dependent variable. The insignificance may suggest that internal debt, as measured in this model, does not play a crucial role in long-term changes or may be influenced by other intervening factors not captured here. This finding is in variance with Abdulkarim and Saidatulakmal (2021). The insignificant positive effect of internal debt on human development in Nigeria suggests that domestic borrowing has not translated into meaningful improvements in areas like education, healthcare, and living standards. This may indicate inefficient use of borrowed funds, with resources not being directed toward sectors that directly enhance human capital. The positive sign, though insignificant, hints that internal debt could have potential benefits if managed effectively, such as reducing reliance on external borrowing and financing social programs. However, the insignificance implies that internal debt alone is insufficient to drive substantial improvements in human development without broader fiscal reforms and effective resource allocation.

Trend is highly significant with a negative coefficient of -0.1887 and a probability value of 0.0001, significant at the 1% level. This implies that over time, there is a general declining trend in the dependent variable. This trend could be driven by various structural factors or external shocks that systematically affect the dependent variable negatively in the long run.

Conclusion

The main objective of the study is to examine the effects of public debt on economic development. Human development index was used to proxy economic development while external debt, internal debt and debt servicing were used to proxy public debt. This study employs ex post facto research design using time series data for the periods under study (1980-2023), it allows for data collection and analysis all aimed at providing solution to the problem under investigation. Data for this study is completely secondary in nature. Data were sourced from various issues of Central Bank of Nigeria (CBN) Statistical Bulletins and World Development Indicator (WDI). The study's parameter estimation will be done based on the Autoregressive Distributed Lag (ARDL) model.

The ARDL long-run estimates show that while External Debt (EXD) has a negative but statistically insignificant effect on human development, Debt Servicing (DTS) significantly harms human development by diverting resources from key sectors. Internal Debt (IND) has a small, statistically insignificant positive effect, suggesting it does not meaningfully impact human development on its own. Overall, high debt servicing costs negatively affect long-term growth, indicating a need for better management of both external and internal debt.

Recommendations

Based on the study's findings, the following recommendations are made. (i) Improve Debt Servicing Management. Implement strategies to better manage debt servicing costs, ensuring that a significant portion of resources is not diverted away from critical sectors like education and healthcare. This could involve negotiating better terms with creditors and prioritizing efficient use of funds. (ii) Optimize Resource Allocation. Reallocate resources towards sectors that directly contribute to human development, such as education and healthcare, to counteract the negative impacts of debt servicing. This will help ensure that essential services are adequately funded despite debt obligations. (iii) Enhance Debt Transparency. Increase transparency in debt management practices to foster trust and ensure that both external and internal debts are managed in a way that supports long-term growth and human development. Regularly report on the impact of debt on development outcomes to keep stakeholders informed.

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BOARD COMPOSITION AND PROFITABILTIY OF COMMERCIAL BANKS IN NIGERIA.

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Abstract
This study investigated the impact of Board composition on the profitability of commercial banks in Nigeria. It adopted Ex-post facto research design comprising of data obtained from secondary sources. This data were obtained from the audited annual report of 13 out of 14 commercial banks quoted on the Nigerian Exchange Group between the life span of 2013-2022. Regression analysis was used to analyse the data collected for the study and the study revealed and concluded that Board composition has a positive and insignificant impact on the profitability of commercial banks in Nigeria (β= 0.003, p-value = 0.326) hence it recommends that commercial banks should carefully monitor all fundamentals that indicate profitability issues, and not merely focus on firm attributes; since the firm's attributes do not completely isolate firms from profitability threats. It also recommends that commercial banks should equally compose their board based on proficiency and skill requirements, among others rather than size.

Introduction

Banking sector plays important roles in the economic life of a country. It facilitates the production, distribution, exchange and consumption processes in the economic system, thus being an essential part of country's sustainable development. National economies depend on the banking sector majorly as far as lending is concerned. Ongore and Kusa (2013) highlight that commercial banks play a very important role in the allocation of economic resources by facilitating the channelling of funds from depositors to stockholders efficiently. The value of the banking sector in propelling the economic growth cannot be underestimated. This was evident during the global financial crisis as the banking crisis greatly saw a deterioration of not only the US economy but also the global economy. Some of the systematically important banks had to be bailed out owing to their value in fostering economic growth. This indicates that banks work in collaboration with the Central Bank of Nigeria (CBN) as a key player in the financial sector and ultimately maintain the financial stability of any nation's economy.

Oziegbe and Cy (2021) argued that banks play three crucial roles to the development of any nation. Firstly, banks have an overwhelmingly dominant position in the financial systems of developing economies, and are extremely important engines of economic growth. Secondly, banks in these developing economies are typically one of the most important sources of finance for the majority of firms. Also, banks in developing countries are the main depository for the economy's savings and provide the means for payment. Therefore, the banking industry in Nigeria has a significant role to play in the development of the country's economy.

They offer important services of providing deposit and loan facilities for personal and corporate customers, making credit and liquidity available for business organizations and facilitate the nation's payment systems (Ikhide, 2000). Besides, banks are also the vehicles of transmitting effective monetary policy of the Central Bank and in a way they share the responsibility of stabilizing economy. The soundness of the banking sector is very critical to the health of the entire economy. On the other hand, the wellbeing of banks to a larger extent depends on their profitability which invariably indicates the strength and weakness of a bank. Nonetheless, financial performance is evaluated by a number of factors including profitability. This is the case because banks must generate necessary income to cover their operational expenses, with a mark-up for returns on investment.

Profitability has always been a central term to determine the performance of firms, where an adequate level of profitability is important for a firm's long-term survivability and success. The profitability of a firm describes how individuals in the company try to achieve the corporate goal. Companies are concerned with its profitability since it has great implications for their survival. Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability are crucial and paramount to every corporate organization. According to Ayanda *et al.* (2013) the term profitability refers to the ability of the business organization to maintain its profit year after year. Profitability of a bank according to Podder (2013) is the efficiency of a bank at generating earnings. Profitability, apart from ensuring the sustainability of the companies, it has also wider implications of the economy as a whole. Similarly, every business should earn sufficient profits to survive and grow over a long period of time.

Both the internal and external environment in which a firm operates highly influences its performance, hence this compels the managers and owners of the organization to conduct a thorough analysis before arriving at any decisions and to do so, firms' attributes have to be analyzed critically and diversification strategies well reviewed.

The relationship between corporate governance and firm performance has been a major focus in the financial industry, particularly within commercial banks. Corporate governance structures, including the composition and size of the board of directors, play a critical role in determining the operational efficiency and profitability of firms. Commercial banks in Nigeria, like many other financial institutions globally, are governed by a board of directors whose primary responsibilities include ensuring that the bank operates within regulatory frameworks and efficiently allocates resources to generate profit.

Board size, which refers to the number of members on a company's board of directors, has been a subject of debate in academic and professional circles. Some studies suggest that larger boards enhance firm performance by bringing diverse perspectives, expertise, and networks, which improve decision-making processes. Conversely, other research argues that excessively large boards may suffer from coordination problems, groupthink, or slow decision-making, ultimately impairing profitability (Lipton & Lorsch, 1992). Therefore, determining the optimal board size is crucial for banks operating in competitive and dynamic environments like Nigeria's financial sector.

In Nigeria, the banking sector is one of the most regulated industries due to its significant role in the country's economic development. Commercial banks, in particular, are key drivers of economic growth through their intermediation role mobilizing deposits from surplus sectors and extending credit to deficit sectors. However, the performance of banks, including their profitability, is contingent on several internal factors such as capital adequacy, risk management, governance structures, and board size.

The Nigerian banking sector has undergone significant transformations in recent decades, driven by regulatory reforms, consolidation efforts, and technological advancements. Despite these changes, many commercial banks continue to face profitability challenges. These challenges have been exacerbated by fluctuating macroeconomic conditions, regulatory pressures, and an increasingly competitive landscape, both domestically and globally. To navigate these challenges, commercial banks must implement sound governance practices, one of which is determining the optimal board size that fosters efficient decision-making and strategic leadership.

The relationship between board size and firm profitability remains a contentious issue in corporate governance literature. In theory, larger boards could provide more resources, expertise, and networks, which could potentially enhance a firm's ability to identify opportunities and manage risks (Dalton et al., 1999). However, empirical studies have provided mixed results. While some studies have found a positive correlation between board size and firm performance, others argue that beyond a certain point, large boards may become ineffective due to communication bottlenecks and slower decision-making processes (Jensen, 1993).

In the context of Nigeria, the issue of board size is particularly important given the regulatory emphasis on corporate governance following the banking reforms in the early 2000s. Nigerian banks are required to adhere to specific corporate governance codes that mandate the structure and composition of their boards. However, despite these regulations, profitability in many commercial banks has remained inconsistent. As such, it is unclear whether the board size, as stipulated by governance codes, is aligned with the operational realities of commercial banks in Nigeria.

The lack of consensus in existing literature and the unique challenges facing Nigeria's commercial banks underscore the need for a comprehensive investigation into how board size impacts profitability. Specifically, there is a gap in the literature on how the size of a bank's board affects its financial performance in the Nigerian banking sector, which is characterized by regulatory volatility, economic instability, and stiff competition. Therefore this study seeks to examine the impact of board composition on the profitability of commercial banks in Nigeria. Addressing this gap will provide valuable insights for bank executives, regulators, and policymakers on how to optimize board size to enhance profitability.

Conceptual Framework

Board Composition

Board composition refers to the number of independent non-executive directors on the board relative to the total number of directors. An independent non-executive director is defined as an independent director who has no affiliation with the firm except for their directorship (Clifford and Evans, 1997). There is an apparent presumption that boards with significant outside directors will make different and perhaps better decisions than boards dominated by insiders. Fama and Jensen (2020) suggest that non-executive directors can play an important role in the effective resolution of agency problems and their presence on the board can lead to more effective decision-making. However, the results of empirical studies are mixed. A number of studies, from around the world, indicate that non-executive directors have been effective in monitoring managers and protecting the interests of shareholders, resulting in a positive impact on performance, stock returns, credit ratings, auditing, etc.

Fama and Jensen (2020) theorize that internal directors are the most influential board members due to their valuable firm specific knowledge. Similarly, recent studies show that inside directors are valuable in enhancing a board's advisory and monitoring functions leading to effective performance of an organization (Raheja 2005; Adams and Ferreira 2007). Executive directors simply refer to as insider directors. They are those directors that are also managers and/or current officers in the firm (Ogbechie and Koufopoulos, 2010). The role of inside directors from the perspectives of contracting literature assumed that boards choose directors to maximize shareholder's wealth by improving board expertise and monitoring oversight of senior management. Fama and Jensen (2020) in their study found that inside directors enhance board functionality by improving the quality of board decision making. As such, they expect well-functioning boards to include several of the organization's top managers. Inside directors can contribute firm-specific expertise and insight into firm activities to board discussions, which enhances a board's ability to monitor firm performance and to set its strategic objectives.

Non-executive directors are outside directors who are independent of the company. They are called independent directors because they have neither personal nor business relationships with the company (Ogbechie and Koufopoulos, 2010). In other words, non-executive is any director who is not a representative or member of the immediate family of a shareholder and who has no business relationship with the company for the past three years or more and who has the ability to control or significantly influence the board or management of the company. Non-executive directors are usually chosen because they have appropriate calibre, skills and personal qualities, and breadth of experience. More so, non-executive directors may have some specialist knowledge that will help in providing the board with valuable insights or, key contacts in related industries that may contribute in improving the financial performance of such industries. In addition, part of the utmost importance of non-executive directors is that they are independent of the management of the company and any of its interested parties. This means they can bring a degree of objectivity to the board's deliberations, and play a valuable role in monitoring executive management. Furthermore, the presence of non-executive directors is generally believed to have provided better governance, effective monitoring, and quality performance. However, the empirical results of the previous studies regarding the relationship between non-executive directors and firm performance are still inconclusive.

Dehaene *et al.* (2001), found a significant positive association between the number of external directors and return on equity. The results of this study show evidence backed up the argument that non-executive directors provide superior benefits to the company due to their independence from the management of the organization. This single act of independence attracted investors in investing more into the organizations as it helps them in making better investment decisions. Similarly, non-executive independent directors reduce firm performance and this negative effect was even more important during the recent financial crisis (Priya and Nimalathasan, 2013), as the non-executive independent directors prefer conservative business strategies in order to protect shareholders, but this behaviour adds more cost and lowers firm´s performance. Numerous studies have evidenced that the proportion of non-executive independent directors is correlated to firm performance (Agrawal and Knoeber, 2006). This shows that companies with more non-executive independent directors tend to be more profitable than those with fewer non-executive independent directors. This also suggests that increasing the level of the proportion of non-executive independent directors should simultaneously increase firm performance as they are more effective monitors of managers (Adams and Mehran, 2003).

Profitability

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So, measuring current and past profitability and projecting future profitability is crucial and paramount to every corporate organization. According to Ayanda *et al.* (2013) the term profitability refers to the ability of the business organization to maintain its profit year after year.

Profitability of a bank according to Podder (2012) is the efficiency of a bank at generating earnings. Profitability, apart from ensuring the sustainability of the companies also has wider implications of the economy as a whole. Similarly, every business should earn sufficient profits to survive and grow over a long period of time. It is the index to the economic progress, improved national income and rising standard of living.

In a simplest model, the company's revenue less the costs that are incurred by producing and selling the goods and services sold equal profit (or loss). Furthermore, profit could either be normal or supernormal. Normal profit is that minimum level of profit necessary to keep a firm in that line of business (that is, revenue equal to explicit expenses). This level of normal profit enables the firm to pay reasonable salaries to its workers and managers. On the other hand, abnormal profit also known as supernormal profit is extra profit above or in excess of normal profit.

Maximization of profit is a very crucial objective for a firm to remain in business and to withstand competition from firms operating in similar industry. It is a major pre-requisite for long-term survival and success of a firm while it is a key pre-condition for the achievement of other financial goals of a business entity (Gitman and Zutter, 2012). Profitability is a core measure of the performance of a firm and it constitutes an essential aspect of its financial reporting. It reveals the firm's ability and capacity to generate earnings at a rate of sales, level of assets and stock of capital in a specific period of time (Margaretha and Supartika, 2016). Consequently, firms' profitability and modalities for improving it have generated serious debates in the literature and have remained topical in the field of economics, finance, accounting and management. Profitable firms create value, hire people, tend to be more innovative, more socially responsible and are beneficial to the entire economy through payment of taxes. High rate of performance of firms indeed contributes effectively to income. Fatihudin and Mochklas (2018) defined this construct as the capability of a company to manage its resources and its measures are such as solvency capital adequacy as well as profitability among others. Financial performance measures mainly serve three purposes; they serve as major objectives of the business, they serve as a tool of financial management, and also serve as a mechanism for control and motivation within an organization (Kenny, 2019).

Musah *et al.* (2019) cited a significantly positive correlation between growth and financial performance calculated through return on assets, and insignificantly positive relation amid company's return on equity and growth, and that the company's ROA, as well as ROE positive correlation with growth, was an indication that a significant growth would lead to increased company's rendition. Matar and Eneizan (2018) in a study on financial performance determinants cited that revenues, liquidity, and profitability factors were positively related to returns on assets, whilst financial leverage, as well as the size of the firm variables, were antagonistically correlated to ROA. This paper will make use of profit for the year because it indicates how much the banks are earning compared to the investments they make. Measuring profitable investments allows the banks to ensure that they are putting their monies in the right places.

Theoretical Review

Several theoretical frameworks have been developed to explain the relationship between board size and firm performance.

The Resource Dependence Theory posits that boards of directors provide essential resources, such as expertise, legitimacy, and access to external networks, which are critical for organizational success (Pfeffer & Salancik, 1978). According to this theory, larger boards are advantageous because they bring diverse skills and knowledge that can enhance decision-making and improve a firm's strategic position. For commercial banks, which operate in complex environments requiring effective risk management and regulatory compliance, having a larger board could help provide the necessary oversight and guidance to drive profitability.

On the other hand, the Agency Theory highlights the potential conflicts of interest between a firm's management and its shareholders. Larger boards could exacerbate agency problems by making it harder to monitor management effectively, as directors might be less coordinated and more prone to conflict or groupthink (Jensen & Meckling, 1976). This theory suggests that smaller boards are more efficient in overseeing management because they are less likely to suffer from coordination problems and can make decisions more swiftly.

Empirical review

According to Omolehin *et al.,* (N.d), The performance of banks has been identified as critical to the development of any economy. The boards of these banks also occupy a critical role in their performance as they are responsible for the long term success of the banks. It has become a big question what board composition is appropriate for effective performance of corporate organizations of which banks are not exceptional. This study therefore examined the effect of board composition on the financial performance of listed deposit money banks in Nigeria. Five (5) banks were randomly sampled and studied over a six year period (2012-2017). Data collected from various annual reports and accounts were analyzed using Ordinary Least Square Regression analysis. Results show that board size has negative significant effect on the financial performance of listed deposit money banks in Nigeria while non-executive directors have positive significant effect on the financial performance of listed deposit money banks in Nigeria. This study recommends among others, a board size composition of ten and a maximum of fifteen (15) for deposit money banks depending on the scale and complexity of the bank without prejudice for skills, competence, independence and availability of meetings. This study also recommends in line with corporate governance codes that emphasis be placed on non-executive directors although with great care and considerations given to skills, competence, experience, independence and availability for meetings.

Abimbola *et al (2022)* examined the effect of board composition on the financial performance of listed commercial banks in Nigeria. The specific objectives of the study are: to assess the influence of CEO duality on the financial performance of commercial banks in Nigeria; to examine the influence of board gender on the financial performance of commercial banks in Nigeria; and to determine the influence of board size on the financial performance of commercial banks in Nigeria. A total of eight commercial banks were used as sample size for the study. The study covered a five year period (i.e., 2016-2020). The study used secondary data to reach study findings. Data collected from the study were analysed using multiple regression technique processed on SPSS. From the analysis of the study, it is found out that only board size have significant influence on the financial performance of commercial banks in Nigeria. That is to say that CEO duality and board gender have no significant effect on the financial performance of commercial banks in Nigeria. The study therefore recommends a majority of board members be female to provide some additional skills and perspectives that may not be possible with all-male boards.

According to Joseph *et al.*, (2022) Banks world over are expected to operate within acceptable standards of governance for consistent operational performance. They depend on customer deposits, which are confidence–driven. Since the quality of governance is critical to winning and retaining customer confidence and patronage, the imperative for good governance practices in banks cannot be overemphasized. The aim of this study is to empirically explore the relationship between board composition and firms' performance of quoted commercial banks in Nigeria. Data on different variables of board composition and firm market value from 2011-2021 were collected from the annual financial reports of all the fourteen quoted commercial banks in Nigeria. Ordinary least square regression analysis, descriptive statistics, Hausman specification test, likelihood ratio test, panel stationarity test, Lagrange multiplier test, lag length selection criterion, and panel auto-regressive distribution lag brand test was used in analyzing the data. The empirical results indicate that board composition significantly relates to firm performance, explaining about 85.1% of the total variation of firm market value. The study concludes that board composition contributes significantly to firm performance and recommends that a strong and mandatory corporate governance structure should be put in place to ensure that the board of directors consists mostly of members that are independent of the firm, both directly and indirectly.

Ogan *et al.,* (2024) examines the effect of Board size composition on the financial performance of deposit money banks quoted on the Nigeria Stock Exchange (NSE) from (2014- 2018). The study aims to achieve two specific objectives, two research questions guided the study and two null hypotheses were formulated. The study used ex-post facto research design. Ten quoted deposit money banks were used and purposive sampling technique was adopted. Regression of Ordinary Least Square (OLS) was used to analyse the data collected. The study revealed that board size composition (BSCP) and board size characteristics (BSCH) both have strong positive effect on the financial performance of deposit money banks in Nigeria. The study therefore concludes that the more the board has members with five years of experience and above and those with professional certification the more the number of them the more efficient the financial performance. The study therefore recommends that the board should be filled with members with minimum of five years of experience and professional certification in relevant discipline relating to the sector.

Abimbola et al., (2022) examined the effect of board composition on the financial performance of listed commercial banks in Nigeria. The specific objectives of the study are: to assess the influence of CEO duality on the financial performance of commercial banks in Nigeria; to examine the influence of board gender on the financial performance of commercial banks in Nigeria; and to determine the influence of board size on the financial performance of commercial banks in Nigeria. A total of eight commercial banks were used as sample size for the study. The study covered a five year period (i.e., 2016-2020). The study used secondary data to reach study findings. Data collected from the study were analysed using multiple regression technique processed on SPSS. From the analysis of the study, it is found out that only board size have significant influence on the financial performance of commercial banks in Nigeria. That is to say that CEO duality and board gender have no significant effect on the financial performance of commercial banks in Nigeria. The study therefore recommends a majority of board members be female to provide some additional skills and perspectives that may not be possible with all-male boards.

Methodology

The research design used for this study is the *ex-post facto* research design. The population of this study comprised the fourteen (14) Commercial banks listed on the Nigerian Exchange Group as at the year 2023.

The purposive sampling technique was adopted for this study. Consequently, Ecobank was excluded due to the fact that its financial statements are presented in foreign currency, this would create translation problem. Other commercial banks with no relevant data on the Nigerian Exchange Group for the period are excluded. Thus, the sample size were 13 banks for the period of 2013 to 2022. Secondary data were used in the study. Data from the financial reports were extracted using content analysis from the financial statements of the selected banks. The variables of the study are explained in this section of the study.

Table 3.2: Dependent and Independent Variables

S/N	Variables	Types	Definition	*Apiori* Expectation
1.	Profitability	Dependent	Profit for the year	
2.	Board composition	Independent	Percentage of Executive directors in the board	Positive

Source: Researcher's Compilation (2024)

One functional relationship will be based on descriptive analysis. Linear regression analysis will be stated in general form. It is stated as thus:

$$P = f(BC)$$

The model developed for this study is:

$$P = f(BC)$$

$$P = \beta + b_1 BC_{i,t} + \varepsilon \qquad 3.1$$

Where:

P = Profitability, BC= Board Composition, ε = Error Term, β = Constant, b_1 = Coefficients

Regression analysis was used to analyse the model specified in the study. The decision rule states that the null hypothesis will be rejected if the p-value is less than 0.05 and also if the calculated F statistics is less than the critical value of F at the degree of freedom of n-k-1.

Data Presentation

The data required for the study were profit for the year, and number of board members of the various Deposit money banks in Nigeria. The data set covered the period 2013 to 2022. These data were used to compute the variables of the study.

Test of Hypotheses

Table 4.1 Model Summary for Hypothesis Four

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.087[a]	.008	.000	.5019399430480	.359

a. Predictors: (Constant), Board Composition
b. Dependent Variable: Profitability

Source: Researcher's Computation (2024)

Table 4.2 ANOVA[a] for Hypothesis Four

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.245	1	.245	.972	.326[b]
	Residual	32.249	128	.252		
	Total	32.494	129			

a. Dependent Variable: Profitability
b. Predictors: (Constant), Board Composition

Source: Researcher's Computation (2024)

Table 4.3 Coefficients[a] for Hypothesis Four

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	7.765	.116		67.134	.000		
	Board Composition	.003	.003	.087	.986	.326	1.000	1.000

a. Dependent Variable: Profitability

Source: Researcher's Computation (2024).

The model summary in Table 4.1 shows the R-square value of 0.008 which indicates that 8% of the variance in profitability is explained by the board composition. The ANOVA (Table 4.2) shows F-ratio of 0.972, p-value 0.326 > 0.05, indicating that the independent variable, board composition, has no significant effect on the dependent variable, profitability. Based on this finding and the decision rule of the study, we accept the null hypothesis which states that there is no significant effect of board composition on the profitability of banks in Nigeria. This implies that board composition does not have significant influence on the profitability of banks in Nigeria.

The result of the analysis presented in Table 4.1 showed an R-square value of 0.008. The implication of this result is that 8% of the changes in profitability of commercial banks is influenced by board composition. The R-value of 0.087 showed that there is a positive relationship between board composition and profitability of commercial banks in Nigeria. The result was statistically insignificant because p-value of 0.000 which is less than 0.326. This finding was in line with the findings of Abdulkarim and Isah (2020) who examined the impact of board composition and board size on the market value of listed industrial goods companies in Nigeria. Their findings document significant positive effect of board size on the market value of the companies and insignificant but negative effect of board composition on the market value of the companies. From the study findings, Board Composition has positive but statistically insignificant effect on commercial banks' profitability.

Conclusion

Based on the findings of the study, it was concluded that Board composition has a positive and insignificant effect on the profitability of commercial banks in Nigeria. However, based on the result of the analysis.

Recommendations

The study focused on the Board composition and profitability of commercial banks in Nigeria. The study found that Board composition has a positive and insignificant effect on the profitability of commercial banks in Nigeria. Hence it recommends commercial banks should carefully monitor all fundamentals that indicate profitability issues, and not merely focus on firm attributes; since the firm's attributes do not completely isolate firms from profitability threats. Commercial banks should equally compose their board based on proficiency and skill requirements, among others rather than size.

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FINANCIAL INCLUSION TECHNOLOGY AND POVERTY REDUCTION IN NIGERIA

Fr. Dr. Andrew
Financial Inclusive Technical

Abstract
This study investigates the impact of financial inclusion technologies—namely ATMs, POS systems, and mobile payments—on poverty alleviation in Nigeria. Using trend analysis and error correction econometric methods, the research evaluates how these technologies contribute to reducing poverty levels across different regions and demographics in the country. The findings reveal that ATMs and mobile payment systems significantly reduce poverty, primarily by enhancing access to financial services, promoting economic participation, and providing financial stability to low-income individuals. In contrast, POS systems do not exhibit a strong reductive effect on poverty, likely due to limited accessibility in rural areas and among the unbanked population. The study also highlights the positive role of financial deepening in poverty reduction, emphasizing the importance of expanding access to a wide range of financial services. The implications suggest that targeted investments in financial infrastructure, regulatory support, and financial literacy initiatives are essential to maximizing the poverty-alleviating potential of these technologies. The research concludes that a comprehensive approach to financial inclusion and deepening, tailored to the needs of underserved populations, is crucial for achieving sustainable poverty reduction and fostering inclusive economic growth in Nigeria.
Keywords: *ATM, POS, Mobile Pay, Poverty.*

Introduction

Poverty remains a significant challenge in Nigeria, where a substantial portion of the population lives below the poverty line (Agba, Agba, Ushie, & Akwara, 2024). The Nigerian economy, characterized by a high unemployment rate, low income, and limited access to financial services, contributes to the persistence of poverty (Ezeudu and Tukur, 2024). In this context, financial inclusion has emerged as a critical strategy for poverty alleviation, aiming to provide affordable and accessible financial services to the underserved and unbanked populations (Ozili, Ademiju, & Rachid, 2023).

Financial inclusion refers to the availability and equality of opportunities to access financial services (Ozili, 2020). It is considered a key driver of economic growth and poverty reduction, as it enables individuals and businesses to participate fully in the economy. In Nigeria, financial inclusion has gained increasing attention from policymakers, financial institutions, and development agencies as a means to enhance economic opportunities and reduce poverty (Wayne, Soetan, Bajepade, & Mogaji, 2020). Technological advancements have played a significant role in promoting financial inclusion in Nigeria. The introduction and expansion of financial inclusion technologies such as Automated Teller Machines (ATMs), Point of Sale (POS) terminals, and mobile payment platforms have revolutionized the financial landscape (Ozili, 2021). These technologies have significantly improved access to financial services, particularly in rural and underserved areas where traditional banking infrastructure is limited (Ozili, 2021).

ATMs have become widespread, offering convenient access to cash withdrawals, account inquiries, and other banking services (Adedotun *et al.* 2024). POS terminals have facilitated cashless transactions, enabling businesses, especially small and medium enterprises (SMEs), to conduct transactions more efficiently. Mobile payment platforms, including mobile money services, have been particularly impactful, allowing individuals to perform financial transactions using their mobile phones, bypassing the need for a physical bank account (Adedotun *et al.* 2024).
These technologies have the potential to contribute significantly to poverty alleviation by increasing access to financial services, reducing transaction costs, and promoting financial literacy. For instance, mobile payments have enabled many previously unbanked individuals to save, invest, and manage their finances more effectively, thereby enhancing their economic resilience. Furthermore, financial inclusion technologies have supported the growth of microenterprises, providing them with the tools needed to access credit, expand their businesses, and improve their livelihoods.

The period from 2010 to 2022 witnessed significant advancements in financial inclusion technologies in Nigeria. These developments were driven by a combination of government initiatives, technological innovation, and growing demand for financial services, especially among underserved populations. Table 1 below is a tabular display and analysis of the trends of financial inclusion technologies from 2010 to 2022 in Nigeria.

Table 1: Trends of financial inclusion technologies in Nigeria (2010 – 2022)

Year	**ATM Value of Transactions (₦'Billion)**	**POS Value of Transactions (₦'Billion)**	**Mobile Pay Value of Transactions (₦'Billion)**
2010	19675.51	12.72000	25.05000
2011	22302.65	31.02000	59.61000
2012	7461.630	48.01000	31.57000
2013	7674.860	161.0200	47.32000
2014	7269.080	312.0700	74.04000
2015	6195.460	448.5100	91.58000
2016	5829.550	759.0000	132.3600
2017	5381.910	1409.810	184.6000
2018	5035.330	2383.110	675.9200

2019	4481.670	3204.750	478.1400
2020	1152.750	633.8100	107.6400
2021	1118.160	749.8200	116.2600
2022	1099.700	856.8600	120.5700

Source: Central Bank of Nigeria (CBN) Financial Statistical Bulletin, 2022.

The data provided in table 1 on the value of transactions through Automated Teller Machines (ATMs), Point of Sale (POS) terminals, and Mobile Payment platforms in Nigeria from 2010 to 2022 reveals significant trends and shifts in the usage of these financial inclusion technologies. The value of ATM transactions in Nigeria peaked in 2011 at N22,302.65 billion, followed by a steep decline to N7,461.63 billion in 2012. The subsequent years show a fluctuating trend with a general decline, reaching N1,099.70 billion in 2022. The initial high value of ATM transactions in 2010 and 2011 can be attributed to the widespread adoption of ATMs as a convenient method for cash withdrawals and basic banking services. However, the sharp decline starting in 2012 indicates a shift in consumer behavior, likely influenced by the introduction and growing adoption of alternative payment methods, particularly POS and mobile payments. The declining trend from 2012 onwards reflects the gradual shift away from cash-based transactions towards digital and cashless payments, facilitated by the rise of POS terminals and mobile payment platforms. Additionally, issues such as ATM fraud, maintenance challenges, and the cost of ATM transactions might have contributed to the reduced reliance on ATMs.

The value of POS transactions shows an exponential growth trend, starting from N12.72 billion in 2010 and reaching N3,204.75 billion in 2019. Despite a slight decline in 2020, the value of POS transactions continued to rise, reaching N856.86 billion in 2022. The rapid growth in POS transactions reflects the increasing adoption of electronic payment systems in Nigeria, driven by the Central Bank of Nigeria's (CBN) cashless policy and the expansion of POS terminal networks. This trend indicates a significant shift towards cashless transactions, particularly in urban and semi-urban areas where POS terminals became more prevalent. The decline in 2020, likely due to the COVID-19 pandemic, underscores the impact of external factors on transaction volumes. The pandemic disrupted economic activities and reduced consumer spending, which may have contributed to the temporary decline in POS transactions. The recovery and continued growth post-2020 suggest resilience in the adoption of POS technology, supported by the increased digitalization of businesses and consumer preferences for cashless payments.

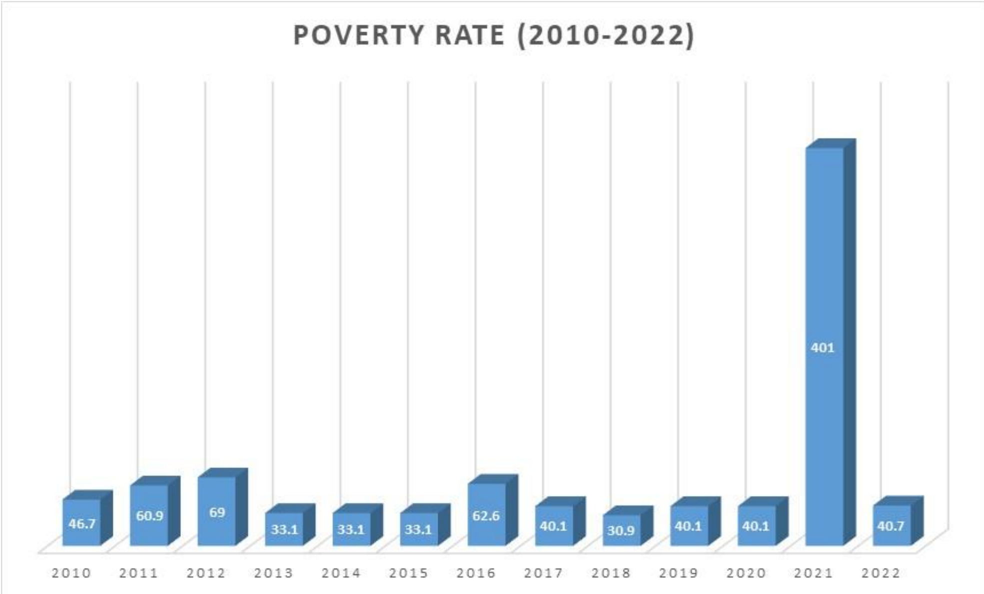
Mobile payment transactions have shown a generally upward trend, with significant growth starting in 2017. The value of transactions rose from N25.05 billion in 2010 to N675.92 billion in 2018, though it fluctuated slightly in subsequent years, reaching N120.57 billion in 2022. The early years of mobile payment adoption (2010-2016) saw steady growth, as mobile money services gained acceptance among the unbanked and underbanked populations, particularly in rural areas. The surge in transaction value from 2017 to 2018 reflects the increasing penetration of smartphones, better mobile network coverage, and the entry of new players in the mobile payment space, such as Opay and PalmPay. The slight fluctuations in mobile payment transaction values after 2018 could be attributed to market saturation, regulatory challenges, and competition from other digital payment methods, including POS and internet banking. The overall trend highlights the crucial role of mobile payment platforms in enhancing financial inclusion, particularly by reaching underserved populations who lack access to traditional

However, despite the progress made, challenges remain in fully realizing the potential of financial inclusion technologies for poverty alleviation in Nigeria. The poverty trend is presented in figure 1 and 2 respectfully and discussed afterwards:

Figure 1: Poverty Trend in Nigeria (2010-2022)

Source: Central Bank of Nigeria (CBN) Statistical Bulletin 2022

Figure 2: Bar Charted Poverty Trend in Nigeria (2010-2022)



Source: Statista and World Development Index (WDI)

The poverty rate in Nigeria saw a dramatic increase from 46.7% in 2010 to 69.0% in 2012. This spike can be attributed to several factors, including economic instability, rising inflation, and inadequate infrastructure, which disproportionately affected the poorest segments of the population. The high rates during this period reflect the challenges of economic management and the impact of global economic conditions on Nigeria's economy. Following the peak in 2012, the poverty rate fluctuated significantly. By 2013, it dropped to 33.1%, suggesting some recovery efforts were beginning to take effect. However, this recovery was not consistent, as the rate remained at 33.1% in both 2014 and 2015, indicating a stagnation in poverty reduction efforts despite ongoing economic challenges. The poverty rate rose sharply again in 2016 to 62.6%, reflecting the severe economic recession Nigeria faced due to falling oil prices and internal conflicts. This trend highlights the vulnerability of Nigeria's economy, which is heavily reliant on oil exports. The data shows a gradual decline in poverty rates from 2017 to 2019, with rates of 40.1% in both 2017 and 2019. This period indicates some stabilization efforts, but the rates remained alarmingly high, reflecting the ongoing economic struggles and regional disparities, particularly between the northern and southern regions. The poverty rate remained at 40.1% in 2020 and 2021, illustrating the stagnation caused by the COVID-19 pandemic, which severely impacted the economy and exacerbated existing vulnerabilities. The pandemic led to job losses and reduced incomes, pushing more families into poverty. By 2022, the poverty rate was approximately 40.7%, with about 88.4 million Nigerians living in extreme poverty (Aliu, 2023). This slight increase from previous years underscores the persistent challenges facing the country, including high inflation and inadequate social safety nets.

This research therefore explored the impact of financial inclusion technologies, specifically ATMs, POS, and mobile payment platforms, on poverty alleviation in Nigeria. By examining the extent to which these technologies have enhanced financial access, improved economic opportunities, and contributed to poverty reduction, the study provided insights into the effectiveness of financial inclusion initiatives and identify areas for improvement. The findings contributed to the broader discourse on financial inclusion and its role in achieving sustainable development goals in Nigeria.

Literature Review

Conceptual Review

Automated Teller Machines (ATMs)

ATMs have been a traditional channel for banking services, primarily used for cash withdrawals, balance inquiries, and fund transfers (Ezekiel, Ehiedu, & Onuorah, 2021). Over time, their role in financial inclusion has evolved, particularly in rural areas where physical bank branches are scarce. ATMs provide a critical access point for financial services, allowing users to conduct basic transactions without needing to visit a bank branch. However, the utility of ATMs in promoting financial inclusion is often limited by factors such as poor infrastructure, high operational costs, and security concerns (Ahmad, 2023).

Point of Sale (POS) Terminals

POS terminals have become increasingly significant in Nigeria's cashless economy drive. These devices allow merchants to accept electronic payments for goods and services, thus reducing the reliance on cash (Utomo *et al.* 2024). The widespread adoption of POS terminals has been driven by the CBN's cashless policy, which aims to reduce the amount of physical cash in circulation and encourage digital payments. The growth in POS transactions reflects the expanding role of electronic payments in the economy and their potential to enhance financial inclusion by bringing more people into the formal financial system (Adeolu, Salamntu, & Paschal, 2024).

Mobile Payment Platforms

Mobile payment platforms represent one of the most transformative financial inclusion technologies in Nigeria (Chike & Ogba, 2023). These platforms, including mobile wallets and mobile money services, allow users to conduct a range of financial transactions using their mobile phones. This technology is particularly impactful in reaching unbanked populations, who may not have access to traditional banking infrastructure but do have access to mobile phones. Mobile payments have been credited with enabling greater financial inclusion by providing a convenient, low-cost means for individuals to save, transfer money, and pay for goods and services (Zaccheaus, 2023).

Impact on Poverty Alleviation

Enhancing Access to Financial Services

One of the key ways financial inclusion technologies contribute to poverty alleviation is by enhancing access to financial services. By providing accessible and affordable financial products, these technologies empower individuals to manage their finances more effectively, save for the future, and invest in income-generating activities. For instance, mobile payment platforms have enabled many Nigerians to access credit and microloans, which they can use to start or expand small businesses (Oladipo & Adebiyi 2022).

Promoting Economic Participation

Financial inclusion technologies also promote broader economic participation by integrating more people into the formal economy. POS terminals, for example, enable small and medium enterprises (SMEs) to accept digital payments, expanding their customer base and increasing sales. This, in turn, supports job creation and income generation, contributing to poverty reduction (Oladipo & Adebiyi 2022).

Facilitating Financial Resilience

By enabling savings and providing access to credit, financial inclusion technologies help individuals build financial resilience. This is particularly important in a country like Nigeria, where many people face economic uncertainty and volatility. Having access to financial services through mobile payment platforms or ATMs allows individuals to save for emergencies, access funds when needed, and reduce their vulnerability to economic shocks (World Bank, 2022).

Theoretical Framework

For a study on the impact of financial inclusion technologies (such as ATMs, POS terminals, and mobile payments) on poverty alleviation in Nigeria, the following two theories or models were applied:

Diffusion of Innovations Theory

The Diffusion of Innovations (DOI) Theory, developed by Everett Rogers in 1962, explains how new ideas, technologies, or practices spread within a society or from one society to another (Rogers, 2003). The theory posits that innovations are adopted through a process that involves different categories of adopters: innovators, early adopters, early majority, late majority, and laggards (Meso & Duncan 2019).

In the context of financial inclusion technologies, the DOI theory can be used to understand how these technologies (e.g., ATMs, POS terminals, and mobile payments) are adopted by different segments of the population in Nigeria. The theory can help identify the factors that influence the rate of adoption, such as relative advantage, compatibility, complexity, trialability, and observability of the technology.

Amartya Sen's Capability Approach

Amartya Sen's Capability Approach is a theoretical framework that focuses on individuals' capabilities—their ability to do and to be what they value (Sen, 1999). The approach emphasizes the importance of enhancing individuals' freedoms and opportunities to achieve well-being and escape poverty. It argues that poverty should not be measured solely by income levels but by the deprivation of capabilities (Alkire & Deneulin 2009).

The Capability Approach can be used to analyze how financial inclusion technologies enhance or constrain the capabilities of individuals, particularly the poor, in Nigeria. The focus is on how these technologies improve people's ability to access financial services, save money, invest in education or business, and manage risks, thereby improving their overall well-being.

Empirical Studies

Adeyemi and Lawal (2021) examined the relationship between the availability of ATMs and poverty alleviation in Nigeria, using data from 2010 to 2020. The research employs a panel data analysis across different states in Nigeria, focusing on the correlation between the density of ATMs and poverty reduction indicators such as income levels, employment rates, and access to financial services. The study finds that an increase in ATM density is significantly associated with improved access to financial services, particularly in urban and semi-urban areas. The availability of ATMs has contributed to poverty alleviation by facilitating easier access to cash, thereby enabling individuals to manage their finances more effectively. However, the impact is less pronounced in rural areas due to infrastructural challenges and lower levels of ATM penetration.

Ojo and Ibrahim (2022) investigated the role of ATMs in promoting financial inclusion and alleviating poverty in Nigeria's rural economy. The research utilizes a mixed-method approach, combining quantitative analysis of ATM usage data with qualitative interviews of rural residents and financial service providers. The study reveals that ATMs have had a positive impact on financial inclusion in rural areas, particularly by reducing travel time and costs associated with accessing banking services. The presence of ATMs in rural areas has enabled more people to participate in the formal financial system, which has had downstream effects on poverty reduction through increased savings and access to microloans. However, challenges such as frequent machine outages and limited cash availability still hinder the full potential of ATMs in these areas.

Eze and Onuoha (2023) explored the differential impact of ATM accessibility on poverty reduction in urban versus rural areas of Nigeria. Using a dataset covering the period from 2015 to 2023, the research employs econometric modeling to assess how ATM distribution affects poverty indicators such as income levels, financial inclusion rates, and economic empowerment. The findings indicate that in urban areas, ATMs have significantly contributed to poverty reduction by improving access to financial services, reducing transaction costs, and increasing financial literacy. In rural areas, while there is a positive impact, it is less significant due to factors such as lower ATM density, infrastructural challenges, and lower levels of financial literacy. The study suggests that targeted policies are needed to increase ATM accessibility in rural areas to enhance their impact on poverty alleviation.

Adebayo and Olatunji (2021) explored the relationship between the proliferation of POS terminals and poverty alleviation in Nigeria from 2015 to 2020. The research utilizes a combination of survey data and secondary data on POS transactions across different states in Nigeria. The study assesses how the increased use of POS terminals has influenced financial inclusion, income generation, and poverty levels. The study finds a significant positive correlation between the adoption of POS terminals and poverty reduction, particularly in urban areas where POS usage is more prevalent. POS terminals have improved financial inclusion by making it easier for small and medium-sized enterprises (SMEs) to conduct cashless transactions, thereby increasing their customer base and profitability. The study also highlights the role of POS systems in reducing transaction costs and enhancing access to financial services, which are critical for poverty alleviation.

Nwankwo and Okonkwo (2022) investigated the impact of POS terminals on poverty alleviation in rural Nigeria, focusing on the period from 2018 to 2022. The research employs a qualitative approach, including interviews with rural merchants, customers, and financial service providers. It examines how the introduction of POS terminals in rural areas has affected financial inclusion, economic activities, and poverty levels. The study finds that POS terminals have contributed to poverty alleviation in rural areas by facilitating easier access to financial services, thereby reducing the dependency on cash and enhancing the efficiency of transactions. However, the study also identifies significant challenges, such as poor network connectivity, lack of infrastructure, and limited awareness and trust in electronic payments, which hinder the full potential of POS systems in rural poverty reduction.

Ogunleye and Akinola (2023) analyzed the impact of POS systems on financial access and poverty alleviation in Nigeria, using data from 2016 to 2023. The research employs a panel data approach to examine the effect of POS terminal adoption on various poverty indicators, such as income levels, employment, and access to credit. The results indicate that the adoption of POS systems has a statistically significant impact on reducing poverty, particularly by enhancing access to credit and financial services for underserved populations. The study also highlights the role of POS systems in supporting the growth of microenterprises by enabling them to accept electronic payments, which has led to increased sales and income generation. The findings suggest that expanding the reach of POS systems, particularly in underserved and remote areas, could further contribute to poverty alleviation in Nigeria.

Adesina and Adeyemi (2021) investigated the impact of mobile payments on poverty alleviation in Nigeria, focusing on the period from 2015 to 2020. The study uses a mixed-method approach, combining quantitative analysis of mobile payment adoption data with qualitative interviews from users and financial service providers. The research examines how mobile payments have influenced financial inclusion and poverty indicators such as income levels, savings, and access to credit. The study finds a significant positive relationship between mobile payment adoption and poverty reduction, particularly in rural areas where traditional banking infrastructure is limited. Mobile payments have enhanced financial inclusion by providing low-cost, accessible financial services to underserved populations, enabling them to save, invest, and manage financial risks more effectively.

Ekezie and Nwokolo (2022) examined the role of mobile money services in enhancing financial inclusion and alleviating poverty in Nigeria, focusing on the period from 2018 to 2022. The study employs a panel data approach to analyze the relationship between mobile money usage and poverty indicators across different states in Nigeria. It also considers the factors that influence the adoption of mobile money services, such as income levels, education, and mobile phone ownership. The results indicate that mobile money services have significantly contributed to poverty alleviation by increasing access to financial services, particularly in remote and rural areas. The study finds that mobile money has facilitated savings, improved access to credit, and enabled efficient money transfers, all of which have contributed to poverty reduction.

Okoye and Chima (2023) explores the role of mobile payments in poverty alleviation in Nigeria, using data from 2017 to 2023. The research utilizes econometric modeling to analyze the impact of mobile payment adoption on poverty-related indicators, including income levels, household consumption, and access to financial services. The study also conducts a comparative analysis between urban and rural areas to assess the differential impact of mobile payments on poverty alleviation. The study finds that mobile payments have had a substantial impact on poverty alleviation, particularly by increasing financial access for low-income households and small-scale entrepreneurs. Mobile payments have enabled users to receive remittances, pay bills, and conduct transactions more efficiently, thereby reducing transaction costs and increasing disposable income.

Methodology

Research Design

The investigation employed the *Ex Post Facto* design given that the study is anchored on the utilization of secondary data. This study makes use of econometric procedure in the impact of financial inclusion technologies on poverty reduction in Nigeria. linear regression with the application of Ordinary least squares (OLS) technique was adopted for the study. The primary justification for adopting the linear regression is based on the fact that it possesses the optimal properties of linearity, unbiasedness, linearity and minimum variance (Koutsoyiannis, 2003).

Pre-Estimation Tests

Unit Root Test

In order to avoid spurious regression estimates, a time series data should be examined for stationarity or order of integration. Time series data is accepted to be stationary if "it exhibits mean reversion in that it fluctuates around a constant long-run mean, has a finite variance that is time invariant and has a theoretical correlogram that diminishes as the lag length increases" (Asteriou, 2006). There are many tests trying to find the order of integration of series and among them Dickey-Fuller, Augmented Dickey-Fuller and Phillips and Perron tests are the most widely used ones in testing the presence of unit roots. Dickey-Fuller (DF) test is based on the following model:

$$\Psi_t = \lambda \Psi_{t-1} + \varepsilon_t \qquad (1)$$

The model can also be expressed as:

$$\Delta \psi_t = \varpi \psi_{t-1} + \varepsilon_t \qquad (2)$$

where $\varpi = (\lambda - 1)$. This model is called pure random walk model. Null hypotheses are $H_0 : \lambda = 1$ for model (3.4.1) and $H_0 : \varpi = 0$ for model (2). The corresponding alternative hypotheses are $H_a : \lambda < 1$ and $H_a : \varpi < 1$ respectively. If DF test statistic (t-statistic of lagged dependent variable) is less than the critical value, we reject the null hypothesis and conclude that the series is stationary (there is no unit root). Model (2) can be extended by including a constant term and/or the trend.
The corresponding models are called random walk with drift and random walk with drift and time trend:

$$\Delta \psi_t = \alpha_0 + \Omega \psi_{t-1} + \varepsilon_t$$

$$\Delta \Psi_t = \alpha_0 + \beta_2 t + \Omega \Psi_{t-1} + \varepsilon_t$$

Where: $\Omega = (\lambda - 1)$. The two models have same testing procedures with the random walk model.

However, Equation (3.4.2) does not consider autocorrelation. Augmented Dickey-Fuller (ADF) test is used to test existence of unit root when there is autocorrelation in the series and lagged terms of the dependent variable are included in the equation. The following three models represent pure random walk, random walk with drift and random walk with drift and trend used in Augmented Dickey Fuller tests:

$$\Delta\psi_t = \Omega\psi_{t-1} + \sum_{i=1}^{p}\beta_i\Delta\psi_{t-1} + \varepsilon_t$$

$$\Delta\psi_t = \alpha_0 + \Omega\psi_{t-1} + \sum_{i=1}^{p}\beta_i\Delta\psi_{t-i} + \varepsilon_t$$

$$\Delta\psi_t = \alpha_0 + \Omega\Psi + \beta_2 t + \sum_{i=1}^{p}\beta_i\Delta\psi_{t-1} + \varepsilon_t$$

where: $\Omega = (\lambda - 1)$ The null hypothesis is $\mathrm{H}_0 : \Omega = 0$ and the alternative hypothesis is $\mathrm{H}_a : \Omega < 0$ If ADF test statistic (t-statistic of lagged dependent variable) is less than the critical value, we reject the null hypothesis and conclude that the series is stationary (there is no unit root).

Cointegration Test

The co-integration technique allows for the estimation of a long-run equilibrium relationship. Simply put, one can argue that various non-stationarity time series are co-integrated when their linear combinations are stationary. One of the most popular tests for cointegration has been suggested by Engel and Granger (1987). The process is demonstrated thus; given a multiple regression: $y_t = \beta' x_t + \mu_t, t = 1,...,T,$ where $x_t = (x_{1t}, x_{2t},...,x_{kt})'$ is the k-dimensional I(1) regressors. For y_t and x_t to be cointegrated, μ_t must be I(0). Otherwise, it is spurious. Thus, a basic idea is to test whether μ_t is I(0) or I(1).

The Model

The error correction analysis is an econometric analysis carried out if the variables under investigation are seen to be cointegrated. The Error Correction Mechanism (ECM) was used to estimate the speed of adjustment of the short-run dynamics of the variables and timing to long run convergence. The ECM is given by the equation:
$\Delta PR_t = \beta_0 + \Delta\beta_1 POS_t + \Delta\beta_2 ATM_t + \Delta\beta_3 MOP_t + \Delta\beta_4 FD_t + ECM_{t-1} + \mu_t \ldots 4$
Where Δ = First Difference Operator

Model Specification

The guiding econometric model for this research is specified thus:

Implicitly: $PR_t = f(POS_t, ATM_t, MOP_t, FD,)$ (3)

The explicit econometric model is specified thus:

$$PR_t = \beta_0 + \beta_1 POS_t + \beta_2 ATM_t + \beta_3 MOP_t + \beta_4 FD_t + \mu_t \quad (4)$$

Where:

PR = Poverty Rate (Head Count)

POS = Point of Sales (Value of Transactions)

ATM = Automated Teller Machines (Value of Transactions)

MOP = Mobile Pay (Value of Transactions)

FD = Financial Deepening (measured with the ratio of broad money supply to GDP)

t = Time Period

β 's = structural Parameters to be estimated

μ = Stochastic Error Term

The a priori expectations are given as: $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, & $\beta_4 > 0$.

Results and Discussion

Unit Root Results

Table 2: Unit Root Results

	Level Form		**Differenced Form**		
VARIABLE	**ADF STAT**	**Critical Val @5%**	**ADF STAT.**	**Critical Val @5%**	**Order Of Integration**
POS	-0.459372	-2.941145	-9.272254	-2.941145	I(1)
ATM	-1.266202	-1.949609	-17.68324	-1.949856	I(1)
MOP	-0.676244	-2.941145	-6.986401	-2.943427	I(1)
FD	-1.345052	-2.938987	-7.192507	-2.943427	I(1)
POVR	-2.482046	-2.943427	-3.055353	-1.951687	I(1)

Source: *Author's Computation Using E-views 10.*

Table 4.1 clearly shows that all the variables are stationary at first difference (I(1)). This means that the variables have unit-root until differenced in the first order. This was also strengthened by the correlogram analysis. This, therefore, necessitated the need to estimate the model using Error Correction Model (ECM).

Table 3: Error Correction Model Analysis

Dependent Variable: POVR
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.76158	3.133283	3.753757	0.0071
POS	0.273004	0.279986	0.975063	0.3620
ATM	-0.227897	0.138258	-1.648350	0.1433
MOP	-0.424483	0.319033	-1.330532	0.2250
FD	-0.243817	0.150681	-1.618104	0.1497
ECM-1	0.006192	0.000954	6.489605	0.0003

R-squared	0.897601	Mean dependent var	3.925194
Adjusted R-squared	0.824460	S.D. dependent var	0.674567
S.E. of regression	0.282627	Akaike info criterion	0.614659
Sum squared resid	0.559145	Schwarz criterion	0.875404
Log likelihood	2.004719	Hannan-Quinn criter.	0.561064
F-statistic	12.27207	Durbin-Watson stat	2.481792
Prob(F-statistic)	0.002355		

Source: Researcher's Computation Using E-views Software.

Table 3 clearly shows that POS yielded a numerical coefficient of 0.273004. This result implies that POS for the years analyzed did not have a reductive effect on poverty in Nigeria. The lack of impact might indicate that the infrastructure supporting POS systems, such as reliable electricity, internet connectivity, and financial literacy, is insufficient, particularly in rural and underserved areas. Policymakers may need to focus on improving these foundational elements to enhance the effectiveness of POS systems in poverty reduction.

ATM yielded a negative numerical coefficient of -0.27897. This entails that ATM facilitates the reduction of poverty in Nigeria. A 1% increase in ATM availability resulted in a 0.27% decrease in poverty in Nigeria. The positive impact of ATMs on poverty reduction suggests that expanding ATM infrastructure, particularly in underserved and rural areas, could further enhance financial inclusion and contribute to poverty alleviation. Policymakers may consider incentivizing banks and financial institutions to install more ATMs in areas with limited access to financial services.

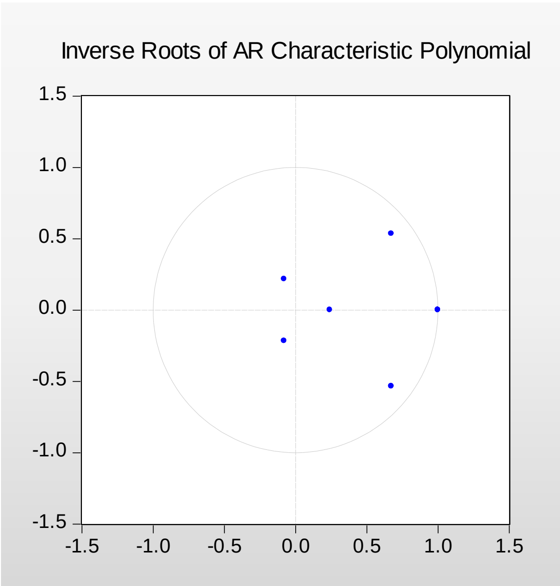
Mobile Pay (MOP) also yielded a negative numerical coefficient of -0.424483. This entails that MOP facilitates the reduction of poverty in Nigeria. A 1% increase in MOP availability resulted in a 0.42% decrease in poverty in Nigeria. The finding suggests that mobile payment systems are effective tools for financial inclusion.

Policymakers should therefore prioritize expanding access to mobile payment platforms, particularly in rural and underserved areas. This could involve incentivizing mobile network operators and fintech companies to invest in infrastructure and services that make mobile payments more accessible to low-income populations.

Finally, financial deepening (FD) yielded a negative numerical coefficient at the magnitude of -0.243817. This entails that FD facilitates the reduction of poverty in Nigeria. A 1% increase in financial depth resulted in a 0.24% decrease in poverty in Nigeria. The finding underscores the importance of continuing efforts to deepen the financial sector in Nigeria.

The coefficient of determination (R-Squared) yielded 0.897601. This entails that approximately 90% of the variations of the dependent variable is explained by changes in the independent variables. This is however high as it is above average (50%). The F-statistics is a statistical tool employed in checking the statistical significance of the entire regression plane. From the regression, it can be clearly seen that the F-statistics yielded 12.27207 with a corresponding probability value of 0.002355. This means that the test is statistically significant in the entire regression plane.

Model Stability (AR Unit-Circle)
Table 4



Source: *Researcher's Computation Using E-views 10.*

The importance of evaluating the stability of a model cannot be overemphasized. This is to ensure the model is dynamically stable. The condition for stability is that no inverse root dot should be outside the unit circle. Judging from the inverse roots of the AR characteristic polynomial, the model is stable as no dot lies outside the enclave of the unit circle.

Discussion of Results

Findings from the study revealed that POS did not contribute positively to poverty in Nigeria. The findings suggest that there may be barriers to the effective adoption and use of POS systems, such as lack of trust in digital transactions, limited access to POS devices in certain regions, or high transaction fees. This finding does not however align with findings of Adebayo and Olatunji (2021) who explored the relationship between the proliferation of POS terminals and poverty alleviation in Nigeria from 2015 to 2020 and found a significant positive correlation between the adoption of POS terminals and poverty reduction, particularly in urban areas where POS usage is more prevalent. The finding did not also agree with the finding of Nwankwo and Okonkwo (2022) who investigated the impact of POS terminals on poverty alleviation in rural Nigeria, focusing on the period from 2018 to 2022.

The study also found out that ATM contributes positively to poverty reduction in Nigeria. This finding is in tandem with the findings of Adeyemi and Lawal (2021) who examined the relationship between the availability of ATMs and poverty alleviation in Nigeria, using data from 2010 to 2020. It also agrees with the findings of Ojo and Ibrahim (2022) who investigated the role of ATMs in promoting financial inclusion and alleviating poverty in Nigeria's rural economy and found out that ATMs have had a positive impact on financial inclusion in rural areas, particularly by reducing travel time and costs associated with accessing banking services.

The study also discovered that mobile pay contributes positively to poverty reduction in Nigeria for the years analyzed. This finding is in line with the results obtained from Adesina and Adeyemi (2021) who investigated the impact of mobile payments on poverty alleviation in Nigeria, focusing on the period from 2015 to 2020 and a significant positive relationship between mobile payment adoption and poverty reduction, particularly in rural areas where traditional banking infrastructure is limited. The finding also aligns with the findings of Okoye and Chima (2023) who explored the role of mobile payments in poverty alleviation in Nigeria, using data from 2017 to 2023. The study finds that mobile payments have had a substantial impact on poverty alleviation, particularly by increasing financial access for low-income households and small-scale entrepreneurs.

Conclusion and Recommendations

The findings underscore the critical role that financial inclusion and deepening play in reducing poverty in Nigeria. While ATMs and mobile payments have proven effective in reaching and benefiting low-income populations, the limited impact of POS systems suggests the need for a more nuanced approach to financial inclusion strategies. To maximize the poverty-reducing potential of financial technologies, stakeholders—including policymakers, financial institutions, and technology providers—must continue to invest in expanding access to financial services, particularly in underserved regions. Moreover, efforts to enhance financial literacy and infrastructure are crucial to ensure that these services are not only available but also effectively utilized by those most in need. Ultimately, a comprehensive and inclusive approach to financial sector development, leveraging the strengths of various financial technologies, will be essential in driving sustainable poverty reduction and fostering economic growth in Nigeria.

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THE IMPACT OF MANAGEMENT INFORMATION SYSTEM ON UNIVERSITIES' MANAGERIAL DECISION-MAKING

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Abstract
Management is often saddled with decision – making in planning, directing, controlling coordinating, financing and staffing functions. Information is a critical factor for effective and efficient managerial decision-making in universities Quality decisions, its efficient communication and effective implementation are the live wire of every organization like the Universities. Quality managerial decision is critical and vital to success and achievement of the Universities goals and activities. Quality Information is the bedrock, fulcrum and the veritable resource of the universities' quality managerial decision. It is often the output of Universities' Management Information system (UMIS). Management Information System is the state-of-the-art Information technology tool for gathering, processing and churning good information for managerial decisions. This study examines the effect or influence of universities management information technology on managerial decision – making in Universities. It investigates factors that influences information gathering, processing, communication, utilization and the flow of effective information. It also assesses the influences of information flow on managerial decision-making in Universities. The results revealed great and numerous invaluable impact the adoption and application of UMIS has on universities' management decision-making. It offers very high efficiency and unparallel effectiveness in managerial decision-making in universities due to quality information from the UMIS. The result especially depicted better results, improved performance, highly increased productivity, reduced data risk and insecurity, enhanced viability and values, reduced operational headaches and cost, enhanced goodwill and maximized control and flawless attainment of Universities' goals and aspirations with growing scalability and as well successful churning out readymade manpower for the industries and workplaces in Nigeria and across the globe. The major drawbacks are cost, technical barrier, professional demand. power, data accuracy and security breaches, etc.
Keywords: *MIS, Information, Decision-Making, Managerial Decision*

Introduction

Decision–making is one of the very essences of the management and administrators of institutions especially the Universities. Management is often saddled with decision – making in planning, directing, controlling coordinating, financing and staffing functions. The Administrators have to constantly choose what to do, who to do it and when, where and occasionally how to do it. Ideally such decision was often made on the basis of the evidence and information thoughtfully, empirically and appropriately gathered. Quality decisions and its efficient communication are the live wire of every organization like the Universities. Decision – making and communication errors are mitigations in the universities' wheels of growth and development. This is sky -rocketing at geometric progression due to Information Systems and existing decision supports or tools. These errors are adverse and costly, growing more costly adversely with universities' increasing complexities, population explosion, expanding activities, rising needs and demands of and from Universities. The importance and impact of the decisions depends to a great extent on the research extent, technology, techniques and methodology of gathering the necessary information, processing, evaluating alternatives and selecting a course of action among others called decision.

The Management decisional roles cut across the five resources of every organization, namely man, money machine, material and information. In all these, the management relies on one resource. – The Information. Management needs information in other to make decision. They need information to prepare the strategic, tactical and operational plan of action, to link the different parts of resources of the universities together, to allow certain specific action to happen or others occurring, and to monitor the work of the universities to point out requirements for corrective action or opportunity for improvement. Information is the glue or centripetal force that holds other resources or the organizations together. Quality decisions is a function of quality Information. And quality information is a factor or function of availability of accurate, relevant, complete, up to date, concise processed data. Drucker, (1967) and Simon, (1976), had described the decisional role or the decision-making among interpersonal and informational roles. Osisioma (1999) include as well technical, conceptual, diagnostic, communication, time management. Griffin (2002) saw it as the heart of administrative and management activity. It is also opined that the prime job that lies at the heart of management and the basis of success depends largely on both effective and efficient decision-making as in (Mintzberg, 1973; Alexis &Wilson, 1981; Agwu, 1993). Prior to the era of computing and or information technology (IT), several Information supports for decision-making in the universities were availed from mathematical, statistical, management, psychology, behaviourial sciences, etc. techniques and tools. There was growing call or demand for more and better-quality decisions and its efficient communication especially due to ever-increasing operational complexity, population explosion, unprecedented volume of activities, problems and needs multiplicity, expanding scope of management and advancing administration and operations. Similarly, universities are facing the pressure of growing enrolments, curriculum modernization, shortage of funds and increasing needs of funds, rising demand for materials, growing information explosion, resource allocations, appointment of staff, maintaining educational standard, offering courses as per new demand or need of manpower, etc. which are necessities of a challenging and changing era. Staff development, research and scientific developments are part of the issues that apply pressure to the universities. The increasing complexities of our universities have continued to make these techniques both ineffective and inefficient for the dynamic and ever-increasing needs of the growing and developing universities. These among others have contributed to serious dwindling performances of universities' administrators and/ or management as well insignificant growth and development of universities.

Hence, universities' have also failed to stand the test of time in this dynamic and fast changing global village in such as speed of decision-making processes and communication due to parity between information needs of the 21st century universities' and information processing tools or techniques especially in provision quality information for quality decisions. It is the underlying premise of this study that the use of most of the aforementioned techniques or supports to provide information for decision-making no longer live the tests of time and are longer in vogue, due to traditional and inherent drawbacks such as clumsy and time consuming, obsolete and outdated, highly error prone and inefficient for a sound, solid, effective and efficient information processing supports for managerial decision-making in 21st century Universities. The deficiencies have core or serious issues and drawbacks mitigating against the growth, development and achievements of universities' goals and activities. It is against these drawbacks and inhibitions that the Universities have shift attention to management information system as messianic panacea for quality information to enable managerial decision. UMIS are common in universities with diverse inscription and status.

Quality Information and its efficient communication and effective utilizations are the live wire of every organization like the Universities. Obviously, poor, inadequate, adverse and inefficient information and as well as inefficient and ineffective information generation, processing, communication system are bane of poor and inefficient decisions. Also poses serious impediments on achievements of the Universities goals and purposes. More recently MIS has risen to the gap of poor-quality information and inefficient information generation, processing and communication for managerial decision-making in the Universities. Hence, the essence of resorting to management information system as pervasive solution for provision or generation of quality information for quality decision-making and achievement of universities goals and activities of the Universities. This study therefore examines the impact of MIS, on managerial decision - making in Universities.

Statement of Problem and Purpose

This is a study of effect or influence of management information system on managerial decision-making in universities. The prevalent information processing and provision tools in universities were derived from mathematical, scientific, management sciences, psychological, behaviourial sciences models. These models were characteristic inefficient information gathering, processing and communication tools or techniques, inherent with poor communication network, inadequate information provision, and inaccessible quality information for managerial decision-making in universities. The deficiencies have been core or serious issues and drawbacks mitigating against the growth, development and achievements of Universities goals and activities. It is against these drawbacks and inhibitions that the Universities are turning attention to management information system as means of obtaining quality information for managerial decisions. Hence the aim of this study is to examine the impact or influence of management information system on managerial decision-making in universities with the objectives to determine how decisions are made in Universities, the quality of information available for decisions -making in universities, the efficient and effective information flow in universities, the effect of information on universities management in decision -making, effect of quality information on the quality of decisions, the importance of source, content, state of processing and other circumstances on integration of information in decision making universities, effect of information flow climate affect decision-making process, the effect information technology i.e. management information system on availability, processing, quality, communication and flow of information for managerial decision- making. It would also examine the values and benefits off UMIS on managerial decision -making in universities and as well possible misgivings, problems and pains of UMIS on management decision -making in universities.

Theoretical Review of the Study

The Nature of Universities Administrative Work

There are many ways of looking at the task and process of management or administrators. We can look at it as the performance of a set of functions (planning, organizing, controlling etc.), as the process of getting things done through and with people, as a problem solving structure or in any variety of ways (Barnard: 1938: Drucker, 1984; Simon, 1960) However, the most insightful perspective has come from Emery (1970). He defines managing as “the processing of information to obtain results through people”. Emery sees the manager as an information processor and communicator. He recognizes that systematic procedures for dealing with problems and decision are essential but believes that the performance of such activities could be broken down to information processing responsibilities. It is this perspective that provides a take off point for this paper. Nevertheless, since no single perspective is adequate to sufficiently capture the essence of managing, we will integrate into it the contributions of Mintzberg (1973) and Drucker (1984). Mintzberg conducted an extensive study of chief executives and at the end concluded that managerial activities can be divided into three groups those that are concerned primarily with interpersonal relationship, those that deal mainly with the transfer of information and those that essentially involve decision making. He thereafter defined managerial work as the performance often roles arising from this grouping. Drucker, on the other hand sees the work of a manager as consisting of five operations - setting objectives, organizing, motivating and communicating, measurement and developing people. He does not stop there; he insisted that engaging in these operations would result in the integration of resources to achieve a desirable synergy (which is what managing is all about) only with the skillful use of one tool - information. The manager needs information in order to function. If his tasks, as Koontz et.al (1983) contends is "to transform inputs in an effective and efficient manner into outputs" then he must need a wide assortment of information Oettinger (1984) puts it most succinctly when he states that "without information nothing makes sense". Before we derive an operational perspective to managing base on information and decision making, we must bridge the gap between the two. This is necessary since information is in itself neutral and static (Rappaport: 1975) whereas decision making is more or less, a process and an act; we have to consider how information is captured, processed, communicated and integrated into the decision making process - how it is activated, channeled and used for decision making. The overall framework would take cognizance of these aspects.

Decision and Decision-Making Model

Decision is a choice between two or more alternatives or choice of or for action. It is the choices or options from two or more alternatives or options. The moment of decisions arrived – a determination is arrived at after due or several considerations or conclusion reached. Decision is synonymous resolutions, conclusion, settlement, communication, choice, option, selection, ruling, judgement, verdict, findings, recommendations, pronouncement, decree, sentence, order, rule, injunction, results, arbitration, etc., (Pappaport, 1975: Hornby, 1994; Bartlett's Roget's Thesaurus, 1996,) Decision is judgement selected from two or more options or choice made from two or more alternative choices or options. There are different types of decisions namely routine, emergency, adaptive and innovative or virgin decisions. There are three levels of decisions namely strategic decisions often made by top executives i.e. in the University system the Pro Chancellor and the Council, The Vice Chancellor and The Senate, and the University Administration as well as committees attached these arms. The decisions are usually crucial to operation and long term, it is strategic because it defines and focuses on long term goals of the university. The Tactical or Administrative decisions often made by the Administrators or the middle management such as the Deans, Directors Registry, Bursary, Internal Auditor, ICT, Public relation, etc. This resolves unusual problems and develop techniques to improve functions. The Operational or Firstline managers are. the HOD of Departments and units as well as their receptive committees, takes routine decisions involving the daily events or activities, (Drucker, 1967; Gulueck,1980; Alexis & Wilson, 1981; Handy, 1985; Anderson, 2001; Amaefule, 2003)

What is Decision-Making: Decision making is one of the most arduous and herculean tasks of administration of any organization. Nothing is more difficult and more precious than to be able to decide. Organizational progress depends on good, efficient and effective decisions. Decisions could mar or make organization depending on quality. Decision-making is one of the central activities of management and is a huge part of any process of implementation. This is the action or process of making important decisions (Harris, Osisioma. *Decision-making* can be regarded as the cognitive process resulting in the selection of a belief or a course of action among several alternative possibilities. **T**his is a thought process of selecting a logical choice from the available options (Effraim & Jay 1998; Fatamah, 2003;; Power, 2004; Dew, 2014: Abiola, 2014, Tree, 2016). When trying to make a good decision, a person must choose between several options.

Every decision-making process produces a final choice that may or may not prompt action. Decision-making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Decision making is precisely a process of developing commitment to course of action. Some decisions are based on hunches (not guesses) and intuition. Experience is the most popular method of decision- making. Problem solving is synonym to decision-making concept. It is a systematic process that focuses on analyzing a difficult situation, and always includes a decision-making step. It is invariably a process whereby a dilemma is identified and corrected. Problem presents unsatisfactory state that needs to be changed to a desired state. The factors which affect the decision-making which include experience and knowledge, creative thinking, self-concept, stress, interpersonal conflict, time available, money and energy, routine verses non routine decisions, risks associated with decisions, critical nature of work, written guidelines, organization "s attitude towards decision-making, amount and kind of information available, degree of acceptance and support and managers" personal ability, etc., (Efraim & Jay, 2005; Baridam, 2015; Lucey, 2010; Modum, 1995).

Universities' Management Information System (UMIS): Impact and Issues

A management information system (MIS) is an information system used for decision-making, and for the coordination, control, analysis, and visualization of information in an organization categorized into three main types: routine, tactical, and strategic. Managerial decision-making is a process aimed at resolving identified problems and enabling effective and efficient performance of organization activities. It is seriously impacting the organizations in provision and processing of universities' vault of data to obtain quality information which decision makers employ for effective, efficient quality decision that impact on organizations' success, performance, productivity, profitability, enhance results, marginal growth and development; and overall result or goal achievements. UMIS help the universities meet its goal by providing its managers with insights into its regular operations so that they can control, organize and plan effectively. It plays an important role in the performance of the universities managerial decision-making because it provides platform or environment where job to be done according to plan and reporting is based on one click environment.

It churns out information (categorized as routine, tactical, and strategic.) for decision-making, and for the coordination, control, analysis, and visualization of information in an organization. And enables rapid access to up-to-date information from any location, UMIS helps to interpret data patterns, allow teams to collaborate, and facilitate presentation of information tailored to different audiences which enables quicker and more accurate decisions. It produces quality information used to make better and quality decisions that helps managers support ongoing operations. It provides timely, accurate, and relevant information for informed decision-making, leading to better outcomes. It is increasing efficiency and effectiveness in achievement of universities goals. It is enhancing productivity. Performance and achievements of management in decision-making and improving the universities' results and success. Universities are more competitive as it gives room for innovation advancement, growth and development with very scalability index. It improves employees' maintenance, loyalty and work ethics, overall universities performance and efficiency, conquering the boundaries to communication, ensuring clear accountabilities, lowering cost and expanding cost – benefits of decision-making and communication. It offers real-time data and information required to make wise and quality decisions. It automates processes, reducing costs and enhancing performance and productivity. It provides accurate, timely, and relevant data from various sources, such as internal databases, external websites, social media, sensors, and surveys that helps to produce several reports, including schedule, on-demand, exception, and detailed reports with vital indicators used to take corrective action as necessary.

UMIS portrays ability to improve the decision-making process both quantitatively and qualitatively resulting in better decisions reached more quickly. Integration ability of communications linkages to connect the various work locations, universities community, clients and contractors and even may link its employees' homes through direct computer and telecommunications hook-up. It helps the Universities extract actionable insights from its records to guide decision-making. Revolutionization of record keeping practices and reporting methods is another impact of MIS. Some good progress has been made towards developing means for generating large quantities of data and information that are differentiated for specific decision-making situations. Also, the fact that electronic information handling systems are assuming certain routine decision making tasks, reduces the need for personnel information handling. Generally speaking, UMIS improves data management and data accuracy, increases the management and universities performance and productivity, ensures better decision-making, enhances quality decision and information as well report communication, streamlines activities and processes, ensuring cost savings and reduced error, enhance cost - effectiveness, improves human resources performance, reduced maintenance and manageability chores,

It increases managerial performance and productivity ‘intelligence that can perform many diverse functions that normally tie up valuable executive time and effort. It Increases in the ability of an executive to collect and utilize data from remote locations, or to disseminate material to such locations. And offers stability of format of information processed, communicated and received without alteration or change. UMIS offers tremendous improvements in the communication of management information and linkage of the various elements of an executive’s job, thus eliminating the tedious and often error-prone intermediate stages in the collection, processing, transfer and or storage of information. Creating the possibility of greater flexibility in terms of working conditions and locations. It generates real-time performance reports or information and analytical records, provides comparative projections and performances as well as enhancing the work allocation process and internal report. UMIS improves data accuracy and quality information for decision-making, facilitates coordination and offers tremendous human resource performance It makes communication of information and results almost seamless, resultingly this capability has inescapably influenced universities formation structures. Evidently, there is a strong positive and progressive correlation between MIS and the quality of information, quality of managerial decisions, performance and productivity and efficiency and effectiveness of achieving universities goals with variations in the independent variables - relation management and financial management information.

Information Communication and Managerial Decision - Making

This is attempt to establish a definite link between information and managerial decision making and also expound on how management communicate or managerial communication. It examines the specific attributes of information necessary for effective decision making; discusses linkages and impacts and bring out the centrality of the communication structure while attempt to elaboration on informational approach and framework for decision making. Minztberg (1973), stated that a manager gets or seeks information in order to detect changes to identify problems and opportunities, to builds up knowledge about his milieu, to be informed when information must be disseminated and to make decisions. Alexis and Wilson (1967) opined that in any situation decision to be made, a manager usually would respond to a particular problem in proportion to the volume, nature and strength of the information and communication availability. They further opined that the quality of decisions would depend on the quality of information available to the decision maker. Edmunds (1959), similarly professed that the Handy information availability determines “the reach of an executive ‘Obviously speaking, a direct relationship is being established to exist between good information and good effective decisions. What is "good information" and what is "effective decision" and their relationships. According to Dean (1963) information to be considered good for decision making purposes, should possess four quality namely: correlated, consistent, current and complete. while S a fifth – concise was latter added. Reddin (1978) asserted that information should be relevant timely, accurate and well presented. In addition, conception of good information has been characterized by relevance, accuracy, adequacy, conciseness, timeliness and appropriateness of presentation. Relevance connotes that information should reflect and be appropriate to the decision-making situation and the needs of the recipient or user. Accuracy implies an acceptable ratio of correct information i.e. the total amount of information. This has to do with the purpose, clarity, precision, cost and speed involved. Good information should be comprehensive and complete, providing the manager with all the facts needed to make a decision. Additionally, should be sharp, brief, to the point; that is concise. Information should also be available at the time it is most needed and useful and at the right frequency. The nature of presentation of information is also important as it determines how effective it is explicit and integrated into the decision-making process.

Similarly, the quality of information is related to the communication structure. Leavitt (1985) asserted that the structure and design of a communication system is central importance in controlling the reliability and availability of information. Selectivity in observation and transmission characterizes all information received by a decision unit. A good communication system prevails and prevents effectively against bias, doubts, error, distortions and disturbance (Cherry: 1987). It also provides for multiple flows to a given decision unit so that it can compare and screen the information for consistencies and sharp differences as deduced in (Alexis and Wilson 1967). However, the communication system must be such that it makes information easily accessible to decision units, easy to obtain and speedily available in form and at the right time. Hence, the peruse of decision-making process, the criteria for effectiveness and the impact of information on them. An examination of processes of decision making and the determinants of effective decision making reveals the impact or vitality and influence of information in managerial decision making. It is information and its flow that leads to a problem being identified and provides the necessary guidelines for clear problem definition and objectives setting. Problem analysis, generation and evaluation of alternatives and even the actual choice all depend on information and its manipulation. And of course, the choice becomes another kind of information that provides the key to implementation. Hence, Emery (1970) depicted to see the entire managerial decision-making process as no more than information processing and analysis. However, a model linking information, communication and decision making has been developed by Ference (1970).

On the issue of effectiveness, information enters as standards, measures and assessment variables purpose has to be define and outcomes assessed in terms of information, goals and objectives have to exist as information against which compatibility is determined arid the optimality with which resources are utilized can only be measured against standards. Drucker (1977) contends that good information enables a clear focus on what the decision is all about, an exploration of a wide variety of approaches and building of effective execution into the decision-making process. In fact, every decision is as good as the information on which it is based. Information and communication systems supply the information that managers need in order to make decisions and when information is presented to the form and need of the decision makers, the more qualitative the decisions made. A decision made by a manager is a function of his own view or understanding and view is evoked in him through the system of information. The system "blue print" of the manager's views is the information base including the nature of the information and data stored, the logical storage structure and the models which are used to manipulate them. Above all, the information system and communication structure determine the climate of operation and decision making. Without information and a suitable information and communication system, effective managerial decision making will most probably be impossible.

Practical Justification for the Management Information System

An attempt at the effort of justifying the establishment of a management information system for universities (General or Technical, Public (Federal or State) or Private) may proceed along the following lines. The service universities of the 21St century will require may be categorized thus:

(a) Managerial, planning, control, co-ordination
(b) Administrative
(c) Communication

(a) Managerial, Panning, Control, Coordination.

The Universities management is essentially concerned with planning and control of the resources of the institution, with a view to the attainment of set objectives. Planning is concerned with a delineation of goals and the formulation of decision models for selecting means of achieving those goals. Control on the other hand is regulation of activities within the Universities so that they are in accordance with the expectations established in policies, plans and targets. And coordination is putting the various activities of Universities into equal and important relation. Crucial to the planning, coordination and control decisions of management, is information. Good decisions are based on information that is timely, relevant, complete and up to date, properly presented, problem solving and forward looking. And there comes the challenge and or need for management information system.

(b) Administration

A sample of the process of the administration chart will exhibit the following:

- Council Chairman (Council and Sub Committees)
- Vice Chancellor's office (Senate, "UMC, Security, Transport, Works, MICTU, Audit, etc./)
- Registry (Admissions, Registration, Examinations, Personnel programmes (Degree regular, Sandwich, Postgraduate (Staff Quarters, Recruitment & promotions.))
- Bursary (Accounts, Cash office, Audit, Stores, Inventions & Records, Payroll,)
- Library (Cataloguing, Serial, Reference, Word processing support (WPS))
- Deans (Department and Word processing supports (WPS))
- Other Departments /Sections (Students hostel & Accommodation- WPS)

c) Communication

Communication is the process of maintaining an uninterrupted flow of orders, instructions, questions, responses, explanations, ideas and suggestions between top management and the rest of the organizations. (Osisioma & Osisioma, 1999) We may classify communication as internal, external and a mixture of the two.

Internal —

- Heads of units, internal members of council, principal officers may wish to communicate on official matters among themselves and with the Vice Chancellor or Registrar, Bursar. For meetings that involve highly structured data, Tele-conferencing and video conferencing techniques may be used.
- The Vice Chancellor should have electronic access to each senior member of staff and the University key offices. (Each of them should own an e-mail address and WhatsApp acount)
- Academic staff certainly would wish to have electronic access to colleagues, the library and a central computing unit set up in other institutions, global databases centers of research and teaching.

External

- Academic staff, especially, frequent access to resources held in foreign stores such as libraries and internet sites. They need to communicate with fellow members of their academic associations.
- The Vice Chancellor needs to communicate with the National University Commission, various ministries, UNESCO, ASUU, NASU, NAAT, SSANU, SUG, The mode of communication with these bodies will always be determined by and driven by advances in information technology (WhatsApp, e-mail, diskette copies, CD, Online, pdf documents, etc.) google forms reports etc on the Internet

Management Information System (MIS) Conception and Design

MIS has not yet received consensus or generally and universally accepted definition among the authors and computing professionals. However, this study has adapted Mcloed (1995) which opined that management information system (MIS) is an organized means of providing managers with the information they need to do their jobs effectively. This includes internal and external information relating to an organization's past and present, as well as projections of what is likely to happen in the future. The purpose of an MIS is to furnish information within a workable time frame so that managers can make the best decisions concerning the planning, control and operation of their organization's activities. A critical examination of this definition is depicting as follows:

- **Organized means**. The parts of an MIS work together in well-coordinated fashion so that the system efficiently provides needed information.
- **Internal and external information**. An MIS must provide information about what's happening both inside and outside the organization
- **Past, present and future**. The MIS must provide information that reveals where the organization has been, where it is now, and where it's likely to be in the future.
- **Workable time** frame. An MIS must be responsive, that is, provide its information quickly. A slow response can mean a missed opportunity.
- **Decision making**. By providing needed information, the MIS helps managers make the decisions for which they are responsible.
- **Planning, control, and operation**. An MIS helps managers manage her basic functions of planning, control and operation. Therefore, the MIS is an aid in planning what to do, executing plans, and controlling activities to ensure that plans are carried out.

System Design of Model

System design elements of a system i.e. modules, architecture, components and their interfaces and data for a system based on the specified requirements with specific needs and designs are presented. Design objectives are the functional and non-functional qualities of a design. These are often stated as goals for what a design is meant to achieve. The UMIS design shows information flows functional relationships, and rudiments of managerial decision-making information processing below.

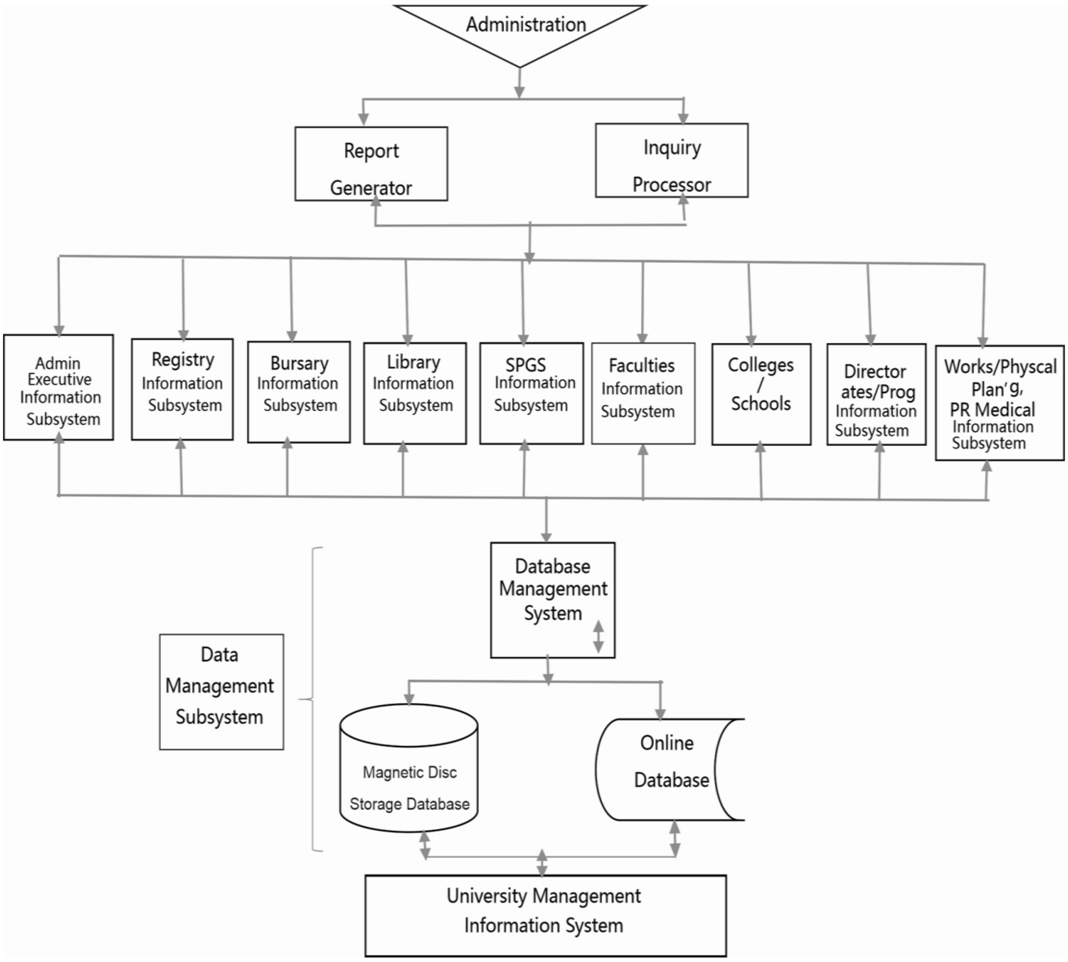

Figure 4.1: Multi-Model University Management Information system

The University Management Information System (UMIS) Model

The Figure 4.1 is typical Multi-Model University Management Information system organized to provide valuable, timely, accurately and adequately needed internal and external information relating to the University's past, present and future projections to management of the University at all level for effective performance in their respective daily and routine responsibilities. The UMIS would furnish information within a workable time frame so that it could be effectively used to make best decisions concerning planning, control and operation of the University activities. The UMIS strictly provides information to the University Management and their subunits or committees only. The UMIS consists of the following modules: Organizational Problem Solvers (Administration or Management), Report Writing Software/ Report Generator provide the requested information in the right form, the

Inquiry Processor which also houses the Mathematical or other Models called model subsystem. The model actually provides solution for the respectively inquired problem or information. There is Data Management System environment which consists of the Database Management System (DBMS) and Database environment (Internal and External). The figure 4.2 depicts the Internal structure or view of the Multi-Model Management Information Systems.

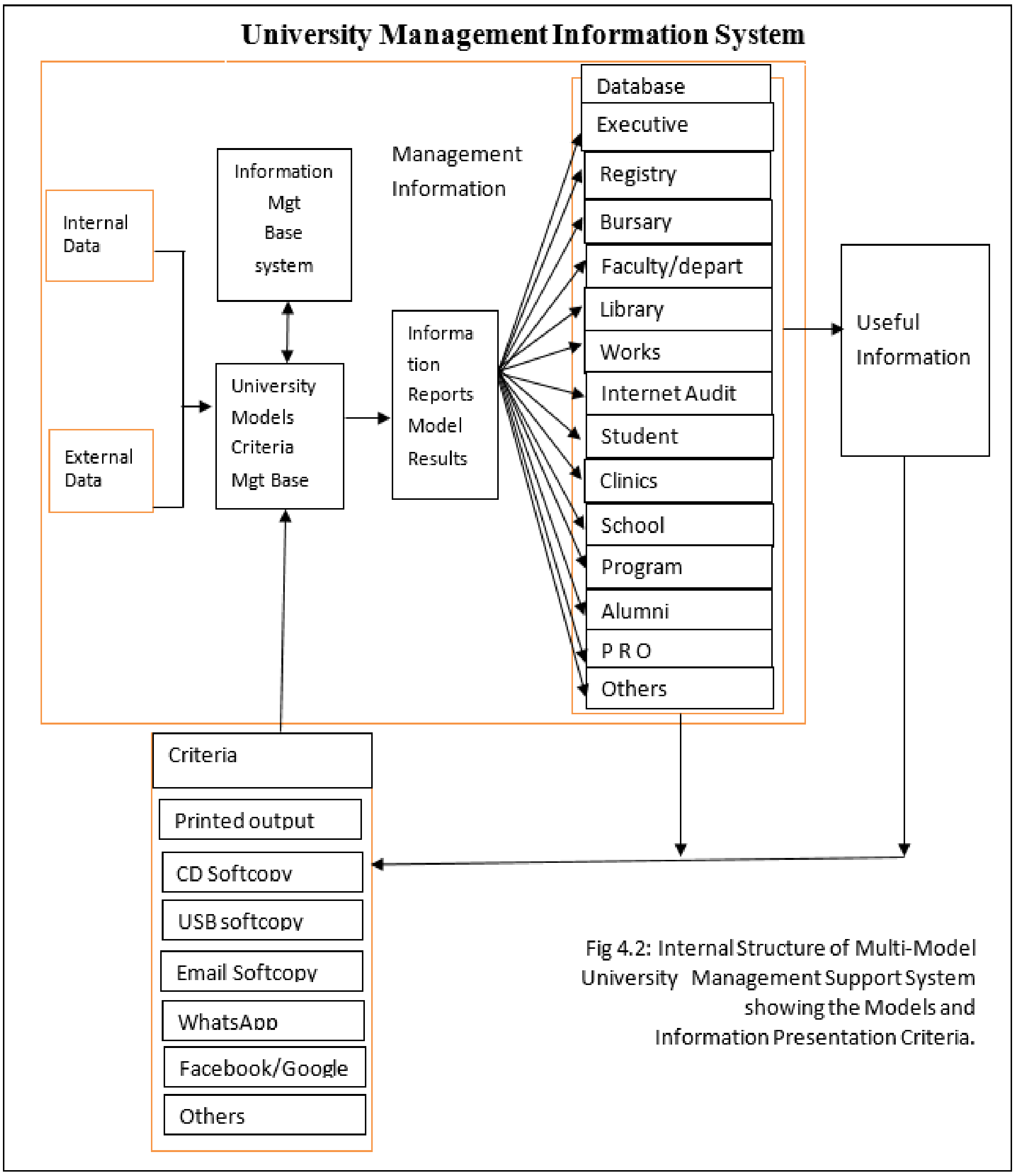

Figure 4.2: The Internal View of Multi-Model Management Information System (UMIS)

Findings and Results

i. The study revealed very poor, inefficient and clumsy decision-making tools implored by the management in making decisions in the Universities prior to the era of information technology which ushered in the management information technology has that witnessed tremendous and trending improvement in managerial decision making in the universities.

ii. The quality of information available for decisions -making in universities has improved.
There is unprecedented landmark achievements and success on improvement of quality of information available to the management for decision-making in the universities due to availability and use of management information system as against the poor information due to inefficient information gathering, processing and communication tools or techniques as well as poor or absence of communication network facility

iii. The study revealed the great importance management attached to source, content, state of processing and other circumstances on integration of information on decision-making in universities, this factor has enhanced its reliability, acceptance and adoption. management attaches importance information with respect to these issues.

iv. And that the information flow climate effects on decision-making process in the universities among the decision makers is extraordinarily friendly, relational, common and encouraging unlike the era without MIS that was pervaded with hoarding, delay, insufficient and denial of right information for efficient decision-making

v. The information flow climate in universities especially among decision-makers is cordial and relational, positively enhanced by efficient communication platform provided by UMIS influences of decision-making process, cushioning or extirpating the practices of information hoarding, delay and denial

vi. It was revealed that MIS provides efficient and effective information flow in universities. With the numerous computer-based systems scattered across the universities' Depts, units and offices, interconnected and linked to the MIS network, it was easy and flexible to communicate and exchange information and as well access needed data to process information for decision-making.

vii. The information flow climate in universities especially among decision-makers is cordial and relational, positively enhanced by efficient communication platform provided by UMIS influences of decision-making process, cushioning or extirpating the practices of information hoarding, delay and denial

viii. MIS is veritable, reliable and efficient sources of quality Information for managerial decision-making. The study revealed that MIS increased the intrinsic quality of decisions and their acceptance through availability, processing, quality and flow of information for managerial decision- making. Hence management concentrates more to better their operational performance and productive activities that would eventfully improves the universities performance, productivity, viability, visibility, relevance, growth and development and achieving of goals.

ix. The values include rapid access to up-to-date information from any location, enabling quicker, more accurate decisions, help interpret data patterns, allow teams to collaborate, and facilitate presenting information tailored to different audiences, produce information to make better decisions helps managers make effective decisions to support ongoing operations, provides timely, accurate, and relevant information for informed decision-making, leading to better outcomes, increasing efficiency and effectiveness, automates processes, reducing costs and enhancing productivity, provide accurate, timely, and relevant data from various sources, such as internal databases, external websites, social media, sensors, and surveys, help produces several reports, including schedule, on-demand, exception, and detailed reports.

x. The study further affirmed great impact of quality information from the MIS on universities management in decision -making and hence that quality information is directly proportional to quality decisions. It further professed that the effect information technology i.e. management information system on availability, processing, quality and flow of information for managerial decision- making is extra ordinarily vital and invaluable.

xi. The misgivings, problems and pains of the MIS in universities decision-making revealed to include high cost of MIS implementation, technical barrier and professional demand, demand of data accuracy, data security concern and dependence on power

Conclusion

University Management Information System (UMIS) is seemingly the panaceas to overwhelming Information vault overload and the information demand of ever-increasing complex, explosive population and rising demand of information of activities in universities. UMIS is an important tool that universities use to collect, store, organize and utilize large amounts of data, thereby enabling improved efficiency, accurate reporting and informed, efficient and effective decision-making. UMIS is an information system that churn out quality information used for decision-making, and for the coordination, control, analysis, and visualization of information in an organization categorized into three main types: routine, tactical, and strategic. Managerial decision-making is a process aimed at resolving identified problems and enabling effective and efficient performance of Universities' activities. It is seriously impacting the organizations in provision and processing of universities unprecedented volume of data to obtain quality information which decision makers employ for effective, efficient and quality decision that impact on universities' success, performance, productivity, profitability, enhance business results, marginal growth and development; and overall result or goal achievements.

UMIS help the universities meet its goal by providing its management with insights into its regular operations so that they can control, organize and plan effectively. It plays an important role in the performance of managerial decision-making because it provides platform or environment where job to done according to plan and reporting is based on one click environment. There is strong positive and direct correlations between the quality information provided by the UMIS for the decision-making and the quality of decision made by the Universities managers which are having tremendously impact on the universities. It is sufficing therefore to state that the trending explosive quality information and its communication, quality and efficient decisions, high performance, increasing productivity, better and progressive activities results, heightening enhanced viability and values, reduced data risk and insecurity, reduced operational headaches and cost enhanced goodwill and maximized control, flawless administration or management of universities, efficient and effective attainment of goals of the universities among others are glaring impact of the universities Management Information System(UMIS). The findings revealed very high efficiency and unparallel effectiveness in managerial decision-making in universities which directly impacts on total universities achievements due to quality information precipitating from the Universities management information system. The major drawback are cost, technical barrier and professional dependence on power and data accuracy especially.

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