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CORPORATE GOVERNANCE MECHANISMS AND AUDIT COMMITTEE INDEPENDENCE EFFECTIVENESS: A PANEL DATA ANALYSIS

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Abstract

This study examined the relationship between corporate governance mechanisms and audit committee independence in Nigerian listed firms using panel data analysis. The regression results reveal that CEO ownership has a significant negative effect on audit committee independence, suggesting that CEOs with higher ownership stakes may attempt to limit the committee's independence to reduce oversight and accountability, while management ownership has a significant positive effect, indicating that firms with higher managerial ownership are more likely to maintain independent audit committees, possibly due to their vested interest in long-term firm stability. Institutional ownership and CEO duality do not significantly impact audit committee independence, which may reflect specific local governance practices or institutional factors unique to Nigerian firms. Additionally, firm size exhibits a significant positive relationship with audit committee independence, supporting the notion that larger firms tend to have stronger governance mechanisms due to regulatory scrutiny and resource availability. The study highlights the importance of ownership structures in shaping audit committee independence and recommends stricter governance policies to mitigate CEO influence while promoting responsible managerial ownership.

Keywords: Corporate Governance, CEO Ownership, Management Ownership, Institutional Ownership, CEO Duality, Panel Data Analysis.

1.0 Introduction

Corporate governance (CG) serves as a mechanism for ensuring transparency, accountability, and the integrity of financial reporting within firms, these mechanisms are classified into two categories (Internal and External). Among the key internal governance structures, the audit committee plays a pivotal role in monitoring financial disclosures and mitigating agency conflicts (Alyousef & Alsughayer, 2021). The independence of the audit committee is essential in strengthening corporate oversight, as a well-functioning and independent audit committee can enhance the reliability of financial statements and curb opportunistic managerial behaviors (Lajmi & Yab, 2022). However, corporate governance dynamics, including institutional ownership, CEO ownership, management ownership, and CEO duality,

significantly influence audit committee independence, particularly in emerging markets such as Nigeria.

Institutional investors, due to their substantial shareholding and influence, are expected to enhance audit committee independence by promoting stringent oversight and demanding higher transparency (Al Lawati & Hussainey, 2021). However, the role of CEO ownership is more complex, while some studies argue that CEO shareholding aligns managerial interests with shareholder value, excessive ownership concentration may lead to entrenched leadership, thereby compromising the independence of the audit committee (Adhikary & Mitra, 2016; Sinebe, 2024a). Similarly, management ownership, where key executives hold significant equity stakes, can create conflicts of interest that undermine the audit committee's ability to operate independently (Edogbanya & Karmardin, 2015). Another critical factor is CEO duality, where the CEO simultaneously serves as the board chair. This concentration of power may weaken the audit committee's independence, as the CEO can exert undue influence over financial reporting processes and internal controls (Isa, 2019; Elmashtawy, CheHaat, Ismail &Almaqtari, 2024). Conversely, firms with a well-structured corporate governance framework may implement checks and balances to mitigate these risks.

Despite the increasing volume of panel data studies on corporate governance, audit committees, financial reporting quality, and firm performance in Nigeria, several research gaps persist. Firstly, while existing studies (e.g., Eklemet et al., 2023; Jamiu et al., 2024) examined audit committee characteristics, they primarily focus on direct relationships without considering mediating or moderating effects. The influence of leverage, institutional ownership, or firm heterogeneity in these relationships remains underexplored. Secondly, several studies (e.g., Soyemi et al., 2021; Abdulmalik & Ahmad, 2016) investigated the impact of corporate governance on audit quality and earnings management, but they often relied on static models, limiting the ability to capture firm-specific heterogeneity and dynamic adjustments over time. Thirdly, many studies assessed the impact of audit committee independence and board characteristics on firm performance, yet they lack comprehensive evaluations of how firm size, industry type, or market conditions shape these governance-performance relationships. Furthermore, studies such as Uwuigbe et al. (2014) and Somoye et al. (2020) focused on the Nigerian corporate environment but do not sufficiently compare governance mechanisms across industries or examine potential regulatory effects over

different time periods. Additionally, while research on audit fees and auditor independence exists, the role of non-audit services and their potential to impair independence has not been deeply analyzed in the Nigerian context.

Using panel data analysis, this study examines the extent to which these governance mechanisms influence audit committee independence in Nigerian listed firms. Given Nigeria's evolving corporate governance landscape and recent regulatory reforms, it contributes to the ongoing discourse on improving governance structures to enhance financial oversight and corporate accountability.

2.0 Literature Review

Conceptual Review

2.1. Corporate Governance Mechanisms (CG)

Internal corporate governance plays an important role in monitoring management and ensuring accountability to mitigate conflicts of interest between managers and investors. Among these mechanisms, audit committees are instrumental in reducing earnings management and information asymmetry by ensuring accurate financial reporting and preventing the manipulation of audit reports (Usman & Yahaya, 2023; Muhammad, Migliori & Mohsni, 2023; Gorshunov, 2024). They are expected to fulfill their oversight obligations, making financial reports more reliable and less susceptible to falsification. However, some studies suggest that audit committees may not always be effective in enforcing financial reporting resolutions, limiting their impact on corporate governance practices (Bereprebofa & Sinebe, 2022; Oyewo, Tawiah & Hussain, 2023; Dimes & Molinari, 2024). This inefficiency may stem from weak oversight functions, lack of enforcement capabilities, or insufficient expertise. Therefore, while internal governance mechanisms are vital for transparency and investor protection, their effectiveness depends on the enforcement of governance policies.

2.2 Corporate Governance and Audit Committee Independence (ACIND)

ACIND is a crucial aspect of CG, ensuring effective oversight of financial reporting and internal control mechanisms (Sahyoun & Magnan, 2022). An independent audit committee enhances transparency, reduces financial misstatements, and mitigates agency conflicts between management and shareholders (Almasria, 2022; Al Lawati & Hussainey, 2023). The

extent to which an audit committee can function independently, however, is influenced by various corporate governance mechanisms, including institutional ownership, CEO ownership, management ownership, and CEO duality (Sinebe, 2023).

2.3 Discussion of Concepts in Line with Hypotheses

2.3.1 Institutional Ownership (INSOW) and Audit Committee Independence

Institutional investors play a significant role in CG by exerting pressure on firms to adopt stronger oversight mechanisms, including independent audit committees (Mardessi, 2022). Large institutional investors have the resources and expertise to monitor managerial actions effectively, thus demanding greater accountability in financial reporting (Mohammadi, Saeidi & Naghshbandi, 2021). Empirical studies indicate that firms with high INSOW tend to have more independent audit committees, as these investors advocate for enhanced corporate governance to protect their investments (Oudat, Ali & Qeshta, 2021). However, conflicting findings suggest that institutional investors with close ties to management may weaken audit committee independence, prioritizing profitability over governance integrity (Sinebe, 2024b).

***H₀:** Institutional ownership has no significant effect on audit committee independence in non-financial firms in Nigeria.*

2.3.2 CEO Ownership (CEOOWN) and Audit Committee Independence

The influence of CEO ownership on ACIND is debated in corporate governance literature. On one hand, CEO ownership aligns managerial interests with those of shareholders, mitigating agency conflicts; conversely, excessive CEO ownership may result in entrenched leadership, wherein the CEO wields significant control over corporate decisions, potentially limiting the effectiveness of independent audit committees (Li, Xu, Zhu & Haq, 2021; Okolo & Sinebe, 2025). Studies by Uyar, Kuzey, Kilic and Karaman, (2021) suggest that when CEOs hold a significant equity stake, they may resist governance mechanisms that challenge their authority, thereby undermining the ACIND.

***H₀:** CEO ownership has no significant effect on audit committee independence in non-financial firms in Nigeria*

2.3.3 Management Ownership (MGTOWN) and Audit Committee Independence

Similar to CEO ownership, MGTOWN can have either positive and negative effects on audit committee independence. When managers own shares in the company, they have a vested interest in the firm's long-term success, which may encourage responsible financial reporting (Edogbanya, et al. 2015). However, high levels of management ownership may lead to conflicts of interest, where executives prioritize self-preservation over transparency and accountability (Kalia& Gill, 2023). Empirical research indicates that companies with concentrated managerial ownership are more prone to possess weaker audit committees, as executives may seek to influence governance structures to maintain control over financial reporting processes (Lu, Ntim, Zhang & Li, 2022; Sinebe&Okolo, 2022).

H0: Management ownership has no significant effect on audit committee independence in non-financial firms in Nigeria

2.3.4 CEO Duality (CEODUA) and Audit Committee Independence

Proponents of CEO duality argue that it enhances leadership efficiency by streamlining decision-making processes (Uyar, et al. 2021). However, critics contend that concentrating power in a single individual reduces board oversight and weakens the audit committee's independence (Gull, Hussain, Khan, Khan &Saeed, 2023). Empirical studies indicate that firms with CEO having dual roles tend to have less independent audit committees, as the dual role enables CEOs to exert undue influence over financial reporting and internal controls (Aziz, 2024). Regulatory entities, including the Financial Reporting Council of Nigeria (FRCN), have advocated for the segregation of the CEO and board chair responsibilities to enhance CG and the ACIND.

H0: CEO duality has no significant effect on audit committee independence in non-financial firms in Nigeria.

2.3.5 Firm Size (FSIZE) as a Control Variable

Firm size is an important determinant of CG structures and ACIND. Larger firms tend to have more established governance mechanisms, including independent audit committees, due to greater regulatory scrutiny and stakeholder expectations. Smaller firms, however, may lack the resources to implement robust governance frameworks, potentially leading to weaker audit committees (Sinebe, 2022). Studies by Muhammad, et al. (2023) suggest that firm size

positively correlates with audit committee independence, as larger firms are more likely to attract institutional investors and comply with stringent governance regulations.

H0: Firm size does not significantly moderate the relationship between corporate governance mechanisms and audit committee independence in non-financial firms in Nigeria.

2.4 Theoretical Framework

2.4.1. Resource Dependence Theory (RDT)

RDT by Salancik and Pfeffer, (1978) is instrumental in studying CG mechanisms effectiveness by emphasizing the role of external resource control in enhancing governance quality. Since organizations rely on external resources for optimal performance (Chen, Wang & Wang, 2023), independent audit committees serve as crucial internal governance mechanisms by accessing external expertise, reducing information asymmetry, and strengthening oversight. The BOD plays another important role in managing resource interdependence, ensuring compliance, and facilitating resource acquisition, which directly enhances company performance (Hossain, Hasan & Hasan, 2024). Independent audit committees improve governance by leveraging external networks to access knowledge, enhance risk management, and reinforce screening and signaling functions. Strong organizational ties with external environments enhance stakeholder relationships and governance effectiveness (Matinheikki, Kauppi, Brandon-Jones & van Raaij, 2022). Thus, Resource Dependence Theory underscores how external resource access strengthens audit committee independence, promoting internal transparency and corporate accountability.

2.5 Summary and Research Gap

Despite the growing panel data studies on CG, audit committees, and firm performance in Nigeria, key research gaps persist. Existing studies often rely on static models that fail to capture firm-specific heterogeneity. Moreover, research on audit committee independence and board characteristics lacks comprehensive evaluations of how firm size, industry type, and market conditions shape governance-performance relationships. Additionally, the impact of non-audit services on auditor independence remains underexplored. Resource Dependence Theory (Salancik & Pfeffer, 1978) highlights the role of external resource access in strengthening internal audit committee independence, reducing information asymmetry, and enhancing governance quality. Independent audit committees improve oversight by leveraging

external expertise, reinforcing risk management, and fostering stakeholder relationships, ultimately promoting corporate accountability.

3.0 Methodology

The study population is up of secondary data of all firms in the non-financial sector listed in the Nigeria Exchange Group (NGX) and utilised the stratified sampling technique, in order to capture firms in all sectors of the non-financial industries, to select a sample size of fifty-five (55) non-financial firms for a period ten (10) years, within the period of 2015-2024, while the panel data analytical technique was adopted for the data analysis.

3.1 Model Specifications

The model for this study is stated in econometrics terms below as;

$$ACE = (ACIND, INSOW, CEOOWN, MGTOW, CEODUA, FSIZE) \quad \text{eq. i}$$

$$ACIND_{it} = \alpha_0 + \beta_1 INSOW_{it} + \beta_2 CEOOWN_{it} + \beta_3 MGTOW_{it} + \beta_4 CEODUA_{it} + \beta_5 FSIZE_{it} + \epsilon_{it} \quad \text{eq.ii}$$

Where;

- f = Stochastic error term capturing other unexplanatory variables
- i = firm identifier (55 firms)
- t = time variable (10 Years)
- ϵ = error term

α_0 is the intercept of the regression.

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the co-efficient of the regression equation.

The Apriori expectation: $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 is less or greater than 0.

Table 1: Measurement of Instrument

VARIABLE	MEANING	MEASUREMENT
ACIND	AUDIT COMMITTEE INDEPENDENCE:	Measured as the number of non-directors and non-executive directors in the audit committee divided by audit committee members size (%)
INSOW	BLOCK INSTITUTIONAL OWNERSHIP	Measured as the share's ownership concentration of all the block institutional shareholders with 5% and above shares ownership (%)
CEOOWN	CEO OWNERSHIP:	Measured as CEO direct and indirect shares divided by numbers of shares (%)
MGTOW	MANAGEMENT OWNERSHIP	Measured as directors' direct and indirect shares divided by the numbers of shares (%)
CEODUA	CEO DUALITY	Measured as a dummy where "1" is assigned to companies that have a CEO that is separated from the chairman and "0" for otherwise.
FSIZE	FIRM SIZE	Measured as natural log of total asset

Source: Author's Conception, 2025

4.0 Results and Discussions

4.1 Descriptive statistics

Table 2: Summary of Descriptive Statistics of the study's Variables

VARIABLES	OBS	MEAN	STD. DEV	MIN	MAX
ACIND	550	48.47741	13.52914	0	100
INSOW	550	47.17636	26.45882	0	95
CEOOWN	550	4.530802	10.69384	0	50.8012
MGTOW	550	19.25361	23.88961	0	94.35
CEODUA	550	.9872727	.112197	0	1
FSIZE	550	7.262764	.8624295	5.21	9.48

Source: Regression Output, 2025.

Table 2 presents the summary statistics of the variables used in this study, it includes audit committee independence (ACIND), institutional ownership (INSOW), CEO ownership (CEOOWN), management ownership (MGTOW), CEO duality (CEODUA), and firm size (FSIZE). From the Table, ACIND has 48.48%, 13.53, 0 and 100 for mean, standard deviation, minimum and maximum respectively, suggesting that some firms may lack independent audit committee members while some firms have fully independent audit committees. INSOW has 47.18%, 26.46, 0 and 95% for mean, standard deviation, minimum and maximum respectively suggesting that some firms have substantial institutional ownership. CEOOWN displays 4.53%, 10.69, 0, and 50.80%, for mean, standard deviation, minimum and maximum

respectively indicating that some CEOs hold no ownership in their firms, while some have significant control through shareholding. MGTOW shows a mean of 19.25%, standard deviation of 23.89, a minimum value of 0, indicating that some firms have no management ownership, and a maximum value of 94.35%, suggesting that in some firms, management holds a significant stake. CEODUA has a mean value of 0.99, a standard deviation of 0.11, a minimum value of 0, meaning that some firms separate the CEO and board chair positions and a maximum value of 1, indicating that in most firms, the CEO also serves as the board chair. The high mean suggests that CEO duality is prevalent in Nigerian listed firms. This concentration of power may weaken corporate governance and reduce audit committee independence, highlighting the need for regulatory enforcement of board role separation. The descriptive statistics highlight significant variations in corporate governance mechanisms among Nigerian listed firms. While institutional ownership is relatively high, CEO and management ownership levels vary widely, potentially influencing governance practices. The high prevalence of CEO duality raises concerns about governance concentration, which could weaken audit committee independence.

4.2 Normality Test

Table 3: Output for Shapiro-Wilk W test for normal data

VARIABLES	OBS	W	V	Z	PROB>Z
ACIND	550	0.86688	48.800	9.385	0.00000
INSOW	550	0.96076	14.385	6.437	0.00000
CEOOWN	550	0.58523	152.052	12.129	0.00000
MGTOW	550	0.79328	75.782	10.448	0.00000
CEODUA	550	0.72650	100.261	11.124	0.00000
FSIZE	550	0.98970	3.775	3.207	0.00067

Source: Regression Output, 2025.

The Shapiro-Wilk W test for normality in Table 3 assesses whether the data for each variable follows a normal distribution. From Table 2, it indicates that all variables deviate significantly from normality, particularly CEO ownership, management ownership, and CEO duality. To address this, the study should consider non-parametric tests to ensure reliable and valid results.

4.3 Correlation Analysis

Table 4: Summary of Spearman Correlation Analysis

	ACIND	INSOW	CEOOWN	MGTOW	CEODUA	FSIZE
ACIND	1.0000					
INSOW	0.1402* 0.0010	1.0000				
CEOOWN	0.0028 0.9471	-0.5678* 0.0000	1.0000			
MGTOW	-0.0490 0.2510	-0.3456* 0.0000	0.5583* 0.0000	1.0000		
CEODUA	0.0384 0.3689	-0.0169 0.6922	0.0056 0.8963	-0.0102 0.8111	1.0000	
FSIZE	0.1266* 0.0029	0.4370* 0.0000	-0.3986* 0.0000	-0.3188* 0.0000	-0.0170 0.6915	1.0000

Source: Regression Output, 2025.

From Table 4, the Spearman correlation coefficient (ρ) measures the strength and direction of the relationship between two variables. INSOW and ACIND showed a positive and significant correlation ($\rho = 0.1402$, $p = 0.0010$) suggesting that higher institutional ownership is associated with greater audit committee independence. CEOOWN and ACIND ($\rho = 0.0028$, $p = 0.9471$) show an insignificant correlation, indicating that CEO equity holdings do not significantly influence audit committee independence. MGTOW and ACIND ($\rho = -0.0490$, $p = 0.2510$) show a negative but insignificant relationship which implies that higher management-controlled firms do not necessarily compromise audit committee independence. CEODUA and ACIND ($\rho = 0.0384$, $p = 0.3689$) shows an insignificant relationship which indicates that whether the CEO also serves as the board chairman does not influence audit committee independence. FSIZE and ACIND ($\rho = 0.1266$, $p = 0.0029$) shows a positive and significant correlation suggesting that larger firms tend to have more independent audit committees. This aligns with prior research, as larger firms face greater regulatory scrutiny and shareholder monitoring, leading to stronger governance structures (Francis et al., 2021).

4.4 Result for Variance Inflation Factor (VIF) Test

Table 5: VIF Test Result

VARIABLE	VIF	1/VIF
CEOOWN	1.49	0.670978
MGTOW	1.33	0.751305
INSOW	1.31	0.761743
FSIZE	1.21	0.828091
CEODUA	1.00	0.998831
Mean VIF	1.27	

Source: Regression Output, 2025.

The VIF in Table 5 is used to detect multicollinearity in regression analysis. The 1/VIF (Tolerance Value) should be greater than 0.1 to ensure that no independent variable is excessively correlated with others. Since all VIF values are low (below 2.00), multicollinearity is not a problem.

4.5 Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Table 6: Diagnostic Tests fitted values of ACIND

Outcome For Other Diagnostic Tests Breusch and Pagan Lagrangian Multiplier test	
Decision rule	If p-value is statistically significant, then reject Ho and accept HA
Result	chi2(1) = 93.73; Prob>chi2= 0.0000
Hausman Test	
Decision rule	If p-value is statistically significant, then reject Ho and accept HA
Result	chi2(5) = 3.57; Prob>chi2= 0.6133

Source: Regression Output, 2025.

Since the test result in Table 6 shows that chi2 (1) is 93.73 and the Prob>chi2 is equal to 0.0000, it indicates that the p-value is statistically significant. This means we reject the null hypothesis (H₀), which assumes no panel effects, and accept the alternative hypothesis (H_a), indicating that a random effects model is preferable over pooled OLS. The Hausman test determines whether a random effects model or a fixed effects model is more appropriate. From the test result, it shows that the chi2 (5) is 3.57 and the Prob>chi2 is equal to 0.6133, meaning the p-value is not statistically significant (greater than 0.05%). Since we fail to reject the null hypothesis (H₀), this suggests that the random effects model is more suitable than the fixed effects model.

4.6 Hypotheses Testing

Table 7: Summary of Random Effect GLS regression Result

VARIABLE	COEF.	STD.ERR.	Z	P> Z
INSOW	.0376134	.0351909	1.07	0.285
CEOOWN	-.1896625	.0941944	-2.01	0.044
MGTOW	.0932387	.0328491	2.84	0.005
CEODUA	6.923551	4.97621	1.39	0.164
FSIZE	1.499505	1.18867	1.26	0.207
_CONS	28.0411	9.741576	2.88	0.004
OBS				550
WALD CHI2(5)				17.21
PROB > CHI2				0.0041

Source: Regression Output, 2025.

From the information in Table 7, INSOW with a coefficient 0.0376 and a p-value 0.285 indicate that INSOW has a positive but statistically insignificant effect on the ACIND. CEOOWN with a coeff -0.1897 and p-value: 0.044 (significant at 5% level) indicates that CEOOWN has a negative and statistically significant effect, meaning that as CEO ownership increases, the dependent variable decreases. This may indicate potential conflicts of interest, where higher CEO ownership reduces the effectiveness of governance mechanisms. MGTOW with a coefficient of 0.0932 and p-value of 0.005 (significant at 1% level) indicates that it has a positive and significant effect on the dependent variable, suggesting that higher managerial ownership aligns interests with shareholders, improving governance outcomes. Furthermore, CEODUA with a coefficient of 6.9236 and a p-value of 0.164 (not significant). This indicates that CEODUA has a positive but statistically insignificant effect, implying that combining the CEO and board chairman roles does not significantly impact the dependent variable. FSIZE has a coefficient 1.4995 and a p-value of 0.207 (not significant) indicating that firm size has a positive but insignificant effect, indicating that larger firms may have better governance structures, but the impact is not statistically conclusive, while Constant (CONS) displays a coefficient of 28.0411 and a p-value 0.004 (significant) indicating that the constant term is statistically significant, suggesting that when all predictors are zero, the dependent variable still has a significant baseline value.

4.7 Discussion of findings

This study examined the relationship between corporate governance mechanisms and audit committee independence in Nigerian firms using a panel data approach. The findings provide

crucial insights into how ownership structures and firm characteristics influence governance effectiveness. The study found a negative and significant relationship between CEOOWN and ACIND ($\beta = -0.1897$, $p = 0.044$). This aligns with agency theory (Chen, Wang, & Wang, 2023; Matinheikki et al., 2022), which suggests that high CEOOWN can lead to managerial entrenchment, reducing board oversight effectiveness. The result is consistent with previous findings (Aziz, 2024; Li et al., 2021), which argue that excessive managerial control weakens governance mechanisms by limiting independent monitoring. Conversely, MGTOWN was found to have a positive and significant effect on ACIND ($\beta = 0.0932$, $p = 0.005$). This supports the idea that when managers hold equity stakes, they are more likely to align their interests with shareholders, enhancing governance effectiveness (Gull et al., 2023; Mohammadi, Saeidi, & Naghshbandi, 2021). These findings suggest that moderate MGTOWN may act as a governance-enhancing mechanism, reducing agency costs and improving oversight. Although INSOW had a positive relationship with ACIND, it was not statistically significant ($\beta = 0.0376$, $p = 0.285$). This result contrasts with prior research indicating that institutional investors enhance governance effectiveness (Alyousef & Alsughayer, 2021; Bereprebofa & Sinebe, 2022). A possible explanation is that institutional investors in Nigeria may adopt passive investment strategies or lack the regulatory backing to enforce governance changes (Oyewo, Tawiah, & Hussain, 2023). The study also found that CEODUA had a positive but insignificant effect ($\beta = 6.9236$, $p = 0.164$). This result is consistent with mixed findings in governance literature (Isa, 2019; Muhammad, Migliori, & Mohsni, 2023). While some studies argue that combining CEO and board chairman roles weakens governance (Elmashtawy et al., 2024), others suggest it improves leadership efficiency (Uyar et al., 2021). Although FSIZE had a positive relationship with ACIND, it was not statistically significant ($\beta = 1.4995$, $p = 0.207$). This suggests that larger firms may have structured governance frameworks, but their impact on ACIND is not strongly evident in this dataset (Dimes & Molinari, 2024; Lajmi & Yab, 2022). Overall, the findings reinforce the importance of corporate governance in shaping audit committee independence but suggest that ownership structures and regulatory environments play critical roles in governance effectiveness. Future studies should incorporate industry-specific effects and dynamic governance adjustments over time.

5.0 Conclusion and Recommendation

5.1 Conclusion

The findings in this study reveal that CEO ownership negatively influences audit committee independence, suggesting that excessive managerial control can weaken governance oversight. Conversely, management ownership positively impacts governance effectiveness, indicating that aligning managerial interests with shareholders can enhance monitoring mechanisms. The study also found that institutional ownership and firm size do not significantly impact audit committee independence, suggesting that external investors and firm scale alone may not drive governance effectiveness. CEO duality showed a positive but insignificant effect, reflecting the ongoing debate on whether combining leadership roles strengthens or weakens board oversight. Overall, the Wald test confirmed the model's statistical significance, reinforcing the importance of corporate governance in promoting independent oversight. However, mixed results across governance variables suggest that other moderating factors, such as industry regulations and board composition, could influence governance dynamics. Given these findings, firms should strengthen governance frameworks by limiting excessive CEO control, encouraging active institutional investor participation, and optimizing board leadership structures. Future research should explore dynamic governance adjustments over time and across different industries to provide deeper insights into audit committee independence.

5.2 Recommendations

1. **Monitor CEO Ownership:** The negative relationship suggests that higher CEO ownership may weaken corporate governance mechanisms. Firms should establish stronger oversight frameworks to prevent excessive CEO control.
2. **Encourage Managerial Ownership:** Since managerial ownership has a positive impact, firms should incentivize managers with ownership stakes to align their interests with those of shareholders.
3. **Consider Industry-Specific Effects:** Since firm size was not significant, future research should explore industry-level factors that may influence governance effectiveness.
4. **Limit Excessive CEO Ownership:** Since CEO ownership negatively impacts audit committee independence, firms should establish governance policies that prevent

excessive managerial control over ownership structures. This can be achieved by implementing shareholding caps for top executives to ensure balanced power distribution.

5. Encourage Institutional Investor Participation: While institutional ownership was found to be insignificant, encouraging active engagement from institutional investors can enhance governance oversight. Regulators should mandate greater transparency and disclosure to attract long-term institutional investors who can play a monitoring role.
6. Enhance Audit Committee Effectiveness: Firms should ensure that audit committees consist of experienced and independent members with financial expertise. Regulatory bodies should enforce stricter qualifications for audit committee members to improve governance quality.
7. Regulatory Reforms and Continuous Monitoring: Policymakers should periodically review corporate governance codes to address emerging governance challenges. Strengthening enforcement mechanisms and penalties for governance violations will ensure compliance and improve audit committee independence.

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DETERMINANTS OF EMPLOYEE COMMITMENT AMONG TELECOM FIRMS IN SOUTHERN NIGERIA: AN EMPIRICAL ASSESSMENT WITH THE APPLICATION OF SHRM PRACTICES

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Abstract

The business climate has become very unstable and unpredictable as a result of the current global economy's quick transition to a knowledge-based one and the emergence of ICT with its advanced tools. This expansion has significantly altered how firms function, posing a number of challenges for business owners. If organizations wish to stay ahead of emerging trends and remain competitively viable, they must seek out committed, goal-oriented human resources (employees). In this context, the paper examines the potential application of SHRMPs to boost employee commitment in Nigerian telecom firms. The research adopted two SHRMPs as proxies/measures: WLB and RR, to ascertain their impact on workers effectiveness. The research approach was a cross-sectional survey, and questionnaires were used to gather data. Hypotheses were tested at a 0.05 significance level. The sample included 379 employees from selected firms. The study was aided by the RBV & social exchange (SE) theories. The research utilized both descriptive & inferential approaches for data examination/analysis. The findings indicated that work-life balance and reward and recognition are significantly and positively correlated with employee commitment, meaning these factors significantly contribute to variations in employees' positive work attitudes. The study concluded that efficient management of employee commitment would foster and enhance a firm's competitive advantage resources. Therefore, it's recommended that managers of telecommunications firms prioritize the full implementation and regular alignment of SHRMPs with prevailing conditions in the global business environment. This will foster a productive work environment.

KEYWORDS: SHRMPs, Employees Commitment, Reward and Recognition, Work-life balance, Telecom Firms, Southern Nigeria.

Introduction

In the corporate world of today, the proliferation of technologies and uncontrollable environmental factors have significantly reshaped the business environment, introducing new patterns of operation. This has made the business landscape unpredictably dynamic, demanding, and turbulent. Additionally, the rapid evolution of the economy into a digital and knowledge-based one has necessitated substantial adjustments in business operations (Otuya,

Akpoyibo & Egware, 2022). These developments have profoundly impacted business resources and strategic directions. To stay abreast of emerging trends, organizations need to seek committed, proactive, and result-oriented human resources (employees) who are willing to embrace the new order and help build competitive advantage through efficient managerial practices (Prakash & Mamata, 2024). SHRMPs, like employee rewards and recognition and work-life balance, are effective managerial tools that support organizations by providing a quality, motivated, and informed workforce. According to Main, Mohammad, & Dana (2021), SHRMPs are instrumental in helping organizations achieve competitive advantage and goals by fostering a strong work climate that aligns employers and employees and integrates business and human resource policies (Dessler, 2011; Main, Mohammad & Dana, 2021). SHRMPs create an environment that promotes positive employee work attitudes and cultures, aiding organizations in achieving their strategic missions and long-term goals (Mayhew, 2018). Thus, SHRMPs are essential tools for fostering employee commitment and organizational success.

Given the intense market competition and the sharp decline in employee commitment and dedication today, it is crucial for organizations to strategically source, attract, and retain knowledgeable, talented, and skilled workers to build sustainable competitive advantages. These strategic roles are fulfilled by SHRMPs, as noted by Prakash & Mamata (2024), Khaliq et al. (2021), & Afriyadi et al. (2022). SHRMPs help organizations not only to find and secure competent employees but also to provide the right number and qualifications for available positions. Moreover, SHRMPs offer a strategic approach to keeping employees motivated, thereby creating avenues for organizations to retain workers and ensure continued growth and performance in the industry (Yang, 2019; Reza & Razieh, 2021). This study will measure the SHRMPs of RR, as well as WLB, against worker commitment. Lydia & Mary (2023) emphasized that recognition is perceived by employees as a sign of their worth and appreciation, boosting morale and ultimately enhancing an organization's efficiency and success. Similarly, Danish & Usman (2010) argue that correctly implemented rewards and recognition establish a productive workplace that supports high performance. Nilawati et al. (2019) posited that WLB is crucial for fostering positive employee attitudes towards both their work and personal lives. Employees who enjoy enhanced balance across their

professional/work and personal lives are more committed, motivated, and satisfied at work. Studies by Ugo & Thomastina (2024), Akpoyibo & Isaac (2021), Gautam et al. (2023), & Nilawati et al. (2019) found positive correlations between RR, WLB, and worker dedication/commitment. In other words, organizations that create the right environment and employ the right personnel can gain superior competitive advantages, deliver high-quality services, and achieve higher customer satisfaction.

Every organization's primary responsibility to its employees is to provide a conducive working environment, along with the necessary facilities and resources for its workforce to perform effectively. However, questions arise regarding how well these resources should be utilized and what level of conduciveness is required in the work environment to enable employees to achieve organizational objectives. Additionally, previous research has not sufficiently addressed how SHRM practices can effectively resolve issues related to employee commitment and provide long-term solutions to their increasing demands for better career-life balance. In light of this, this research examines the effect of SHRMPs on worker dedication/commitment among Nigerian telecommunication firms and aims to offer comprehensive empirical evidence on how SHRMPs can address issues related to employee commitment.

The study objectives

The central goal of the paper is to assess the effect of SHRMPs on employees' dedication/commitment in selected telecommunication firms in Southern Nigeria. The following constitute specific objectives of the study:

- i. Find out the influence of RR on employee commitment.*
- ii. Determine the degree of correlation between WLB and employee commitment.*

Research Questions

The research undertaking is guided by some of the questions stated below:

- i. How much does worker commitment become influenced by RR practice?*
- ii. Does WLB positively correlate with employee commitment?*

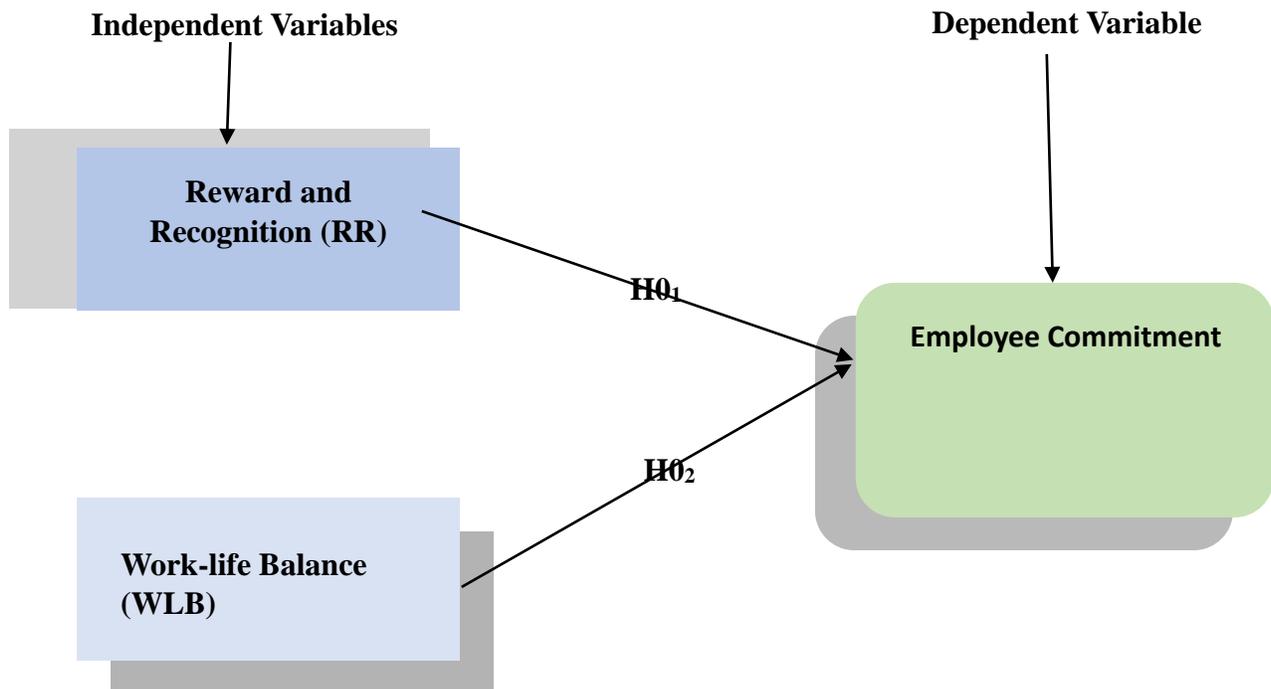
Hypothesis of the study

In a bid to achieve the above-articulated objective of this research, the hypotheses below were postulated.

H₀₁: RR doesn't have a positive and significant correlation with employee commitment.

H₀₂: No significant correlation exists between WLB and the commitment of workers.

Review of Related Literature and Conceptual Frame Work



Source: Author's Conceptualization, (2025).

Strategic Human Resource Management Practices (SHRMPs)

According to Kiragu & Marwa (2022), SHRM involves deciding and establishing strategic priorities/goals to create an enabling work environment where human resource and business policies can thrive. Strategic HRM practices include a variety of programs and activities designed to foster a sense of purposeful direction among organization members and align business and HR policies, strategies, and goals. These practices have a strong impact on employee commitment, enhancing their engagement and dedication to their roles (Prakash & Mamata, 2024; Main, Mohammad & Dana, 2021; Schuler & Jiang, 2014). Fahim (2019)

highlights the evolution of HRM activities from becoming more strategic and proactive instead of reactive and administrative. The core idea of SHRMPs is to effectively integrate HRM practices with firm strategy/approach (Allui & Sahni, 2016; Sahoo, Das & Sundaray, 2011). Armstrong (2006) argues that SHRMPs view employees as strategic resources and assets essential for achieving organizational objectives and long-term goals.

To boost employee commitment, organizations must provide necessary training, career growth plans, a conducive work environment, and attractive rewards by means of long-term approaches/strategies that form a sustainable/reliable HR approach (Main, Mohammad & Dana, 2021). Emeagwal & Ogbonmwan (2018) discovered that SHRM procedures/practices significantly positively affect employees' work behavior (commitment), enhancing organizational competitive strength and operational efficiency. Employees are crucial to organizational success, growth, and performance (Kalyani & Chong, 2019; Shrestha, 2013, 2016, 2020b; Shrestha & Prajapati, 2022, 2023). Today's business leaders must give rapt attention to the efficient deployment and utilization of these human talents/resources. Main, Mohammad & Dana (2021) stated that SHRMPs empower HR heads/managers to control employees' talents, abilities, competence, and performance, among others, in achieving organizational strategic targets. Dessler (2011) argues that SHRM involves implementing HR practices and policies that transform employees' work lives and attitudes, which are essential for achieving strategic goals. Mayhew (2018) notes that SHRMPs foster result-oriented relationships between employers and employees by aligning business and HR policies. Hsu & Wang (2012) discovered that SHRMPs play a significant part in associating, working together/collaborating, supervising, and evaluating employee commitment and work culture in line with organizational standards and strategic direction. Thus, SHRM concepts are vital in enhancing worker dedication/commitment and motivation.

The efficacy of Employees Commitment

According to Salihu & Abu (2018), the concept of worker dedication/commitment and its role in SHRM has been defined in various ways by numerous scholars in management and strategic administration. Meyer, Becker, & van Dick (2006), as cited in Salihu & Abu (2018), provided a highly influential definition, describing commitment as "a drive that binds

employees to an organization's set targets through their assigned tasks, missions, and goals, with a collective course of action relevant to achieving those targets and missions." They emphasized that dedication/commitment is composed of the following mindsets: affective, normative, and continuance commitment. This perspective led to the development of the prominent three-component framework in commitment research (Solinger, Van-Olffen, & Roe, 2008, cited in Salihu & Abu, 2018). Meyer and colleagues are recognized for viewing commitment as a multidimensional concept, in contrast to earlier authors who treated it as unidirectional (Igbeneghu&Popoola, 2011, cited in Salihu& Abu, 2018).

Reward and Recognition, Employee Commitment, and Organization Performance

Reward and recognition refer to the cumulative financial/monetary and non-financial incentives offered to workers by management to appreciate their efforts and contributions to the organization's success (Allui&Sahni, 2016; Francis, 2014, cited in Fahim, 2018). According to AON-Hewitt (2012), recognizing employees' efforts, commitment, and contributions was identified as a leading global motivator and driver in 2011. Employees require appropriate feedback, positive reinforcement, and motivation to consistently exert maximum effort and discretion, which helps them exceed organizational expectations (Muthoni & Mwangi, 2014). Researchers like Hewitt (2012) and Muthoni & Mwangi (2014) have argued that recognizing employees' contributions is a central factor in motivation and commitment. Genuinely acknowledging employees' extra efforts, especially during challenging times, can lead to increased productivity without additional costs (AON-Hewitt, 2012; Muthoni & Mwangi, 2014). Daniel (2017) stated that organizations reap the rewards of the attitudes and behaviors they genuinely recognize. RR are crucial motivational techniques set aside to appreciate/reward exceptional performance and desired behaviors, leading to better job performance and competitive advantage (Pruden, 2012).

Daniel (2017) recommended that organizations' reward and recognition techniques should aim to motivate workers/employees to increase or upscale commitment, performance, and motivation in their respective assigned duties. Motivated workers appeared more productive and committed, becoming valuable assets that enhance the organization's competitive advantage. Morris (2006) noted that employee commitment is influenced by the

nature of rewards, attitudes, and knowledge of reward schemes. Donata (2011) emphasized that rewards can be extrinsic or intrinsic, designed to motivate and elicit desired performance outcomes. Extrinsic rewards are tangible incentives like appraisals, promotions, pay raises, bonuses, pension schemes, and healthcare benefits (Armstrong, 2012; Thomas, 2009). Intrinsic rewards, according to Awasthish & Pratt (1990), create mutually beneficial motivational behaviors and competitive advantages. Rewards encourage employees to give their best, commit more skills and energy to their tasks, and increase their commitment to the organization (Klein, Goodhue & Davis, 1997). Danish & Usman (2010) discovered that RR significantly influenced workers commitment, motivation, and engagement. Recognition often involves monetary awards but can also include commendations for outstanding performance, driving the organization toward competitive advantage (Kendra, 1996). Recognition can be monetary, such as gift certificates or cash awards, or non-monetary, like notes of appreciation or public commendations (Gale, 2002). Armstrong (2012) stated that recognition fosters a sense of purpose, belonging, and commitment in employees. Informal recognition, such as managers expressing appreciation, can also significantly motivate employees. Organizations should maintain flexibility in their recognition approaches, as employees' dedication is shaped by various reward schemes. Simple words of appreciation, like "thank you" or "well done," can greatly enhance employee commitment and dedication to the organization's goals.

Work-life balance, Employee Commitment, and Organization Performance

Abioro, Oladejo, & Ashogbon (2018), cited in Christian, Destria, Siti, & Martono (2020), affirmed that WLB is a critical matter for workers across the board due to its significant impact on their lives and work. If an organization does not prioritize and properly manage WLB, it can lead to decreased employee commitment, morale, productivity, discretion, and performance. WLB programs in the corporate environment began in the 1930s, allowing employees to efficiently perform tasks and have flexible work time to manage personal issues, particularly family life. Today, the corporate managers give priority attention to WLB rather than to intrinsic benefits (Meenakshi & Ravichandran, 2013; R, S, & Murthy, 2015; cited in Christian, Destria, Siti, & Martono, 2020). A survey in Indonesia by Nielsen revealed that equilibrating/balancing job and personal life is a primary agenda/concern for Indonesians, especially in the face of financial problems (Post, 2012; Mittal, 2017, cited in

Christian, Destria, Siti, & Martono, 2020). WLB allows workers to amicably balance their work and personal concerns, encouraging them to divide their time between work and personal priorities such as family, health, and vacations while pursuing their careers. This concept motivates employees, enhances morale, loyalty, and commitment, and contributes to the company's growth and competitive advantage (Jonathan, 2009). WLB involves maintaining a satisfying equation/balance between individual job and personal concerns, leading to contentment for the employee (Bataineh, 2019). However, employees often face increased stress, burnout, and disrupted family and work relationships when work pressures rise (Meenakshi & Ravichandran, 2013; cited in Christian, Destria, Siti, & Martono, 2020). Balancing work and family expectations is crucial for a healthy employer-employee relationship, as poor management can lead to decreased commitment, productivity, efficiency, and morale (Dow-Clarke, 2002; Bataineh, 2019; Meenakshi & Ravichandran, 2013; cited in Christian, Destria, Siti, & Martono, 2020). Delecta (2011), cited in Christian, Destria, Siti, & Martono (2020), stated that WLB practices should be integrated into organizational planning and policies to allocate resources like time and effort between work and personal life. This approach builds a supportive work environment, enhancing employees' morale, loyalty, commitment, and productivity (Meenakshi & Ravichandran, 2013; cited in Christian, Destria, Siti, & Martono, 2020). Work-life balance can be achieved through deliberate efforts by management to create a conducive work climate, making it a key HRM focus (Lazar, Osoian, & Ratiu, 2010; cited in Christian, Destria, Siti, & Martono, 2020). It is not solely an HRM function but a responsibility for all line managers/heads to support and keep balance among their workers. Oa, Ho, Obianuju, & Demilade, 2018; cited in Christian, Destria, Siti, & Martono, 2020).

Many Western businesses recognize the importance of WLB, with workers often considering/preferring it over above salaries. WLB involves balanced time, balanced work and family commitments, and unbiased satisfaction between work and family (Wong, Bandar, & Saili, 2017, cited in Christian, Destria, Siti, & Martono, 2020). The focus has shifted from rigid work structures to flexible ones, as controlling balanced personal concern and corporate tasks is crucial to employee commitment and growth (Aydin, 2016, cited in Christian, Destria, Siti, & Martono, 2020). Organizations should continually recognize and institutionalize work-

life balance to deepen employee commitment, which can lead to competitive advantage, increased productivity, growth, and improved employee effectiveness and standard/quality of existence (Darko-Asumadu, Sika-Bright, & Osei-Tutu, 2018; Christian, Destria, Siti, & Martono, 2020). Baumruk & Gorman (2006) noted that organizations with strong cultures that encourage positive work outcomes experience lower labor turnover, higher profitability, productivity, and superior results.

Theoretical Underpinnings

The RBV and social exchange theory are the supporting theories for this study. The RBV model of SHRM, proposed by Wernerfelt (1984), suggests that an organization possesses both tangible and intangible resources essential for its daily operations and addressing workforce challenges. These resources include various assets that organizations utilize to create value for their stakeholders, workforce, and customers. Employees, considered part of the organization's human resources, are key components of this model. According to RBV, an organization's performance depends significantly on how effectively it manages its human resources, including workforce skills, values, knowledge, abilities, creativity, and problem-solving capabilities (Pulic & Kolakovic, 2003; cited in Sunday, Akpoyibo & Sunday, 2023). These intangible assets can be converted into market value or shares. Social Exchange Theory, on the other hand, views the employment relationship within an organization as a series of social exchanges (Aryee, Budhwar & Chen, 2002; cited in Asetto, 2019). This theory emphasizes the reciprocal nature of the relationship, where employees' efforts and dedication are exchanged for organizational rewards. These exchanges often rely on formal, legally enforceable contracts. The theory posits that employees remain committed to their jobs in anticipation of certain rewards from the organization, which recognizes their capabilities, talents, and efforts in achieving organizational goals. The success of organizations often hinges on employees' commitment, which can be enhanced by SHRMPs and the principles of social exchange theory.

Material and Methods

The study was designed to assess the correlational impact of SHRMPs on employee commitment. It utilized a descriptive cross-sectional survey design. This design was chosen

for its suitability in characterizing the specific attributes of a group of respondents by estimating the proportion of respondents with given characteristics and making accurate predictions at a given point (Cooper & Schindler, 2011). Primary data were collected using a research instrument targeting employees from four selected telecom firms: MTN, Airtel, Globacom, and 9Mobile. The total population consisted of 7,137 staff members, with MTN having 4,165 employees, Globacom 599, Airtel 1,691, and 9Mobile 682. Using Taro Yamane’s model, a sample frame of 379 was determined. The telecom industry was considered due to its impact on the Nigerian economy and robust contributions to her GDP (12.45% in the 4th quarter of 2020, Ikechukwu, 2020). Data on the impact of SHRMPs on employee commitment were collected using a self-structured, closed-ended questionnaire designed on a four-point Likert scale (strongly agree - 4, agree - 3, strongly disagree - 2, disagree - 1). The questionnaire's first section gathered demographic information, while the second section focused on the study's constructs. Simple regression analysis was employed to test the study's hypotheses, using a 5% significance level and mean value points of 2.5 and above. A multicollinearity analysis was conducted to examine the correlation strength among the predictor variables, revealing no variable with a Variance Inflation Factor (VIF) greater than the threshold of 10, as recommended by Heir et al. (2022). This indicates the absence of multicollinearity, confirming that the study variables are appropriate for inferential statistical tests such as factor analysis and simple regression.

Model Specification

Below is the composite model specification of the study copiously depicting the functional relationship between the study constructs; *Employees’ commitment = f(Strategic Human Resource Management Practices)*. eq. 1

To effectively test the study's formulated hypotheses, the following models were subsequently developed:

Model 1

$$EmpCom = f(RewRec) \quad eq.2$$

$$EmpCom = \alpha_0 + \beta_1 RewRec + \mu_t \quad eq.3$$

Model 2

$$EmpCom = f(WokLBal) \quad eq.4$$

$$EmpCom = \alpha_0 + \beta_1 WokLBal + \mu_t \quad eq.5$$

Implications: The above model algebraically expressed employee commitment as a direct function of SHRMPs (RR and WLB) among the selected telecommunications firms.

Variable Descriptions

<i>EmpCom</i>	=	Employee Commitment
<i>RewRec</i>	=	Reward and Recognition
<i>WokLBal</i>	=	Work Life Balance
α_0, β_1	=	Regression coefficients of the model
μ_t	=	Error term.

Data presentation and Analysis

Analysis of Retrieved Questionnaires

Administered questionnaire, returned copies, fully completed and used for the study are shown in table 1 below:

Table 1: Analysis and Presentation of Returned Questionnaire

S/N	Labels	Delta State	Edo State	Rivers State	TOTAL
1	MTN Nig.	59	40	80	179
2	Airtel Nig.	27	22	25	74
3	Etisalat (9Mobile)	11	12	10	33
4	GLO Nig.	8	10	8	26
	TOTAL	105	84	123	312

Source: Author's computation, 2025.

Table 1 above presented the analyses of retrieved/returned questionnaires from the selected South-South States; that is, Delta, Edo, and Rivers State, respectively. And the outcome of the analysis indicated that 105 (33.66%) of the respondents' offices were located in Delta State, 84 (26.92%) in Edo State (Benin City), and 123 (39.42%) in Rivers State. Moreover, out of the 379 copies of the administered questionnaire, 42 could not be retrieved. Out of the 337 copies retrieved, 15 were not properly filled, while 10 were mutilated. Therefore, 312 were found useful and hence were used for the study analysis. In addition, the demographic breakdown of the responses showed that females make up 44.23%, while males

make up 55.77% of the sex distribution. It was also observed that the age range of 25 to 46 has the largest percentage (92.31%) and that of 55 and older has the lowest percentage (7.69%). In addition, it was shown that 67 (21.47%) and 114 (36.54%) of the respondents had obtained NCE and OND degrees, while 114 (36.54%) and 17 (5.45%) had [B.Sc./HND](#) and [M.Sc./Ph.D.](#) degrees, respectively. The table also captured the work status of respondents. Full-time staff represents 248 (79.49%), while the others are part-time (52, 16.67%) and contract (12, 3.85%) staff. The work experience section of the instrument indicated that a significant number of the respondents, accounting for 148 (47.44%), had worked for their firm for 10 years and above; 124 (39.74%) had worked for 5-10 years, while the remaining 34 (10.90%) and 6 (1.92%) had worked for 1-5 years and 1-12 months, respectively. Moreover, Table 1 showed that 57 (18.27%) and 39 (12.50%) are top-level and low-level management staff, while the majority of the respondents, 216 (69.23%), are middle-level staff of the sampled telecommunication companies in the South-South Region of Nigeria.

Test of Hypotheses and Decision

Hypothesis One

H01: *Significant correlation doesn't exist between RR and employee commitment.*

Table 2: Regression Result for RR and Employee Commitment

Source	SS	df	MS	Number of obs = 312		
Model	.825622822	1	.825622822	F(1, 310) =	24.09	
Residual	10.6261658	310	.034277954	Prob > F =	0.0000	
Total	11.4517886	311	.036822471	R-squared =	0.0721	
				Adj R-squared =	0.0691	
				Root MSE =	.18514	

empcom	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
rewrec	.2960584	.0603245	4.91	0.000	.1773611	.4147557
_cons	2.471167	.2143312	11.53	0.000	2.049439	2.892895

Source: *Field Survey, 2025.*

Table 2 presents the simple regression outcome done on RR (*RewRec*) and employee commitment (*EmpCom*). It was observed that the values of *R-squared* and *adjusted R-squared*

were 7.2% and 6.9%, respectively. This revealed that *reward and recognition* accounted for about/around 6.9% of the systematic variance in employee commitment. The large adjusted R-squared, however, showed that reward and recognition is a major driver of employees' commitment. The *F*-statistic (df=1, 310, f-ratio=24.09) with a p-value of 0.0000 indicated copiously that the result is significant at a given 5 percent (5%) level. Furthermore, the regression coefficients and t-values for *RewRec* and *EmpCom* are carrying positive signs; this invariably suggests that reward and recognition and employees' commitment have a great degree of relationship. Largely, it was observed that reward and recognition positively affect employees' commitment at the various telecommunication companies studied in the South-South region of Nigeria. *Decision:* In line with these results, the null hypothesis stands rejected and the alternate hypothesis accepted, indicating that there exists a significant correlation between RR and employee commitment. These results/findings corroborate with those of Allui&Sahni (2016) and Francis (2014), cited in Fahim (2018).

Hypothesis Two

H02: *Significant correlation doesn't between WLB and employee commitment.*

Table 3: Regression Result for Work-life Balance and Employee Commitment

Source	SS	df	MS	Number of obs = 312		
Model	.966246089	1	.966246089	F(1, 310) = 28.57		
Residual	10.4855425	310	.033824331	Prob > F = 0.0000		
Total	11.4517886	311	.036822471	R-squared = 0.0844		
				Adj R-squared = 0.0814		
				Root MSE = .18391		

empcom	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
woklbal	.3221648	.0602766	5.34	0.000	.2035618	.4407679
_cons	2.379968	.2138878	11.13	0.000	1.959113	2.800824

Source:Field Survey, 2025.

Table 3 shows the simple regression result conducted on WLB (*WokLbal*) and worker commitment (*EmpCom*). It was discovered that the values of *R*-squared and adjusted *R*-squared were 8.4% and 8.1%, This indicated that WLB of SHRMPs accounted for about 8.1%

of the systematic variance in *employees' commitment*. The large adjusted R-squared showed that work-life balance is a major or prime driver of employees' commitment in the workplace arrangement. The *F*-statistic (df=1, 310, f-ratio=28.57) with a p-value of 0.0000 indicated that the result is significant at a 5 percent (5%) level. Also, the regression coefficients and *t*-values for *WokLBal* and *EmpCom* are carrying positive signs; this further depicts that WLB and *employee dedication/commitment* have a substantial ongoing relation. Overall, it was further discovered that WLB influences the commitment of workers of telecommunications firms in the Southern region of Nigeria. This result corroborates that of Destria, Siti, & Martono (2020) and others.

Analysis of correlational Effect of RR on Employee Commitment

H₀₁: Significant correlation doesn't exist between RR and Employee commitment

Reward and recognition encompass both monetary and non-monetary benefits given to employees by management as appreciation for their efforts and contributions to the organization's success (Allui & Sahni, 2016; Francis, 2014; cited in Fahim, 2018). Recognition is often considered central to the equation of motivation, encouragement, and commitment within an organization. These rewards and recognitions are significant motivational and strategic tools designed to either reward exceptional performance or encourage desired behavior and discretion, leading to outstanding performance outcomes and increased motivation and commitment to job responsibilities. This, in turn, results in exemplary performance and a competitive advantage for the organization (Pruden, 2012). Morris (2006) noted that individual employee devotion, performance, and commitment are influenced by the nature and methods of rewards, employee attitudes, and their understanding of reward schemes. Donata (2011) emphasized that rewards, which come in two forms—extrinsic and intrinsic—are designed to encourage, motivate, and elicit desired potentials, discretion, commitments, and performance outcomes for the overall benefit of the organization and its employees. This study assessed whether RR affects employee commitment using a simple regression estimation technique. The findings showed that RR positively and significantly influences employee commitment ($r = 0.0721$, $p = 0.000 < 0.05$). This further revealed a significant correlation exists between RR and employee commitment. These observations aligned with the results of Dilip & Prakash (2021), Tuytens, Vekeman, &

Devos (2021), and Sunday & Nsobiari (2016), who also found that reward and recognition significantly impact employee commitment.

Analysis of the Correlational Effect of WLB on Employee Commitment

H₀₂: Significant correlation doesn't exist between WLB and employee commitment.

Work-life balance is an issue of concern for every jobholder in the organizational workspace. The reason is that there will be a relative reduction in employees' deliberate commitment, morale, productivity, and discretion if the organization does not consider or give priority attention to its workers welfare (Abioro, Oladejo, & Ashogbon, 2018; cited in Christian, Destria, Siti, & Martono, 2020). The reality is that the present labor force is paying more attention to WLB-related issues (Meenakshi & Ravichandran, 2013). WLB is a practice in the workplace that provides the employees an avenue to balance their corporate and personal concerns. WLB encourages employees to effectively maximize their time. In the literature, quite a number of SHRMP variables have been identified; however, research is limited as it concerns WLB and employee commitment to selected telecommunications firms in the southern region of Nigeria. This study assessed whether WLB affects employee commitment using a simple regression estimation technique. Specifically, findings of the simple regression result indicated that WLB positively and significantly influences employee commitment ($r = 0.0844$, $p 0.000 < 0.05$). That's a significant correlation that exists between WLB and employee commitment. In a nutshell, WLB contributes to employees positive work attitudes. This observation corroborates the findings of Dilip & Prakash (2021) and Koon (2015).

Conclusion and Recommendations

The main purpose of business organizations is to maximize shareholder value by meeting the rising expectations of the great majority of their host economies. Businesses must provide exceptional services in order to remain competitive in the quickly evolving business settings of today, which are marked by both opportunities and challenges brought about by globalization and sophisticated information and communication technology. The commitment/dedication of employee is crucial for firms to keep their competitive edge and offer their clients top-notch services. Employees are vital resources, and firms cannot succeed without their commitment.

The purpose of this study was to investigate how SHRMPs affect employee commitment. The effects of RR and WLB on employee commitment are included in the SHRMPs that were adopted. Data was gathered from target respondents who work for four chosen telecom firms using a self-structured and validated questionnaire. Prior to doing regression analysis, diagnostic tests and descriptive statistics were carried out. According to the investigation, employee commitment in the chosen telecom enterprises is significantly correlated with the SHRMPs (RR and WLB). Positive work attitudes (commitment) among employees were found to be significantly influenced by all metrics. It is crucial to remember that SHRM practices are powerful tools for fostering dedication and motivation, which aids businesses in luring in fresh talent and retaining current staff members who are driven and dedicated to their work, thereby preserving a competitive edge in the market. As a result, the study suggested, among other things, that CEOs, managers, and policymakers in the telecom sector prioritize WLB and RR and shape their HR procedures/policies to align with current realities in the global business environment. By doing this, they will be able to build a robust and competitive workforce, which will help them stay focused and competitive in the telecom sector and beyond.

List of Abbreviations

CEOs	–	Chief Executive Officers
ICT	–	Information and Communication Technology
HR	-	Human Resource
HRM	–	Human Resource Management
RBV	–	Resource Based View
RR	–	Reward and Recognition
SE	-	Social Exchange
SHRM	-	Strategic Human Resource Management
SHRMPs	–	Strategic Human Resource Management Practices
WLB	–	Work-life balance

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DOES BOARD SIZE INFLUENCE CORPORATE ENVIRONMENTAL DISCLOSURE OF LISTED FIRMS IN NIGERIA?

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Abstract

This study examines the impact of board size on the environmental disclosures of publicly traded firms in Nigeria, using data from 10 non-financial companies spanning the years 2012 to 2022. Through the application of descriptive statistics and multiple ordinary least squares regression analysis, the results reveal that the number of directors on the board significantly affects corporate environmental disclosure in Nigeria. Furthermore, the research indicates that gender diversity within the board, the overall size of the company, and the growth of the firm also contribute positively to corporate environmental disclosure. To corroborate the findings of this study, board gender diversity, company size, and firm growth were treated as control variables. The analysis illustrates that both board gender diversity and company size are positively and significantly linked to the environmental disclosures of listed firms in Nigeria. Although the impact of firm growth is positive, it does not reach statistical significance. Based on these results, the study recommends an optimal board size of fifteen and an average board gender diversity score of 0.67 to improve corporate environmental disclosure in Nigeria.

Keywords: Board size, Board gender diversity, firm size, firm growth, and environmental disclosure.

1. Introduction

The topic of corporate environmental disclosure has garnered heightened empirical interest lately. This growing concern originated in the 1970s with the advent of corporate social reporting (CSR) and gained more prominence among businesses (Gray, Kouhy, & Lavers, 1995). Following the founding of the United Nations Environmental Programme (UNEP) in Sweden during 1972, numerous nations and corporate organizations recognized the significance of environmental disclosure. Global environmental concerns peaked in January 2008, when an international conference was held in Davos, Switzerland, to discuss the adverse effects of human and corporate actions on the environment, including industrial emissions and their negative environmental impacts (Gray, 1992; Kolk&Perego 2010). The conference highlighted essential measures to reduce environmental pollution and stressed the necessity for countries to adopt environmentally sustainable policies that ensure a healthy and sustainable future.

In a rapidly expanding global economy, effective business management practices require a focus on environmental issues. The purpose of environmental disclosure is to identify and integrate costs associated with the detrimental effects of corporate activities on society, which traditional accounting reports often overlook and are vital for decision-making among various stakeholders. However, in many developing nations with inadequate social and environmental accounting disclosure, only a minimal amount of social and environmental accounting information is reported. While it is challenging to quantitatively assess the impact of environmental damage on accounting reports, the figures from industrialized countries with robust data management are promising. This becomes particularly paradoxical considering that Nigeria flares more gas than any other nation worldwide. Many countries have recognized environmental accounting and the disclosure of environmental information as valuable tools for economic decision-making that pave the way for sustainable development in the long term. In Nigeria, the social, economic, and security consequences of environmental neglect in the Niger Delta region have recently gained attention, particularly with the rise of the Niger Delta Militants. Protests regarding the environmental hazards due to oil production—including pollution, spills, noise, and the release of harmful waste—have escalated into armed conflict and militancy against the Nigerian state and the involved oil companies. The purpose of environmental disclosure is rooted in the need for sustainability, accountability, and transparency in corporate annual reports, aimed at serving stakeholders' interests. In particular, environmental disclosure is a response to the adverse effects that corporate entities have on society and the natural environment, such as global warming, climate change, depletion of the ozone layer, and environmental degradation (Graham, Harvey, & Rajgopal, 2005).

Environmental disclosure refers to the information about the natural environment, protection efforts, and resources utilized, which is reported in corporate annual reports. According to Deegan (2002), environmental disclosure encompasses details about the installation of eco-friendly machinery, efforts in site rehabilitation, recycling initiatives, admissions of pollution, emissions, and fines associated with environmental violations, among others. Organizations operating in environmentally sensitive industries such as oil and gas, chemicals, forestry, and mineral extraction are particularly expected to provide social and environmental disclosures. Prior research by Haddock-Fraser and Fraser (2008) suggests that the scope and thoroughness of disclosures can vary widely, and that companies may also report environmental information

through other means, although mainly found in annual financial reports. They concluded that research has largely focused on industry-level and company-level factors affecting environmental disclosure, indicating that corporate characteristics can influence such reports. Consequently, many businesses have undertaken the initiative to emphasize environmental disclosure to share information about their environmental performance, corporate social responsibility, and sustainable development efforts. Additionally, by addressing the expectations of financial markets while simultaneously enhancing their environmental image in financial records, these disclosures are perceived by some stakeholders as having a commercial incentive and enhancing the quality of financial reporting.

Despite the push and encouragement for corporate environmental disclosure, driven by the rising demands from shareholders for transparency and accountability in sustainability practices within Nigeria, numerous non-financial firms provide limited environmental information. This raises concerns about the effectiveness of corporate governance mechanisms, particularly regarding board size and diversity in influencing disclosure practices.

Current literature has predominantly concentrated on corporate disclosure, overlooking other facets related to environmental disclosure, which have increasingly become a focus of policy attention. Furthermore, the limited previous studies on corporate environmental disclosure have adopted an overly aggregative approach centered on the relationship between corporate governance and corporate disclosure (Ajibolade&Uwugbe, 2013; Ahmad &Osazuwa, 2015). This study marks a significant shift, enhancing the existing literature through a disaggregated approach that examines the specific relationship between board characteristics and environmental disclosure, specifically the impact of board size on corporate environmental disclosure—a topic that, to the researcher’s knowledge, has not received considerable empirical focus.

Following this introduction, the rest of the paper is organized as follows: Section 2 provides a review of the literature, which includes conceptual, theoretical, and empirical findings. Section 3 details the methodology, while Section 4 presents the results and discussions. Finally, Section 5 offers conclusions and recommendations.

2. Literature Review

2.1. Conceptual Clarifications

According to Pahuja (2009), environmental disclosure refers to the tendency of environmentally conscious firms to include more information related to the environment in their annual financial statements compared to companies that are less focused on environmental issues. This suggests that such firms may exhibit a greater disposition towards disclosing environmental information rather than reflecting their true environmental performance. In a similar vein, Zakimi and Hamid (2004) characterize environmental disclosure as an environmental management strategy aimed at communicating environmental information to stakeholders. Essentially, environmental disclosure entails the reporting of information that pertains to the natural environment, efforts to protect it, and the resources utilized. As a result, there has been a noticeable increase in companies voluntarily sharing environmental information through sustainability reports, annual financial statements, or other channels. Damilola, Michael, and Tony (2008) define environmental disclosure as a means to understand the costs or expenditures and economic implications of how a firm's operations impact the environment, methods for mitigating such effects by evaluating compliance with relevant environmental regulations and internal standards; enhancing environmental management; maintaining public credibility; increasing staff awareness and commitment to environmental policies; exploring or capitalizing on improvement opportunities; establishing performance benchmarks for advancing the environmental management system (EMS); and enabling the management oversight of environmental practices. The size of a board of directors is a significant attribute of corporate governance that has been studied in relation to environmental disclosure (Sufian&Zahan 2013). The number of directors on a corporate board can influence the extent of environmental information disclosed in corporate financial reports. In essence, an optimal board size for a corporation is crucial because both the number and the quality of its directors affect the board's ability to disclose environmental information (Terri & Hadrian, 2016). They further elaborate that board size is a governance factor that can positively impact the level of environmental reporting.

2.2. Theoretical Framework

2.2.1. Legitimacy Theory

O'Donovan (2002) describes organizational legitimacy as a condition that arises when a company's value system aligns with that of the larger social system in which it operates. He further explained that when there is an actual or potential discrepancy between these two value systems, legitimacy is consequently threatened. Deegan (2002) elaborated on legitimacy as a broadly held assumption or perception that a company's actions are desirable and appropriate within a socially constructed framework of norms, values, beliefs, and definitions. Hooghiemstra (2000) noted that management uses strategic organizational legitimacy to influence and secure societal support. Disclosures are utilized to demonstrate legitimacy. It is important to recognize that legitimacy theory suggests that the reporting of information influences legitimacy, rather than undisclosed changes in company actions (Ahmed, 2004). Significantly, legitimacy theory provides a robust theoretical foundation for comprehending environmental disclosures in corporations' annual financial reports. The theory posits that corporations must operate in accordance with the norms, values, and expectations of society, which legally obligates them to align corporate social disclosures in annual reports with the interests of relevant stakeholders (Deegan 2002; O'Donovan 2002).

Legitimacy theory, as highlighted by Ahmed (2004), implies that businesses voluntarily disclose social and environmental information to garner support from society and the public at large, thereby reflecting a positive image of being a socially and environmentally responsible corporate entity. In this regard, organizations aim to impact public perception by disclosing relevant information, particularly regarding environmental issues, as a means of enhancing the quality of financial reporting. The theory asserts that firms' voluntary disclosure of social and environmental information serves to validate their operational activities and secure societal endorsement for their continued existence. It illustrates the existence of a social contract between corporations and society, indicating that for the former to endure, their objectives must align with the societal value system (Gray, Kouhy & Lavers, 1995). Strategies for legitimacy include altering objectives, methods, and outputs. Milne and Pattern (2002) contend that legitimacy can be achieved by managing stakeholder expectations via voluntary environmental disclosures in financial reports, which may subsequently lead to changes in organizational operations.

Deegan and Gordon (1996) indicated that organizations tend to respond to increased scrutiny related to environmental issues or liabilities. Numerous studies have employed legitimacy theory as a framework for interpreting organizations' responsibilities toward social and environmental disclosures. Deegan (2000) asserted that a company cannot succeed or thrive if it is perceived as promoting outcomes, practices, or methods deemed unacceptable by society. They further emphasized the significance of disclosures in establishing legitimacy. Consequently, companies will persist in making voluntary disclosures to ensure that their legitimacy remains intact and that the quality of their financial reports is favorably regarded by report users. The degree of disclosures made by a company will be contingent upon whether the motive is to gain or maintain legitimacy, as well as the strategies employed (O'Donovan 2002). A newcomer in a new line of business or a long-established firm exploring a new area will strive to gain legitimacy by controlling information shared with all stakeholders. A company that enjoys a strong corporate reputation will seek to highlight its previous achievements to uphold its legitimacy. The legitimacy theory, however, contend that corporate entities strive to make sure they conduct their business operations within the confined norms of the society (Deegan& Gordon 1996).

2.3. Empirical Review

Buniamin, Alrazi, Johari, and Rahman (2008) investigate the association between board size and the extent of environmental reporting. The research employed a content analysis approach, examining a sample of 243 Malaysian companies listed in 2005. Their results reveal that board size has a significant effect on the level of environmental reporting. Akhtaruddin, Hossain, Hossain, and Yao (2009) carried out a study to establish the relationship between board size and environmental disclosure among Malaysian firms. The findings show a strong link between board size and environmental disclosure. Said, Zainuddin, and Haron (2009) assessed a large sample of 150 companies based on the financial reports of selected firms listed on Bursa Malaysia during the 2006 fiscal year. They used OLS regression to analyze the influence of governance characteristics on social and environmental reporting, finding a positive relationship between board size and environmental reporting. Uwuigbe (2010) looked into corporate social environmental sustainability reporting and the performance of specific firms in Nigeria, uncovering a significant connection between firm performance and environmental disclosure, while leverage and firm size were not significantly linked.

Khodadadi, Khazami, and Aflatooni (2010) explored the relationship between governance characteristics and environmental disclosure within Tehran's listed companies. They gathered a sample of 106 firms from the quoted companies in Tehran over the financial years of 2001 to 2005, using Ordered Logit estimation, and found no strong relationship between independent directors and voluntary environmental information disclosure. In research by Buniamin, Alrazi, Johavi, and Rahman (2011), the impact of board characteristics on environmental disclosure in Malaysia was studied, indicating a positive association between board size and environmental disclosure among Malaysian firms. Uwuigbe, Egbide, and Ayokunle (2011) examined how board size and composition affect environmental disclosure in companies' annual reports, revealing a negative correlation between board size and corporate environmental disclosure, while board composition was found to have a positive and significant relationship with it. Ienciu (2012) looked at the connection between governance characteristics and environmental disclosure in Romanian quoted firms, utilizing a sample of 64 quoted organizations along with a constructed disclosure index (DI). The results from the multivariate panel least squares analysis indicate a negative relationship between board size and environmental disclosure. Sufian and Zahan (2013) executed an empirical study analyzing the influence of ownership structure on corporate social and environmental reporting in Bangladeshi quoted firms, applying a multivariate regression method. Their findings reveal no correlation between board size and corporate social and environmental disclosure. Ajibolade and Uwuigbe (2013) researched how corporate governance traits affect firm social and environmental disclosure, identifying significant positive correlations for both board size and the percentage of independent directors, while CEO duality had a negative correlation. Khan, Muttakin, and Siddiqui (2013) evaluated the effect of governance characteristics on corporate social and environmental information reporting across quoted firms, analyzing 135 manufacturing companies through OLS regression, and discovered that board independence has a positive impact on corporate social and environmental disclosures. Lilik, Bambang, Sutrisno, and Erwin (2014) studied the effect of board size on corporate social disclosure within publicly listed Indonesian companies. Their research encompassed a sample of 152 firms, excluding those in financial and insurance sectors, employing purposive sampling methods over the financial years from 2010 to 2012. Their empirical results indicate a positive association between board size and social disclosure.

Mgbame and Onoyase (2015) examined how corporate governance features affect the degree of environmental reporting in Nigerian oil companies. Their findings indicate a robust positive correlation between board size and environmental reporting, while board independence also displays a significant positive link with environmental disclosure. Ndukwe and Onwuchekwa (2015) investigated the elements that affect environmental disclosures among publicly listed companies in Nigeria and discovered that firm size has a notable relationship with environmental disclosure, while profitability, leverage, and the audit firm type exhibit no connection to environmental reporting. Terri and Hadrian (2016) analyzed the relationship between corporate governance mechanisms and environmental information reporting in 38 mining companies listed in Indonesia. They employed a content analysis approach and established a scoring system based on an invented disclosure index (DI). Their results indicate that board size is positively related to the quantity of environmental information disclosed. Additional studies demonstrating a significant link between environmental disclosure and firm performance include research conducted by Malik, Wang, Li, and Naseem

3.0 Methodology

3.1 Research Design

This study employs an ex-post facto research design. This design is utilized to assess the relationships among various variables across distinct populations that may exhibit diverse characteristics. It also includes analytical methods involving the use of secondary data. The data for this research were obtained from the financial statements of companies listed on the Nigerian Exchange Limited (NGX). The research framework combines cross-sectional data with time series data, creating a panel (pool) data set for ten selected companies over the period from 2012 to 2022.

3.2. Population, Sample Size, and Sampling Frame

The study's population encompasses all non-financial companies listed on the Nigerian Exchange Limited (NGX). This research focuses specifically on manufacturing firms in Nigeria, which provides the context for generalizing the findings. Therefore, the population includes all manufacturing firms that are listed on the NGX. A sample consisting of 10 manufacturing firms is selected using stratified sampling techniques. This selection was based on a combination of random and convenience sampling methods, as the chosen firms have the necessary data and adequately represent the overall population. Three major sub-sectors were

chosen from the manufacturing industry, which include the industrial goods sector, the consumer goods sector (specifically food and beverages), and the oil and gas sector.

3.3. Model Specification

The model proposed for this study represents environmental disclosure as a function of board size. This investigation utilizes the model established by Oba and Fodio (2012). The functional representation of the model is expressed as:

$$ENVD = f(\text{BS}, \text{GEND}, \text{FZS}, \text{FGR}) \dots \dots \dots (5)$$

The econometric representation of the model is articulated as:

$$ENVD = \beta_0 + \beta_1 \text{BS}_{it} + \beta_2 \text{GEND}_{it} + \beta_3 \text{FZS}_{it} + \beta_4 \text{FGR}_{it} + \text{et} \dots \dots \dots (6)$$

Where: ENVD = Environmental Disclosure

β_0 = Constant

$\beta_1 - \beta_4$ = Slope Coefficients

BS = Board Size

GEND = Board Gender Diversity

FGR = Firm Growth

Table 1: Operationalization of Variables and Apriori Expectation

Variables	Description and Sources	Apriori Sign
Environmental Disclosure (Dependent variable)	The index comprises a collection of predetermined items that, when evaluated, offer an indication of the degree of disclosure relevant to the particular context for which it was created. In this research, a checklist for corporate environmental disclosure is utilized, featuring twenty (20) content categories and four (4) assessable areas of corporate social and environmental disclosure (Oba &Fodio, 2012; Ghasempour&Yusof, 2014).	
Board Size (Independent variable)	(i) Board Size (BS) refers to the total number of directors present on the board (Parsa&Kouhy 2008).	+
Board Gender Diversity (Control Variable)	(iv) The extent of board gender diversity (BGD) is assessed by counting the female directors on the board (Rao, Tilt & Lester 2012).	+
Firm Size (Control Variable)	(i) Firm Size (FS) is quantified as the natural logarithm of total assets (Galani, Gravas	+
Firm Growth (Control Variable)	(iii)Firm Growth (FGR) is measured by the natural logarithms of revenue (Crisostomo&Freire 2015).	+

Source: Author’s compilation, 2025

3.3. Technique for Data Estimation

The research utilized the ordinary least squares regression econometric method. Prior to this, descriptive summary statistics were performed for the variables. To ensure robustness, the study incorporates a blend of cross-sectional and time series analysis involving ten (10) non-financial companies analyzed from 2012 to 2022.

4. Results and Discussion

4.1. Descriptive Statistics

The descriptive statistics for the variables used in the analysis is presented in table 1.

Table 2: Descriptive Statistics

Variables	ENVD	BS	GEND	FZS	FGR
Mean	0.192	8.723	0.670	8.320	6.851
Median	0.173	9.00	0.187	7.581	6.872
Max	0.410	15.00	5.000	13.850	8.811
Min	0.102	3.000	0.000	3.062	4.021
SD	.072	2.261	0.781	2.165	0.853

Source: Author's computation, 2025

The average value of corporate environmental disclosure is 19 percent, while the median at 17 percent indicates a discrepancy in environmental disclosure levels among the firms in the sample. This suggests that the firms exhibit varying degrees of environmental disclosure in relation to the calculated mean. The highest and lowest levels of corporate environmental disclosure stand at 40 percent and 10 percent, respectively, highlighting the differences in disclosure practices among the firms. The standard deviation of 0.07 is relatively low, reflecting a limited range of variability in environmental disclosure.

The average board size is 8.7, with a median of 9. The largest and smallest board sizes recorded are 15 and 3, respectively. Board gender diversity has an average value of 0.67, with maximum and minimum figures of 5 and 0, correspondingly. Firm size has an average of 8.32, with a median of 7.58. The maximum and minimum firm sizes are 13.85 and 3.06, respectively, and the relatively low standard deviation of 2.17 indicates that the firms in the sample are generally large. Firm growth has an average of 6.85 percent, with a median of 6.87 percent. The maximum and minimum growth rates are 8.81 percent and 4.02 percent,

respectively, and the standard deviation of 0.88 suggests that the growth rates of the sampled firms are generally low.

4.2. Regression Analysis

The results of the regression estimation is presented in Table 2.

Table 3: Corporate Environmental Disclosure and Its Explanatory Variables

Independent Variables	Coefficient	T-Stat	Prob.
C	0.114	1.212	0.23
BS	0.102	2.831	0.00***
GEND	0.015	2.271	0.03**
FS	0.141	2.213	0.04**
FG	0.041	0.872	0.00
F – Stat	25.42		0.000***
DW Stat	1.62		
R-squared	0.73		
Adjusted R-squared	0.71		
Breusch Pagan-LM Test	5.02 (0.74)		
VIF	1.76		

Source: Author’s computation, 2025

***, **, ***, implies statistical significance at 10% 5% and 1% levels, respectively**

The diagnostic statistics reveal an adjusted R-squared value of 0.71, indicating that 71 percent of the systematic variations in corporate environmental disclosure among publicly traded non-financial firms in Nigeria can be accounted for by the independent variables. The F-statistic of 25.4 is significant at the 1 percent level, confirming a meaningful linear relationship between corporate environmental disclosure of listed firms and the explanatory variables, suggesting that these variables are collectively significant in determining the environmental disclosure of corporate entities in Nigeria.

Board size exhibits a positive coefficient and is significant at the 1 percent level. Therefore, having an appropriate board size enhances the extent of corporate environmental disclosure among firms in Nigeria. Thus, a suitable board size for a corporation is crucial since the number and quality of directors influence the board’s capacity to disclose environmental

information. This outcome aligns with the findings of Terri and Hadrian (2016), as well as Islam et al. (2024).

Board gender diversity displays a positive coefficient and is significant at the 5 percent level. Consequently, an increased presence of female directors on the board tends to foster independence and diverse opinions, which significantly promotes corporate environmental disclosure. This result supports the conclusions of Rao, Tilt, and Lester (2012) and Giannarakis, Konteos, and Sarriannidis (2014).

The firm size coefficient is positive, consistent with theoretical expectations, and passes the significance test at the 5 percent level. Thus, larger companies generally possess a greater ability to engage in environmental reporting/disclosures, and consequently, exhibit a higher level of corporate environmental disclosure compared to smaller enterprises. This finding is congruent with the results of Ahmad and Osazuwa (2015), Malik et al. (2023), and Liu (2024). Finally, the coefficient for firm growth is positive but does not pass the 5 percent significance level, which contradicts the results obtained by (Lucyanda & Siagian, 2012).

Post-estimation analysis also supports the retention of the null hypothesis, suggesting no serial cross-sectional dependence and contemporaneous correlations, as indicated by the Breusch-Pagan LM test for cross-sectional dependence and contemporaneous correlation {with $\text{Chi}^2 = 5.02 (0.74)$ }.

The mean variance inflation factor (VIF) of 1.76 indicates the absence of multicollinearity in the estimated model. There is, therefore, no indication that would undermine the validity of the model for structural and policy analysis.

5. Conclusion and Recommendations

5.1 Conclusion

This study examined the influence of board size on the disclosure of environmental information by ten publicly traded non-financial firms in Nigeria. The findings reveal that board size, representing both the number and caliber of directors in a company, significantly and positively impacts environmental disclosure in Nigeria. Additionally, the diversity of gender on the board and the overall size of the company also have a significant positive influence on environmental disclosure in the country. While firm growth is positively associated with environmental disclosure, its effect is not statistically significant. This implies

that larger companies tend to disclose more of their environmental information to benefit users of accounting information.

5.2 Recommendations

In light of the findings, the following recommendations are suggested:

- i. A well-structured and adequately sized board should be established in listed companies in Nigeria to promote environmental disclosure.
- ii. Moreover, having an increased number of female directors on the board should be encouraged to provide diverse and independent viewpoints.
- iii. Implementing policies aimed at enhancing firm size and growth, such as increased investments and improved managerial efficiency strategies, is also crucial for improving corporate environmental disclosure in Nigeria.

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PROJECT PLANNING AND THE PERFORMANCE OF PUBLIC PROJECTS IN LAGOS STATE, NIGERIA

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Abstract

Public projects in Nigeria have had problems with delay in completion time and cost overruns and this has caused a lot of concern. Thus, this study seeks to examine the effect of project planning on the performance of public project in Odi Olowo Ojuwoye Local Council Development Area, Lagos State. The study adopted a cross-sectional survey research design. The population of the study comprised of 25 members of staff in 2 departments, budget and planning department, and works and housing department. These departments were considered based on their involvement in the public project in the selected LCDA, Lagos State. The entire population was approximately fifty (50) and a census sampling technique was used due to the fact that the population size is relatively small. The data relevant for the study were gathered through a structured questionnaire to collect information directly from the respondents. Data collected were analyzed using linear regression. The findings revealed that project planning process is statistically significant to project timely completion. This indicates that there is a significant effect of project planning on timely completion of projects in the public projects carried out in Odi-Olowo Ojuwoye LCDA. The study recommended that LCDA should ensure continue introduction of stakeholder communication strategy to obtain better project outcomes.

Keywords: project completion time, project framework, project management processes, project planning, public project,

Introduction

One way to think about a project is as a dynamic, ever-evolving system. The status of a generic project varies from the moment the idea is conceived or started until the project is completed (Shepherd & Atkinson, 2011). Projects nowadays are also significantly more complex than they were in the past due to the high capital expenditures, several disciplines, geographically distributed project participants, stricter deadlines, and high quality standards. According to the Project Management Institute (PMI, 2017), these have forced project stakeholders to make sure that project management procedures are followed as best practices.

Project management is accomplished through the appropriate application and integration of the project management processes identified for the project (PMI, 2017). Planning is key to a successful project completion. It is the second process group of project management that involve all the necessary steps taken to create a detailed plan or outlines and resources necessary to achieve project objectives. It is the job of a project manager to plan and manage a project successfully as well as predicting future of projects.

Akintelu, Ireferin and Akarakiri (2017) declared that project planning is very crucial to both servicing and production organizations. Once planning is not properly outlined, it will affect the overall deliverables. Planning is the most fundamental out of the Project Management processes. Planning integrates ideas identified during project initiation process and devise the means to which the ideas are achieved. Project planning provides the project's framework that serves as a guide for project execution (Akintelu et al., 2017)

A public project defines an initiative financed by government funds which belongs to and operates under state control. Major construction projects such as roads, bridges, dams, railways, tunnels and institutions including hospitals, schools, libraries and leisure facilities are among the projects considered public. The funding source of tax revenue leads to detailed evaluations and strict project performance requirements in these public works projects. Countries with developing economies face multiple degrees of environmental influence on their projects thus leading to various levels of problems according to Alutu & Udhawuve (2012) and Maru, Jekale & Asteray 2024. Project issues in developing nations stem from three key factors: excessive corruption, arid regions and government priority changes. Research by Alutu and Udhawuve (2012) explains that numerous developing countries exhibit unstable project settings featuring fast-moving markets and funding shifts and continued policy adjustments of governments as well as business conditions.

Oberlender (2009) said that the management of public projects demands modern managerial knowledge and the understanding of the design and processes, specifically in the construction projects. According to Molavi and Barral (2016) There are many internal and external reasons that hampers the performance of the public project, the most important of them is time delay and cost overrun. This performance be assessed by the completion schedule, cost of completion, productivity of works completed, and safety, which are fundamental during planning stage. This is the most important reason why many of the projects are left incomplete and developers move on to the next project. Shane *et al.* (2019) attributed the causes of cost deviations to changes in scope, inadequate planning, and design changes.

Bajere, Galadima and Durodola(2016) evaluated the impact of delay factors on completion time of public projects and revealed that 190 out of the 196 projects sampled had an average of 486.75% time overrun. Mamman and Umesi(2022) investigated the final completion cost of public sector construction projects and revealed that 76.53% of the project sampled had an average of 43.26% cost overrun. According to Chan et al. (2011) for a project to be considered as having been successfully delivered, they should be within budget, on time and having expected quality as specified by the client, in otherwise deficiency of any of these is regarded as a project delay. Most of the public projects in

Nigeria have had problems with delay in completion time and cost overruns and this has caused a lot of concern.

Despite importance of project management recorded, managers still struggled with effectively implementing project management framework. This research therefore seeks to examine the effect of project management process on the performance of public project.

Statement of the problem

Numerous public sector initiatives achieve their targets but also experience failures during multiple project development stages (Ministry of Finance and Economic Planning, 2014). All projects must implement their established steps in order to reach the stated objectives during the complete project lifecycle. Project managers need to create a detailed planned document that remains essential throughout all project stages. (Office of the Auditor General, 2018). The successful execution of any project depends on which strategic approach the project implementation organization has chosen. The execution of success strategies in projects takes place through project life cycle management of time requirements and costs and product quality. Project delays initiate from incomplete planning of essential project requirements. When project planning is inadequate projects end up accomplishing unsatisfactory results and failing to meet defined specifications. Dvir, Raz and Shenhar (2003) established that superior project planning methods produce superior project outcomes. An efficient project plan ensures its ultimate successful delivery. Project planning implementation needs to organize all project elements which include understanding project techniques and tools and mastering underlying theoretical concepts and having the capacity for activity reorganization according to Wambani, Makokha and Namusonge (2019). A project planning practice assessment must evaluate how project stakeholders behave and play their roles throughout the planning process. Regular operational functions merge with the implementation of most projects in developing countries because organizations maintain minimal project management capabilities (Maru et al., 2024). The project management leader emerges from a fundamental requirement for technical expertise which enables controlling all project management process events. (Wideman, 2013).

Most studies such as Wambani et al. (2019) and Alutu & Udhawuve, (2012) focused on construction projects with their results having significant relationship between the effects of project planning and performance of construction projects. Maru *et al.* (2024) however, has mentioned that unreliable communication and poor documentation are typical conditions in developing countries which complicate project management. A significant issue is the inadequate measurement of the key determinant of project management which are cost, material quality, and project time and it influence on performance of public projects. This gap in literature has resulted to the evaluation of the effect of project management process on the performance public projects with specific focus in determining the

effect of project planning on timely completion of public projects in Odi Olowo Ojuwoye Local Council Development Area of Lagos state, Nigeria.

Research Hypothesis

Project planning does not have a significant effect on timely completion of public projects in Odi Olowo Ojuwoye LCDA.

Conceptual Review

1. Project management

Project Management Institute (2017) Defines project management as application of knowledge, skills, tools and technique to project events with the aim of meeting the project requirements (Project Management Institute, 2017). Project management is therefore all about managing resources to ensure efficient and effective use of resources so that a project is completed in a successful way. Some five process groups form the building block for any project life cycle and had been identified by the PMI. Initiation process group consists of these process groups, planning process group, execution process group, monitoring and control process group and closing process group. There is at least one instance when each of these processes occurs in the project life cycle of every project. Nevertheless, it is important to mention that, in a one phase project, all of the process groups may be repeated in a project that is being executed in two or more phases (Wysocki, 2009). The project after initiation stage is planned to the level of main purpose, in order to plan time and cost and resources adequately so that work can be estimated and managed risk effectively during the execution of the project. The same goes as part of the Initiation process group as the failure to plan adequately greatly decreases the project's ability to successfully complete its goals. Project planning generally consists of determining how to plan, developing the scope statement, selecting the planning team, identifying deliverables and creating the work breakdown structure, identifying the activities needed to complete those deliverables and networking the activities in their logical sequence, estimating the resource requirements for the activities, estimating time and cost for activities, developing the schedule, developing the budget, risk planning, gaining formal approval to begin work. It is even challenging for seasoned construction practitioners to plan. They could be used on laptop, smartphone or tablet to digitally create a project timeline using the new and modern project management tools. One type of such 'stick-note' type virtual screen, some applications offer, to simply visualize what is to be worked on and to follow the progress of the project dynamically (Isaac and Hajdu, 2016). Project planning is important function for all technical organization that helps to make any technical organization success. When the organization seeks to have a perfect plan, the probability of customer satisfaction and faith by the customers in the organization for future investments increase. The most vital step in the risk reduction and project

failures. We all know that after all anybody who works as a project manager knows that nobody is awarded with a shining brilliant idea point if in the end the execution doesn't work with this idea.

2. Timely completion time of project

Timeline refers to the length of the time estimated for each project stage to be completed. Apart from this, it also includes telling how the project has been divided into tasks and subtasks. Timeline process includes definition of these timelines, production of individual and team schedule and selection of project milestones. Delay can be defined as a condition that arises where the service provider or his client or those assigned by them consensually or jointly to delay execution of the project within the stipulated or approved initially contract time (Aibinu & Jagboro, 2012). The action or condition that brings about completion of the project a period later than the one contracted to is construction delay (Isyaku et al., 2020). Delay produces detrimental results such as the poor performance of the contracting firm, interruption of the work, additional time, additional cost of the project, third party claim, increase in contract dispute, low contract productivity and termination of the contract or total contract abandonment (Mamman & Umesi 2022). In their emphases on the negative consequence of a contracts delay on an owner and a contractor both on the revenue loss and the extra expense, that would cause contracts liability related controversy which most of the time is contentious and invariably leads to trips to the courtroom, Bajere et al. (2016) focus. A review of studies has found out that delay means different things to stakeholders; the client delay is incremental to the cost budget than that agreed and in the area of infrastructure projects, this implies bad investment return. Contractor delay will result to lengthen work period, which ultimately ends up paying higher operating costs and its associated labour cost, higher cost of material, and inflation. According to Belay et al. (2021), contractor's delay could lead to failure of delivering the work by specification, it may tarnish his reputation and cause loss of confidence in the key business owners in general by them. Time overrun in contract administration is described by Bajere et al. (2016) as the contract period in terms of number of days, weeks, months or years. Any delay beyond the baseline of construction schedule as referred to in Belay et al. (2021) is termed time overrun. Because time delay is fairly common in any part of the construction project duration, project duration become longer and the total project time lengthen too.

Theoretical Framework

1 Planning Theory

The theory on which this study rest is the planning theory, but in the lines of Faludi (1973) who postulates that the application of a scientific method, however crude, to policy making. Naturally, it is a conscious work done with a view of enhancing the validity of policies that are present to and will be for the future of environment. According to the theory, Koskela and Howell (2008) stated that it is a

process that involves defining the sets of methods and procedures on the basis of setting goals of projects or organisation thereby helping to offer a perspective as well as a direction to the attainment of such goals. The theory is supported by the Project Management Institute (2014), as they describe it from the point of breaking it down as different knowledge areas for the execution of the project; scope planning, scope definition, activity definition, resource planning, activity sequencing, activity duration estimating, cost estimating, schedule developing, cost budgeting, and project plan developing. Theory assumes that it is a complete works, that it designates the course of action for team member on a project, that it creates chances to evaluate various possible outcome prior to execution, that it gives lots of possibility of execution and team member can weigh the options and decide which option to implement. The basis of the theory derives from these assumptions and is very much like the processes used in project execution (Mulcahy, 2015). While critiquing the theory, Allmendinger (2002), Abukhater (2009) noted that planning is different and different from the fact that it cannot be defined by a single narrow definition that can cover all the planning. The reason is that planners are not a unified thing, or a single entity one can categorize within a natural unit; and they do not agree on planning what planning is. Instead, planners can range along a continuum of interest – from environmentalists and advocates to even the developers.

Szopik-Depczynska and Lanfranchi (2016); Project management institute (2014) explained that planning is one element of management, the others being organising, motivating and control. It is defined as a process, which comprehends in decision making and action whereby consecutive phenomena will occur (achieve or achieve certain phenomena or objectives) are not spontaneous. The also said of the research that the main purpose is to properly plan time, cost and resources for estimating the work that will be done and for the proper management of risk when carrying out the project. There is an implication of the risk that failure to plan adequately will significantly decrease the chances of project success not only in meeting planned goals and objectives but also its intended objectives.

Empirical Review

Examining the relation between the efforts made in the project planning and the success of projects, Dvir, Raz and Shenhar (2003) applied a survey of 110 technology development projects in Israel's defense programs based on structured questionnaires and interviews. The findings indicate that the process for management implementation of process and procedure that can be easily supported by the modern computerized tools and project management training do not matter in achieving project success. On the other hand, in terms of investment in requirements' definition and specification, greater investment leads to greater project success. Case study analysis of a case study has been used by Hartman and Ashrafi (2004) to study how the SMART Project Planning framework can be

developed for test. This paper presented a planning approach which was developed using this study and other resources, and was holistic, integrated and risk sensitive. After that, the approach was field tested on live projects. It puts forward a unifying method for planning projects which includes both hard and soft aspects, extended the available current tools and techniques, and given overall improvement to the project planning process with overall validation. As part of testing the SMART framework, the study found that project Charter and Plan do not remain connected and distance between them if the same set of documents are not treated as the two documents. It was also determined that the real and expected end states of budget, schedule, scope, key results, priorities, and risks keep key elements integrated and aligned.

The level of stakeholder involvement in building projects project planning process was also evaluated by Heravi, Coffey and Trigunarsyah (2015), by means of evaluating a series of literature review to identify and categorise significant phases during the planning. For this study, the questionnaire survey adopted the questionnaire survey designed and distributed among nearly 200 companies who were involved in the residential building sector in Australia. The analysis results revealed the different relationships for the four stakeholder groups and gave the basis for continuing association with the involved stakeholder groups. It was also confirmed that Stakeholders donated resources which they have the ability to control interaction and resource flows in the network. In addition, it revealed that project planning truly has an influence on the survival of the organisation and should be properly managed. Therefore, it was advised that the involvement of key stakeholders is to be an important part of any project management plan. Using a survey research design the industry in which projects are best planned and executed is identified by Zwikael and Globerson (2006) as the industry against which project planning in other industries is improved. To evaluate and analyze the data recorded through the structured questionnaire of 280 project managers, project success and the quality of project planning were evaluated for four industries such as construction and engineering, software and communication, services, and production and maintenance. The highest of quality of project planning was concentrated in making and engineering organizations and the least in manufacturing organizations. High quality of the project planning enabled construction and engineering organizations to achieve almost half over the cost and schedule budgets as compared to organizations from other industries. Finally, the results of the industries in Israel and Japan are compared and analyzed.

Research Methods

The study adopted a survey research design to examine the effect of project planning on the performance of public projects in Odi Olowo Ojuwoye LCDA. The population of the study comprised 25 members of staff in the 2 departments involving in public project in the selected LCDA in Lagos

state which include: Budget and planning department and works and housing department. These departments were considered based on their involvement in the public project in Odi Olowo Ojuwoye LCDA.

Based on the sample frame sighted, the entire population was approximately fifty (50). A census sampling technique was used due to the fact that the population size is relatively small. The data relevant for the study were gathered through the primary source. It involves the use of questionnaire method to collect information directly from the respondents. The research instrument used in this study was a structured questionnaire. Data collected were analyzed using frequency distribution table and subsequently, for the purpose of testing the hypotheses of the study, linear regression was used.

Content validity was done by consulting subject matter experts who reviewed the questionnaire to ensure it covered all relevant aspects of the topic comprehensively. Their feedback was used to refine the questions, ensuring they were clear, relevant, and capable of capturing the necessary data. To test the reliability of the questionnaire, test-retest reliability and internal consistency were used. Internal consistency was measured using Cronbach's Alpha, a statistical test that evaluates the consistency of responses across items in the questionnaire. The study ensures that the data collected is both accurate and consistent, thereby enhancing the overall quality and credibility of the research findings.

Data Presentation

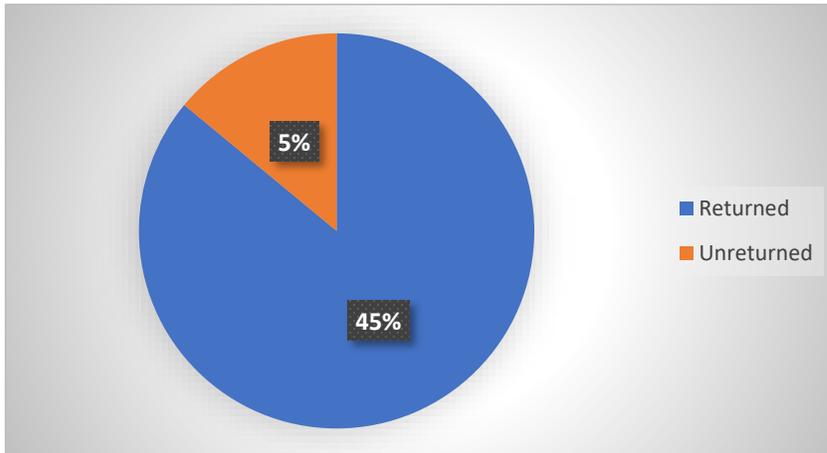
Table 1: Response Rate

Response Rate	Frequency	Percent
Returned	45	90
Unreturned	5	10
Total	50	100

Source: Field Survey (2025)

Table 1 above presents the frequency distribution of the copies of the questionnaire distributed. Based on the determined sample size, a total of 50 (100%) copies of the questionnaire were distributed. Consequently, 45 (90%) of the total copies were retrieved while the remaining 5 (10%) copies could not be retrieved.

Figure 1: Response Rate Distribution of Respondents



Source: Field Survey, 2025.

6.2 Reliability of the instrument

To guarantee uniform measurement across all questionnaire items, firstly, a reliability test was conducted. The dependability of the scale was calculated using Cronbach's alpha. Table 2 displays reliability statistics, including a Cronbach alpha of 0.717 (above the acceptable level of 0.70), indicating that the research instrument is highly dependable (Tavakol & Dennick, 2011).

Table2: Reliability Statistics

Cronbach's Alpha	No. of Items
.717	32

Source: Researcher's Computation (2025)

Descriptive Statistics

Descriptive Statistics of Respondents Biodata.

Table 3: Descriptive Statistics of Respondents Biodata.

		Frequency	Percentage
SEX	Male	28	62.2
	Female	17	37.8
AGE	20 – 29 Years	4	9.0
	30 – 39 Years	24	53.3
	40 – 49 Years	11	24.4
	50 years & above	6	13.3
	20 – 29 Years	4	9.0
Marital Status	Single	12	26.7
	Married	33	73.3
Professional Qualification	PMP	20	44.4
	CAPM	18	40.0
	Others	7	15.6
Management Level	Top	11	24.44
	Middle	19	42.22
	Low	15	33.33

Source: Field Survey, 2025.

It can be observed from the gender distribution as presented in table 3 that 28 (62.2%) of the respondents are male while 17 (37.8%) are female. This distribution suggests that the survey conducted incorporates more male respondents than the female counterparts across the selected respondents. The marital status distribution shows that 33 (73.3%) of the respondents are married while 12 (26.7%) are still single. A total of 20 of the respondents are PMP certified while 18 are CAPM certified and the remaining of the total respondents are neither PMP nor CAPM certified. Lastly, 24.4% of the respondents are top managers, 42.2% are middle level managers, and the remaining representing 33.3% are the low-level managers.

8.1 Test of Relevant Hypotheses

8.1.1 Analysis of Research Hypothesis One

Project planning does not have a significant effect on timely completion of public projects in Odi Olowo Ojuwoye LCDA.

The hypothesis was evaluated using a linear regression analysis, as required by the model. Timely completion of projects (TCP) was the dependent variable, and the PP was the independent variable. Table 4 displays the outcomes of the regression analysis.

Table 4: Model Summary of the effect of PP on timely completion of projects

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.111 ^a	.022	.020	.3761

a. Predictors: (Constant), PP

Source: Research's Computation (2025)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.556	.570		7.993	.000
	PP	.130	.142	.111	.918	.362

a. Dependent Variable: Timely completion of projects

Source: Research's Computation (2025)

The preceding model summary table reveals a moderately positive significant effect exist between the PP and timely completion of projects ($R = 0.1111$). To what extent the PP is responsible for the improved timely completion of projects is also demonstrated by the model. Adjusted $R^2 = 0.02$ implies that 2% increase in timely completion of projects is determined by PP. Since the p-value of the result (0.000) is less than the 0.01 level of significance employed in the study, the result is statistically significant. Thus, the null hypothesis of the study was rejected. This suggests that there is little influence on timely completion of projects due to implementation of Project Planning (PP).

The above table also reveals that the PP is a statistically significant predictor of project timely completion ($\beta_{CCPM} = 0.130$, $p < 0.01$) when evaluating the unstandardized coefficient of PP in the coefficient table and its associated p-value. This indicates that the timely completion of projects is somewhat impacted by PP. This provides additional evidence against accepting the hypothesis of the study. This suggests that there is a significant effect between project planning and timely completion of projects in the public projects carried out in Odi-Olowo Ojuwoye LCDA .

Discussion of Findings

According to Emere, Musonda, and Okoro (2020), Project management processes are the methodical procedures and practises that project managers employ to obtain project deliverables (tangible or intangible goods and services provided). Project deliverables measurement might be difficult. Thus, it is not possible to overemphasise the need of developing and employing project management processes to achieve commendable results and outcomes in all the knowledge areas of project management, which includes quality (Olateju, 2017). To a very reasonable degree this statement agrees with the outcomes of the study hypotheses.

Hypothesis one tested for how Project Planning (PP) does not significantly affect the timely completion of projects in Odi-Olowo Ojuwoye LCDA of Lagos State. The outcome however, revealed PP adoption explains 2% of the increase in timely delivery. This means CCPM significantly affect timely completion of projects in Odi-Olowo Ojuwoye LCDA of Lagos State. This agrees with the assertion of (Olateju, 2017).

Conclusion

It was concluded from the study that project management processes facilitate project-related outputs and delivery of services. Thus, the project planning adoption enhances timely completion of projects in Odi-Olowo Ojuwoye LCDA of Lagos State. disregarding these expert methods of project management throughout execution can have adverse effect on the timeliness with which projects are completed and delivered.

Recommendations

The study recommended that planning and works department of the Local Council Development Area should ensure continuous adoption of project planning techniques to obtain better project outcomes in terms of completion time of project.

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SHAREHOLDERS' ACTIVISM AND CORPORATE SOCIAL RESPONSIBILITY: A CONCEPTUAL PERSPECTIVE

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Abstract

Shareholders influence management and corporate activities/directions through the channels of shareholders' activism and socially responsible investing (SRI) activities. This study examines shareholders' activism and corporate social responsibility (CSR) in Nigeria. It utilizes a conceptual perspective in exploring the subject matter. The study concludes that the development needs of host communities in Nigeria are enormous, particularly the oil bearing communities of Niger-Delta, where vast environmental degradation by oil companies have made life unbearable for the indigenes. One critical and sure way of swaying the attention of management of these companies to engage in CSR is through shareholders' activism. Therefore, with the overriding influence of shareholders in companies through their voting rights and shares, company's policies and practices can be greatly influenced and forced toward Environmental, Social and Governance (ESG) and by so doing, be more accountable for their actions. The study recommends that, through engagements, constructivist and activist-based approaches, share holders can influence companies to be socially responsible towards their host environment.

Keywords: Shareholders' activism, Corporate social responsibility and Socially responsible investment

1. Introduction

The societal impacts of business operations lead to heated discussions between political entities and the public along with policy makers and academic institutions. Such controversies about shareholders' activism together with corporate social responsibility (CSR) have taken center stage in theoretical and empirical research across diverse literature during recent times. Research and policy discussions primarily focus on how shareholders use their increasing influence to direct corporate ESG adoption through policies and practices. A deep moral awareness together with multiple socially accountable deeds define the meaning of CSR. This connotes that business organizations that conduct their activities in an environment must be

socially responsible to that environment and must try to improve the conditions of the host community, as well as advance new ways to enhance and elevate these level of corporate governance and transparency in that locality (Diaz, 2016).

The Corporate Social Responsibility (CSR) school of thought began in the 1950s, and has gained ascendancy following the works of, Bowen (1953), Samuelson (1964), Carroll (1979), Freeman (1984) and Carroll (1999). CSR is the responsibility of businesses to improve the host community and environment where they carry out their activities. As a socially responsible criterion, businesses and organizations are expected to contribute to the meaningful development and welfare of the people in their host environment (World Bank, 2015). Ogbaisi and Ezuem (2021) opined that CSR can be a potent source of innovation and competitive advantage in the business environment.

Business leaders worldwide find CSR to be an inevitable organizational priority. Various organizations including governments and activists and media outlets have mastered the ability to scrutinize companies regarding their social impact through their operational actions. Consequently a broad network of international and domestic and regional groups persistently engages with sustainable development efforts within both private and public sectors. Companies are actively searching for societal solutions on strategic, tactical and operational levels because of public demand. The company achieves performance targets through this strategy. When companies direct CSR investments into both social issue resolution and business performance enhancement through core business planning systems they discover how CSR transforms from expenditure to operational constraint and philanthropic act into a strategic business multiplier. Organizations have found that CSR involvement produces competitive benefits (Beardsell, 2008).

Modern times have produced multiple factors which drive academics as well as investors along with policy authorities to focus on CSR matters. The primary policy management role of shareholders enables them to demand ESG implementation from organizations thus making companies more responsible for their actions. Research interest in this area continues to grow because of worldwide financial crises and climate change and company corruption worldwide. Companies faced restrained ability to invest in CSR yet investors along with corporations have developed awareness about societal needs that demand business engagement (OECD, 2011). Companies across the globe actively enforce environmental responsibilities within their

management practices because stakeholders expect it and new advocacy groups keep them active. Companies receive financial advantages through improved reputation, trust, customer loyalty and access to capital and enhanced human resource management and innovation capacity and risk management capabilities (Aggarwal, 2013).

For instance, in the Niger Delta region of Nigeria, the exploitation of oil with the rising tale of woes and agony on the lives and livelihood of the citizens has given rise and justification for CSR. This is due to the destructive and devastating effects of oil exploration on the environment. Apart from this, strong theoretical and empirical justification on CSR shows that a business should improve the host environment by contributing and carrying out meaningful development of the area where it operates, and by extension, improve the lives of the people where it operates. The extant literature is replete with evidence on CSR among others. However, there is paucity of evidence on the link between shareholders' activism and CSR. This is the motivation for this study.

Aside the introductory section, section 2 contains the review of literature on shareholders activism and CSR. Section 3 discusses some of the areas of CSR. The conclusion, policy outcomes and recommendations are contained in section 4.

2. Literature Review

2.0 Conceptual Review

2.1. Shareholders' Activism and Corporate Social Responsibility

Shareholders' activism refers to shareholders using their voting rights and shares to influence a company's policies and practices, and by so doing, demand greater attention to ESG factors as well as, convince and compel companies to be more accountable for their actions. Shareholder activism implies company management's behavior influenced, it also has to do with advocacy for policy changes, and influence overall conducts that are geared towards socially responsible activities. Hence, adopting activist-based approach in shareholders activism is expected to maximize shareholder wealth (Gilan & Starks, 200; Sjostrom, 2008). Thus, majority shareholder activism plays major roles in improving CSR performance. Shareholders constitute important group of stakeholders influencing management and corporate activity through activism and socially responsible investing (SRI) (Glac, 2014).

CSR represents the corporate responsibility to enhance societal welfare through its obligations to society while addressing societal issues even at minimum standards and maintaining operational areas in a sustainable manner. According to Carroll (1999) CSR represents the economic and ethical and legal with voluntary (philanthropic) social responsibilities that societies expect companies to fulfill. According to Choi and Meek (2008) CSR establishes firm accountability to assess employee welfare and the state of society and environmental conditions. Aggarwal (2013) describes environmental responsibility through two key elements: companies must maintain sustainable environmental practices while revealing the pollution factors resulting from their operations such as land air water and noise pollution. Environmental CSR awareness has increased globally as people worry about industrial effects of global warming and flooding together with destruction of agricultural land and aquatic ecosystems. The environmental aspect of CSR encompasses issues linked to greenhouse gas emissions and toxic ozone - layer depleting substances and oil spills and other pollutants as well as solid waste generation hence it has obtained prominence. According to Mutti et al. (2012) developmental CSR establishes competitive welfare distribution systems for businesses in their societal operations. The primary element of CSR functions in resource seeking regions which lack market seeking corporations. CSR social aspects strongly link to development hopes that exist within the home society where businesses operate (Boon & Ababio, 2009). According to Frynas (2005), multinational companies pursue social engagement for many business reasons that span beyond basic external regulatory requirements. Specific business organizations choose social investment strategies based on two primary motivations such as gaining competitive advantage while securing a stable workplace environment and controlling employee satisfaction. CSR includes multiple issues which range from business ethics to corporate governance together with socially responsible investing and environmental sustainability and community investment. The business operations of CSR enterprises incorporate voluntary 'trusted' social and environmental aspects as they interact with their stakeholders. Businesses implement social initiatives that extend their operations past regulatory and legal requirements since they foresee such initiatives will serve their long-term interests. Business achievements captured through CSR support organizations implement their social, environmental and economic perspectives (Beardsell, 2008).

The analysis of social responsibility opportunities by companies using core business frameworks enables them to direct their CSR initiatives toward solving social problems and enhancing their competitive advantage as described in Porter and Kramer (2006). Organizations would learn that CSR represents more than financial expenses and business limitations when they analyze CSR correctly (Beardsell, 2008). Pursuing CSR starts by developing corporate vision through innovative approaches and designing organizational targets to embed CSR in core business operations. Social responsibility performance standards must incorporate organizational contributions to three sustainability pillars including economic progress and social development together with environmental protection so they align with United Nations Millennium Development Goals. The process includes several activities that include single one-time acts of pure altruism along with sustained approaches to fulfill stakeholder demands alongside legal-binding and universal standards. The growing shareholder expectations have brought socially responsible investing (SRI) along with sustainability investing (SI) into focus since investors want to include sustainability along with responsible corporate conduct when evaluating long-term company value (Beardshell, 2008).

2.2. Theoretical Review

In the context of this study, a brief survey of three theories that pertain to CSR are presented

Agency Theory

Agency theory was developed by Jensen and Meckling in the year 1976. The theory focuses on the relationship between two parties- principal and agent. However, it is generally agreed that agency relationship is between the shareholders (principal) and the management (agent). The owners of a company or a business entity (shareholders) transfer authority to management to take charge of the activities of the organization through the board of directors (agent). The theory posits that conflict of interests between the shareholders, who are owners of the company and managers (the agent) will arise in the discharge of duties by the agent (Jensen & Meckling, 1976). The conflict of interests between these two parties arise in the course of both striving to maximize their own return and each acting as a counter balance to the uncontrolled consequences on the other.

This theory is related to this study because the agent has a responsibility to account to the principal from time to time. The responsibility, in this case, includes social and environmental responsibility matters (CSR) which are considered as stratagem to influence corporate interactions with other parties among which they relate.

Legitimacy Theory

Legitimacy theory was propounded by John Dowling and Jeffery Pfeffer in 1975. The theory posits that companies disclose information on social and environmental issues to legitimize their behaviour, influence various stakeholders and the society or the general public's perception about them to gain their support for their continuous existence. O'Donovan (2002) defines organisational legitimacy as a situation or condition that exists when company's value system is congruent with the value system of the larger or bigger social system of which the company is a part. He further explained that when a difference, actual or potential, exists between the two value systems there is therefore, a threat to legitimacy.

The theory further postulates that corporate entities should operate within the norms, value and expectations of the society, which, in this case include socially responsible activities and that companies, by law are obliged to be in consonance with corporate social disclosures in the annual report to relevant stakeholders. In line with legitimacy theory, businesses and corporate entities must demonstrate efforts to incorporate externality effects in decision making as a prerequisite for obtaining legitimacy and license to operate (Mousa & Hassan 2015). Legitimacy theory is one of the most widely discussed and successful theories stating the rationale behind CSR and social, economic and environmental information disclosure annual financial statements.

This theory is related to this study because the theory explained that the content and the extent of CSR are basically legitimate as corporations strive to legitimise their actions. Thus, business entity discloses social and environmental information voluntarily in order to get support from the society and the general public and to portray good image that it is being socially and environmentally responsible corporate entity. In order to gain societal support for their existence corporate entity engages in CSR activities within their host environment. The theory shows that there exists a social contract between corporations and the public or society and that for the former to continue to exist, its goals have to be in harmony with societal value system (Gray, et al., 1995).

Stakeholder Theory

Stakeholder theory was postulated by Edward Freeman in the year 1984. The theory centers on communication with diverse groups of stakeholder, who possess unequal power to influence the activities of the firm, even though the groups may be concerned with the environmental performance of the organization. Company needs the stakeholders' support and as a result, the company's activities must be adjusted to the needs or demands of the various stakeholders. Roberts (1992) argues that the adoption of social, economically and environmentally responsible activities and their disclosure is a constituent of the negotiation between the firm and its stakeholders for discussing the social (environmental) contracts. According to Asemah, Okpanachi and Edegoh (2013) stakeholder theory is based on organisational administration or management and corporate entity's ethics that deal with values and morals in managing company.

Watts and Zimmerman (1978) hold that disclosures of social and environmental information by corporate entity is due to the pressure from various stakeholders such as the shareholders, local communities, customers, employees, environment, suppliers, subsidiaries and joint venture partners. Thus, stakeholders are eager to see companies provide in their annual financial statements robust financial reporting capable of reflecting details of all financial costs of their business dealings including social and environmental information and CSR for the purpose of decision making.

The theory applies to this research since stakeholders plan to increase their requests for information about business social and environmental impacts. Stakeholders will strategically need to proactively deal with environmental and social issues due to growing resource scarcity and emerging business opportunities and environmental risks because mere ceremonial CSR practices are insufficient.

2.3. Empirical Literature

Ferraro and Beunza (2018) documented a three-year process through which a religious organization submitted owner proposals about environmental social and governance (ESG) matters. Through their research the investor successfully used both financial and ethical justifications to address corporate leadership which sometimes proved effective. Activist group demands force companies to undertake serious examination of their perspective fundamental aspects which includes rethinking the new arguments introduced in the contested

perspectives. The firms that view the challenge as a serious threat tend to create new perspectives that match the activist viewpoints. The firms undertake changes in both their organizational beliefs and practices which they regard as legitimate through this process. The research by Reid and Toffel (2009) evaluated ninety-four shareholder proposals that dealt with environmental matters. This research demonstrates that businesses tend to accept most recommendations which their sponsoring institution submits. Sharing Periodical research shows that investor intervention concerning environmental social governance (ESG) matters has measurable effects on both organizational conduct and shareholder financial returns. Shareholder proposals which focused on ESG reporting matters according to Serafeim (2015) boosted both ESG transparency and advanced reporting practices for corporates.

Khan et al. (2024) explored the legal implications of shareholder activism and corporate social responsibility in Peshawar, Pakistan. Utilizing a conceptual approach, the authors submit that corporate social responsibility initiatives and shareholder participation are strongly interconnected in driving change, exploring the intricate legal elements connected to this relationship. They conclude that in order to effectively maneuver through the constantly evolving landscape of business, a harmonious relationship is important between moral behaviour in business and the concerns/demands of various stakeholders, while fully understanding the legal intricacies involved in this relationship.

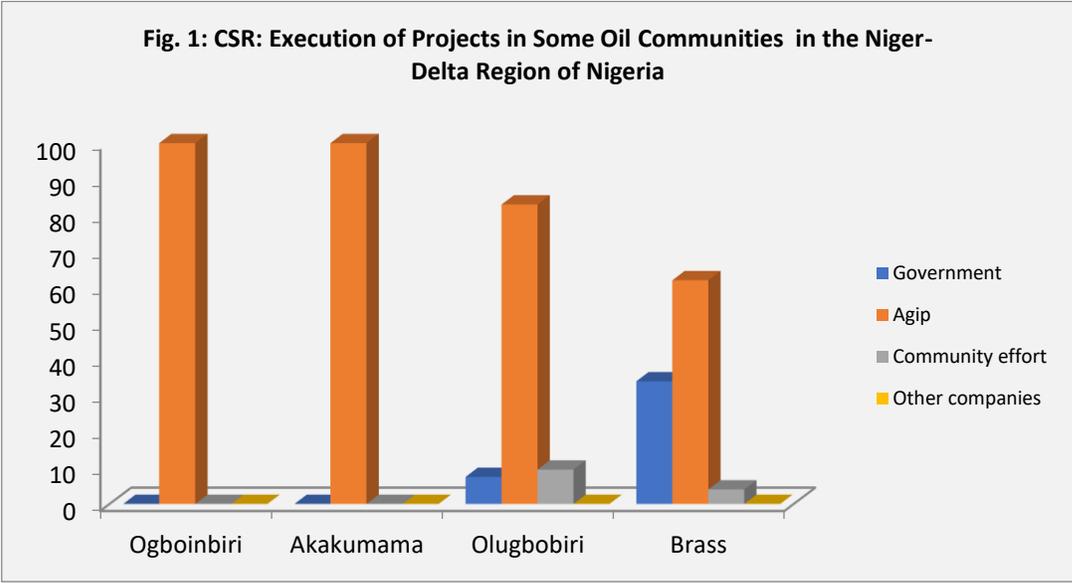
3. Corporate Social Responsibility Activities

Some CSR that a company might engage in are highlighted as follows: Provision of public water system; Provision of water treatment plant; Rural electrification project; Repair/construction of community primary and secondary schools/ teachers' quarters; Construction of science laboratories; Construction of library complex; Granting of scholarships to deserving students in institutions of learning; Provision of primary health center/maternity; Distribution of free drugs, eye treatment and medical check-ups in the host environment; Rural road projects; Construction of community town halls; Construction of markets; Provision of feed mills; Youth training, Bridges; Encouraging indigenous contractors through award of projects; Provision of jetties, ; Human capacity development programmes; Skill acquisition programmes; Annual agricultural support scheme; Supporting and encouraging quiz competition.

In Nigeria, PZ Cussons Nigeria Plc, Cadbury Nigeria Plc and Unilever Nigeria Plc are some of the firms that have been adjudged to be involved in high scaled CSR programmes used in, promoting their activities through various means. Specifically, Unilever, specifically has been commended through the positive comments provided by Euromonitor International (2020) on its CSR and SRI activities.

The firm is adjudged to have taken both a consolidated and long-term approach to business in Nigeria. It has added to its targeted CSR actions a more socially and ethically- minded agenda. Its targets are focused on four critical areas: potable water, road rehabilitation, education and healthcare.

Figure 1 shows the execution of CSR projects in some rural oil communities in the Niger-Delta region of Nigeria by one of the big multinational oil companies, Agip, that operates there.



Source: Authors’ Conception, 2025

The figure show some of the CSR projects in five oil communities in the Niger-Delta. The projects were embarked upon through a public-private participatory approach. As can be seen, both government, Agip, community efforts and the contribution of other companies make up the CSR projects.

Figure 2: Public Road Projects in an oil community in Niger-Delta Region



Fig. 3: Electrification Project in an oil community



Source: Authors' Conception, 2025

Source: Authors' Conception, 2025

Figures 2 and 3 above show public road projects and electrification projects respectively in oil communities in the Niger-Delta region of Nigeria. These projects are part of CSR of socially and ethically based firms operating in the Niger-Delta region of Nigeria.

4. Conclusion and Recommendations

This study examines shareholders activism and corporate social responsibility, drawing evidence from Nigeria. Without doubt, shareholder activism and corporate social responsibility is gaining traction in the academic and policy circles in Nigeria and across the globe. The study concludes that the development needs of host communities in Nigeria are enormous, particularly the oil bearing communities of Niger-Delta, where vast environmental degradation by the oil companies have made life unbearable for the indigenes. One critical and sure way of swaying the attention of management of these companies to engage in CSR is

through shareholder activism. While evidence points to the fact that companies in Nigeria are adopting and implementing CSR programmes as part of their corporate strategies, the evolving patronage system of the CSR still remains relatively low and requires a scaling up. Through practical and constructive dialogue, transparency and alignment with shareholders' interest and shareholder activism, as well as supporting monitoring, regulatory and institutional framework that enforce compliance, CSR, can be enhanced in Nigeria.

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JIDOKA MANUFACTURING METHODOLOGY AND PERFORMANCE OF BEVERAGE FIRMS IN EDO STATE, NIGERIA

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Abstract

Despite the increasing recognition of the importance of recent manufacturing tools like Jidoka manufacturing methodology, firms like Nigerian Bottling Company and Seven Up Bottling Company, Benin plants located in Edo State has encountered persistent challenges related to defects in its production processes. The broad objective of this paper is to examine the nexus between Jidoka manufacturing methodology and performance of beverage firms in Edo State, Nigeria. The study was fastened on Total Quality Management (TQM) Theory designed by Deming, (1986). The researcher employed survey research design and a population of four hundred and forty-seven (447) was used for the study. A sample size of two hundred and six (206) was derived using Krejcie and Morgan (1970) sampling technique. Questionnaire was the data collection tool utilized, while regression analysis was used to ascertain the relationship between the variables of study. Findings obtained from a test of the drafted hypothesis revealed that automatic defect detection has significant effect on the performance (firm competitiveness) of the two studied firms since $F\text{-statistics}=7276.706$; $R\text{-squared}=0.913$; $p<0.05$. As a result of the findings of the study, the researcher concluded that the relationship between Jidoka manufacturing methodology and performance of beverage firms in Edo State, Nigeria is significant and positive. It was against this backdrop that the researchers recommended that management of the studied firms should encourage a full implementation of Jidoka manufacturing methodology as it could help automatically detect defect and by extension impact the competitive position of the studied firms.

Key words: Jidoka manufacturing methodology, automatic defect detection, performance, firm competitiveness.

INTRODUCTION

In recent years, manufacturing companies globally have faced heightened pressures to improve production efficiency, product quality, and competitiveness. These challenges have been particularly significant in emerging markets, where manufacturers struggle to keep up with both local and international competitors (Ali, 2023). The Nigerian manufacturing sector, particularly the beverage industry, has been no exception, with companies like Seven-Up Bottling Company and Nigerian Bottling Company plants are grappling with inefficiencies, quality control issues, and market competition (Ogunleye & Adeyemi, 2022). In response to these challenges, several methodologies have been introduced to optimize production processes. Among them, the Jidoka manufacturing methodology stands out as a transformative approach. Originating from the Toyota Production System (TPS), Jidoka often referred to as "automation" focuses on the integration of automation with built-in quality control systems. Jidoka enables machines and operators to detect issues in real-time, and crucially, it allows workers to stop production when a defect is identified. This process, which focuses

on empowering employees and machines alike, ensures that quality is not compromised at any point in the production process. The methodology's emphasis on detecting defects early, stopping production immediately, and empowering workers to solve problems contributes to continuous improvement and operational excellence (Womack et al., 2022).

The Jidoka manufacturing methodology, originating from the Toyota Production System (TPS) in Japan, has become a key approach to improving manufacturing efficiency and quality control globally. Developed by Kiichiro Toyoda in the 1930s, Jidoka, meaning "automation with a human touch," integrates automation with human oversight, allowing workers to stop production whenever a defect is detected. This approach ensures quality by addressing issues immediately, preventing defects from progressing through the production process (Ohno, 2021; Liker, 2022).

In Nigeria, the adoption of Jidoka has been gradual but increasingly important, especially in sectors such as beverages, food, and consumer goods. Nigerian manufacturers facing challenges like production inefficiencies and growing competition, have embraced lean practices, including Jidoka, to improve operational efficiency and maintain product quality. Manufacturing firms have begun integrating Jidoka principles to address quality control challenges, enhancing both production efficiency and competitiveness in the market (Chukwu & Adebayo, 2023). As businesses face increasing demand for high-quality products, the adoption of Jidoka's defect detection and employee empowerment strategies allows companies to streamline their operations and reduce waste. This adoption is part of a broader shift towards quality management systems (QMS) and lean manufacturing, helping businesses improve customer satisfaction and profitability (Adeoye & Olanrewaju, 2023). Jidoka's gradual adoption in Nigeria represents a significant shift toward more efficient and quality-focused manufacturing processes, positioning companies to thrive in a competitive market.

Inculcating Jidoka manufacturing methodology into the operations of manufacturing firms could provide a strategic solutions to the operations of business organizations as it could bring about significant enhancements in production quality, operational efficiency, competitiveness and overall competitiveness. Furthermore, the adoption of Jidoka could allow the company to address quality control issues more proactively, reducing defects and waste, which in turn would improve customer satisfaction profitability and organizational performance (Smith & Ng, 2023).

Despite the increasing recognition of the importance of recent manufacturing tools like Jidoka Manufacturing Methodology, firms like Nigerian Bottling Company and Seven Up Bottling Company, Benin plants located in Edo State has encountered persistent challenges related to defects in its production processes. These issues could lead to suboptimal product quality, increased waste, and operational inefficiencies, hindering the company's ability to meet rising consumer demand for high-

quality products (Adeoye & Olanrewaju, 2023). Though scholars like Monden (2011) who examined Jidoka in the context of lean manufacturing in Japan; Kumar and Singh (2012) who explored the implementation of Jidoka in a large automobile manufacturing plant in India suggest that the application of Jidoka Manufacturing Methodology could impact the over-all performance level of business organizations, most Nigerian manufacturing firms failed to fully inculcate Jidoka Manufacturing Methodology into their operations. The foregoing propels the researcher to delve into this study as critical manufacturing techniques are required for the continuous survival of manufacturing firms.

The broad objective of this paper is to examine the relationship between Jidoka Manufacturing Methodology and performance of beverage firms in Edo State, Nigeria. Specifically, this study seeks to examine the relationship between automatic defect detection and performance of beverage firms in Edo State, Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Review

Jidoka Manufacturing Methodology

Jidoka, also known as "automation," is a cornerstone of the Toyota Production System, blending automation with human intelligence to create a more resilient and efficient manufacturing process. The methodology's foundational concept is simple yet transformative: equip machines with built-in quality control mechanisms that detect defects and automatically halt production when anomalies are identified. This approach prevents defective products from advancing along the production line, ensuring that only high-quality outputs reach the next stage of manufacturing (Ohno 1988). Unlike traditional automation systems that prioritize speed and volume, Jidoka emphasizes quality and precision, focusing on defect detection and immediate corrective action. By incorporating real-time monitoring systems such as sensors and alarms, Jidoka enables the identification of abnormalities as they occur. This preemptive action reduces the need for extensive rework or costly recalls, significantly enhancing operational efficiency and reducing waste (Likert 2020). A distinguishing feature of Jidoka is its empowerment of human operators. In traditional manufacturing setups, workers often have limited involvement in decision-making processes, particularly regarding quality control. Jidoka shifts this paradigm by granting workers the authority to stop production lines whenever they detect an issue. This empowerment not only ensures swift problem resolution but also fosters a culture of accountability and ownership. Employees are encouraged to actively participate in identifying and

addressing inefficiencies, contributing to a continuous improvement ethos known as *kaizen* (Shingo 2019).

The cultural implications of Jidoka extend beyond immediate operational benefits. It establishes an environment where quality is embedded into every stage of production, aligning with lean manufacturing principles that emphasize waste reduction, automatic defect detection, efficiency, and customer satisfaction. By integrating Jidoka, organizations can create a systematic approach to problem-solving that addresses root causes rather than symptoms, ensuring long-term sustainability in their production processes (Dombrowski and Mielke 2022).

The emphasis of Jidoka Manufacturing Methodology on quality control, employee empowerment, and continuous improvement positions it as a vital tool for manufacturers aiming to navigate the complexities of modern industry. For Nigerian businesses, the adoption of Jidoka could signal a transformative shift, aligning local manufacturing practices with global benchmarks and paving the way for sustained growth and competitiveness. Automatic defect detection is the dimension of Jidoka Manufacturing Methodology used for this study.

Automatic Defect Detection

Automatic defect detection which is a vital component of modern manufacturing processes like Jidoka Manufacturing Methodology, leverage on advanced technologies such as sensors, cameras, and machine learning algorithms to identify defects in real time without human intervention. These systems are designed to detect even minute deviations from quality standards, ensuring that production flaws are identified and addressed promptly, thereby reducing the likelihood of defective products reaching the market (Zhou, 2022). The integration of automatic defect detection systems into production lines offers several key advantages. Firstly, it enhances quality assurance by identifying defects at the earliest possible stage. Early detection reduces waste by preventing flawed products from progressing through the manufacturing process, saving both materials and time. This capability aligns with lean manufacturing principles, which emphasize waste reduction and efficiency (Chen & Lee, 2021). Secondly, automatic defect detection minimizes the need for extensive manual inspections, which can be time-consuming, expensive, and susceptible to human error. By automating the quality control process, companies can achieve higher levels of accuracy and consistency, even in high-volume production environments. For instance, vision-based defect detection systems have been widely adopted in industries such as automotive and electronics, where precision is critical (Park, 2023).

In addition to improving efficiency, automatic defect detection contributes to overall operational performance. By providing real-time data and analytics, these systems enable manufacturers to identify

patterns in defects, which can reveal underlying issues in machinery or processes. This proactive approach allows companies to address root causes rather than symptoms, fostering continuous improvement and reducing downtime (Smith, 2022).

Organizational Performance

Organizational Performance in manufacturing encompasses the overall effectiveness of an organization in achieving its strategic and operational objectives. It serves as a critical metric for assessing the success of implemented methodologies, such as Jidoka, in enhancing production outcomes. Key performance indicators (KPIs) typically include operational efficiency, product quality, financial outcomes, customer satisfaction, and market competitiveness. Each of these dimensions contributes to a comprehensive understanding of how well a manufacturing system is functioning. Operational efficiency refers to the ability of a company to maximize output while minimizing resource consumption, such as time, materials, and labor. Efficient production systems, supported by methodologies like Jidoka, streamline processes to reduce waste, improve cycle times, and enhance throughput. This leads to cost savings and better resource allocation, allowing the organization to reinvest in innovation and growth (Johnson & Akinwale, 2023).

Product quality is another critical aspect of performance. High-quality products not only satisfy customer demands but also reduce costs associated with defects, rework, and recalls. Jidoka directly addresses product quality by integrating automatic defect detection and empowering operators to halt production when abnormalities occur. This ensures that only conforming products proceed through the production line, maintaining high standards, firm competitiveness and customer trust (Nguyen, 2022). Firm competitiveness is the dimension of organizational performance used for this study.

Firm Competitiveness

Firm Competitiveness refers to a company's ability to outperform its rivals by delivering superior products or services while maintaining efficiency and adaptability. It is a critical factor in sustaining business growth and profitability, especially in dynamic and highly competitive markets. The implementation of Jidoka manufacturing methodology significantly enhances competitiveness by addressing key aspects such as product quality, operational efficiency, and responsiveness to market demands (Eze & Oladimeji, 2023). One of the primary ways Jidoka contributes to competitiveness is through its emphasis on defect-free production. By integrating automatic defect detection and empowering operators to address issues in real time, companies can ensure consistent product quality. High-quality products not only satisfy customer expectations but also enhance brand reputation, fostering customer loyalty and repeat business (Nguyen & Roberts, 2022).

Operational efficiency is another pillar of competitiveness supported by Jidoka. By automating processes with built-in quality controls, manufacturers reduce downtime, eliminate waste, and optimize resource utilization. These efficiencies translate into cost minimization, which can be ploughed back to investment in innovation or passed on to customers in the form of customer friendly pricing (Okonkwo & Adebajo, 2023). Adaptability to market demands is also critical for maintaining a competitive edge. Jidoka's focus on continuous improvement encourages a proactive approach to identifying and addressing production challenges, allowing companies to respond swiftly to changes in customer preferences or industry trends. This agility is essential for companies looking to differentiate themselves in saturated markets (Hernandez, 2023).

Theoretical Framework

This study is fastened Total Quality Management (TQM) Theory designed by Deming, 1986; improved upon by Juran, 1988 and further improved by Feigenbaum, 1991. This Theory is a coherent and structured approach to organizational management geared towards improving the quality of products and services through continuous refinement and responsiveness to feedback. TQM emphasizes that quality is the responsibility of all employees across all levels of the organization, advocating for a holistic approach to quality assurance. The theory suggests that to achieve superior customer satisfaction, organizations must consistently improve their processes, integrate quality into all aspects of production, and empower employees to contribute to quality control (Nguyen & Roberts, 2022).

Integrating TQM principles into an organization's processes can create a sustainable quality management system that continually evolves to meet customer demands and improve operational performance. The emphasis on continuous improvement, defect prevention, and employee involvement, which TQM highlights, directly supports the successful implementation of Jidoka in manufacturing settings. This combination can lead to enhanced production quality, increased operational efficiency, and greater market competitiveness (Eze & Oladimeji, 2023).

This theory is imperative to this paper because by advocating product quality, organizations like Seven-Up Bottling Company and Nigerian Bottling Company can leverage Jidoka to achieve higher quality standards, operational efficiency, and sustained competitive position.

Empirical Review

Shingo (1989) in Japan investigated the Toyota Production System's (TPS) application of Jidoka in the automotive industry. Using case study methodology, Shingo analyzed how automakers implemented Jidoka to enhance production quality. His findings revealed that Jidoka led to a significant reduction in defects and improved operational efficiency. The study concluded that Jidoka's emphasis on defect

detection and problem-solving by operators was crucial in Toyota's ability to maintain its competitive edge in the automotive sector.

Lee et al. (2009) conducted a study in South Korea on the integration of Jidoka within electronics manufacturing. The study used a quantitative approach, collecting data from 15 firms employing Jidoka techniques. The results showed a 20% decrease in defect rates and a 15% reduction in production costs. The research concluded that Jidoka not only improved product quality but also enhanced organizational responsiveness and agility, enabling companies to compete more effectively in the global electronics market.

Monden (2011) examined Jidoka in the context of lean manufacturing in Japan. The research employed a combination of case studies and survey data from various manufacturers. Findings showed that Jidoka significantly decreased manufacturing defects and downtime by empowering operators to stop the production line when problems arose. The study concluded that Jidoka, when integrated into a lean environment, promotes higher efficiency and product consistency, which ultimately leads to better customer satisfaction.

Kumar and Singh (2012) explored the implementation of Jidoka in a large automobile manufacturing plant in India. Using a mixed-method approach that included interviews with production managers and data analysis from production records, the study found that Jidoka led to a 30% improvement in quality control and a 25% reduction in rework costs. The research highlighted the importance of operator empowerment and real-time problem detection in improving both efficiency and product quality.

Gap in Knowledge

None of the previous studies of scholars in the area of study examined Jidoka Manufacturing Methodology as it relates to Performance of beverage plants in Edo State, Nigeria. This is the crack in knowledge or existing literature that this study seeks to fill.

METHODOLOGY

Research Design

Survey research design was utilized for this study. It was utilized as a result of the nature of the study. Survey research design enables the researcher to study what happens to the studied sample subjects without altering them.

Area of Study

This research work is designed to examine Jidoka Manufacturing Methodology and Performance of Seven Up Bottling Company plant (Iguosa, Benin-city) and Nigerian Bottling Company plant (Eyaen, Benin-city).

Population Size

The population of the studied beverage firms in Edo State was used for the study. The population of Nigerian bottling company, Benin plant is 265 (115 lower level employees, 124 middle level employees and 26 top level employees). That of Seven up bottling company is 182 (106 lower level employees, 62 middle level employees and 14 top level employees). This gives a total population of 447.

Sample Size and Sampling Technique

Krejcie and Morgan (1970) sampling technique was utilized by the researcher. The formular is given thus:

$$S = \frac{x^2 NP(1-P)}{d^2 (N-1) + x^2 P(1-P)}$$

Where S= Sample Size

X²= Table value of chi-square for 1 degree of freedom 0.05 confidence level (3.84)

N= population Size (447)

P= Population proportion (0.5)

d²= Degree of accuracy (0.05)

S= 3.84 (447) (0.5) (1-0.5)

$$S = \frac{(0.05)^2 (447-1) + (3.84) (0.5) (1-0.5)}{2.08}$$

$$S = \frac{1.12+0.96}{2.08}$$

$$S = \frac{2.08}{2.08} = 206$$

As a result of the analysis above, two hundred and six(206) copies of the data collection tool were randomly distributed to respondents of the studied firms.

Bowley's (1926) allocation formula was used to determine the copies of the data collection instrument to be randomly administered to each of the studied organizations. As a result of the analysis above, one hundred and twenty two(122) copies of the data collection instrument were randomly distributed to employees of Nigerian Bottling Company, Benin Plant while eighty four (84) copies of the data collection tool were randomly distributed to employees of Seven Up Bottling Company, Benin plant.

Instrument of Data Collection

Questionnaire was used to elicit information from the respondents. The questionnaire was designed on a five point Likert Scale. Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD).

Validity of the Instrument

The extent to which a research instrument measures what it intends to measure is referred to as validity. Content and face validity test was applied by the researcher for the study. It was ensured by the researcher and other experts in the area of study.

Reliability of the Instrument

The measure of consistency of a research instrument is referred to as reliability. Cronbach Alpha reliability test was utilized by the researcher for the study. Suwannoppharat and Kaewsra, (2015) reliability coefficient of 0.696 was used for the study. Therefore, a benchmark of 0.696 was used for the study.

Table 3.1: Scale: Reliability Statistics for Jidoka Manufacturing Methodology

Reliability Statistics	
Cronbach's Alpha	N of Items
.813	5

Source: Field Survey 2025

The Cronbach Alpha score of the reliability statistics for Jidoka Manufacturing Methodology is 0.81. Since it is greater than 0.696, it makes the instrument reliable.

Table 3.2: Scale: Reliability Statistics for Organizational Performance

Reliability Statistics	
Cronbach's Alpha	N of Items
.841	5

Source: Field Survey 2025

The Cronbach Alpha score of the reliability statistics for Organizational Performance 0.84. Since it is greater than 0.696, it makes the instrument reliable.

Techniques of Data Analysis

Mean was the descriptive statistics used to analyze the research question using SPSS version 20; regression analysis was the inferential statistics used to test the formulated hypotheses using E-Views 10.

DATA PRESENTATION AND ANALYSIS

Data Presentation and Analysis

Table 4.1: Analysis of Returned and Unreturned Questionnaire

Returned (Un-mutilated)	170	82.52%
Returned (Mutilated)	18	08.74%
Unreturned	18	08.74%
Total Copies Administered	206	100.00%

Source: Field Survey, 2025

From the two hundred and six (206) copies of the questionnaire administered to respondents, one hundred and seventy (170) un-mutilated copies (82.52%) were returned, eighteen (18) mutilated copies (08.74%) were returned while 18 (08.74%) copies were unreturned. As a result of that, one hundred and seventy (170) copies of the questionnaire were used for the analysis.

Is there a relationship between automatic defect detection and performance of beverage firms in Edo State?

Table 4.2: Descriptive Statistics for Automatic Defect Detection

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	
Q1	170	1.00	5.00	3.0000	1.41839	
Q2	170	1.00	5.00	3.3000	1.42193	
Q3	170	1.00	5.00	3.6000	1.28441	
Q4	170	2.00	5.00	3.8000	.98269	
Q5	170	1.00	5.00	3.3000	1.10325	
Valid N (listwise)	170					

Source: Field Survey, 2025

Mean scores based on responses from the questions relating to automatic defect detection of the two studied firms are >2.5. This makes the responses appropriate for the study.

Table 4.3: Descriptive Statistics for Organizational Performance (Firm Competitiveness)

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	
Q1	170	1.00	5.00	2.9941	1.41629	
Q2	170	1.00	5.00	3.2824	1.42764	
Q3	170	1.00	5.00	3.6059	1.27932	
Q4	170	1.00	5.00	3.7824	.99984	
Q5	170	1.00	5.00	3.3059	1.09354	
Valid N (listwise)	170					

Source: Field Survey, 2025

Mean scores base on responses from the questions relating to organizational performance (firm competitiveness) on the two studied firms are >2.5. This makes the responses appropriate for the study.

Test of Hypothesis

Ho: The relationship between automatic defect detection and performance of beverage firms in Edo State is not significant and positive.

Dependent Variable: ORG_PERF

Method: Least Squares

Date: 03/23/25 Time: 07:18

Sample: 1 170

Included observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.900000	0.182737	15.86979	0.0000
DEF_DET	0.940000	0.011019	85.30361	0.0000
R-squared	0.913434	Mean dependent var		17.00000
Adjusted R-squared	0.913299	S.D. dependent var		6.742956
S.E. of regression	1.015944	Akaike info criterion		2.881209
Sum squared resid	173.4000	Schwarz criterion		2.918101
Log likelihood	-242.9028	Hannan-Quinn criter.		2.896179
F-statistic	7276.706	Durbin-Watson stat		1.917878
Prob(F-statistic)	0.000000			

Source: Field Survey, 2025

Findings obtained from a test of the formulated hypothesis revealed that automatic defect detection has significant effect on the performance of the two studied firms ($\beta = 0.940$, t-statistics = 15.86979, $p < 0.05$). Also, automatic defect detection is a predictor of organizational performance (F-statistics = 7276.706; R-squared = 0.913; $p < 0.05$). The predictor variable explained 91.3% of the variance in performance of the studied firms, while the remaining 8.7% could be as a result of the effect of the extraneous variables. The Durbin Watson value of 1.9 reveals that there is no first order serial correlation. This makes the result appropriate.

Discussion of Findings

Results obtained from a test of the formulated hypothesis shows that a strong significant positive relationship exists between automatic defect detection and organizational performance. This is in tandem with the work of Shingo (1989) who investigated the Toyota Production System's (TPS) application of Jidoka in the automotive industry. Findings of the study revealed that an application of Jidoka Manufacturing Methodology led to a significant reduction in defects and improved operational efficiency. The study of Lee et al. (2009) who conducted a study in South Korea on the integration of Jidoka within electronics manufacturing also aligns with findings obtained from a test of the formulated hypothesis. The research concluded that Jidoka not only improved product quality but also enhanced organizational responsiveness and agility, enabling companies to compete more effectively in the global electronics market. The study of Monden (2011) who examined Jidoka in the context of

lean manufacturing in Japan also corroborates the results obtained from a test of the formulated hypothesis. Findings showed that Jidoka significantly decreased manufacturing defects and downtime by empowering operators to stop the production line when problems arose. The study of Kumar and Singh (2012) who explored the implementation of Jidoka in a large automobile manufacturing plant in India also agrees with findings revealed from a test of the formulated hypothesis. Findings of the study highlighted the importance of operator empowerment and real-time problem detection in improving both efficiency and product quality.

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

Findings obtained from a test of the formulated hypothesis revealed that automatic defect detection has significant effect on the performance of the two studied firms ($\beta = 0.940$, t-statistics = 15.86979, $p < 0.05$). Also, automatic defect detection is a predictor of the performance of the studied firms (F-statistics = 7276.706; R-squared = 0.913; $p < 0.05$).

Conclusion

Flowing from results obtained from a test of the formulated hypothesis, the researcher concludes that the relationship between Jidoka Manufacturing Methodology and Performance of the two studied beverage firms is significant and positive. This is because the tested hypothesis showed that the relationship between automatic defect detection and organizational performance (firm competitiveness) is significant and positive.

Recommendation

Base on the findings obtained, the researcher recommended that management of the studied firms should try to fully implementation of Jidoka Manufacturing Methodology as it could help to automatically detect defect and by extension impact the competitive standpoint of the studied firms.

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INNOVATION STRATEGY AND PERFORMANCE OF MANUFACTURING FIRMS IN EDO STATE

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Abstract

This study examines the effect of innovation strategy on performance of manufacturing firms in Edo State, Nigeria. The broad objective of the study is to determine the effect of innovation strategy on performance of manufacturing firms, with a specific focus on the relationship between product innovation and performance of manufacturing firms in Edo State. A survey research design was employed, using questionnaire to collect data from a sample size of 298 respondents. Taro Yamane sampling technique was used to determine the sample size. The collected data was analyzed using Pearson correlation analysis via SPSS version 22. The findings of the study reveals that there is a significant relationship between product innovation and performance of manufacturing firms in Edo State with correlation coefficient of 0.531 and statistically significant at P-value 0.000 less than 0.05 significant level. Hence, the study concludes that innovation strategy have significant effect on performance of manufacturing firms in Edo State and recommends that management of the studied manufacturing firms in Edo State should make concerted effort to prioritize product innovation strategies in their organizational production strategy, as this will place the organization in the best position to compete favourably in the industry it belongs and gain a competitive advantage to capture a higher market share.

Keywords: Innovation, Product Innovation and Performance

1. Introduction

In today's vastly competitive business landscape, the advancement of organizations is largely determined by the ability of their leaders to develop distinctive strategies that enhance performance. Companies that implement innovative and well-suited strategies are more likely to achieve superior results and fulfill their goals and objectives in the future (Onikoyi, 2017). The adoption of unique business strategies enables firms to differentiate themselves, enhance production, attract customers, build goodwill, and improve overall performance. Consequently, organizations that seek to gain a competitive edge must adopt strategic initiatives that enhance product quality, improve marketing efficiency, surpass competitors, and increase profitability, which ultimately leads to higher performance levels (Wheelen & Hunger, 2019). To achieve sustainable success, organizations must prioritize strategic

differentiation, including advancements in technology, research and development, marketing techniques, customer engagement, product innovation, and workforce training. High-quality products capture consumer interest, drive sales growth, improve profitability, and contribute to organizational success (Ahmed & Othman, 2019). Value creation plays a fundamental role in organizational success, serving as a key performance indicator. It is reflected in financial metrics such as net profit margin, return on sales, and leverage ratios. As a result, companies must formulate productive strategies that boost performance and attract consumer attention. One of the most valuable approaches for achieving this is innovation strategy, which equips managers with the necessary tools to enhance the work environment and optimize organizational efficiency (Davila, Epstein, & Shelton, 2017). Innovation involves transforming creative ideas into practical applications that drive positive change in a given field. It is defined as the effective execution of creative concepts within an organization and is considered a crucial factor in driving growth and profitability. Innovation is widely acknowledged as the paramount factor in maintaining a competitive advantage (Tidd, Bessant, & Pavitt, 2019). Davila, Epstein, and Shelton (2019) assert that innovation is a crucial element of sustained success and must be integrated into corporate processes. Schematic (2011) identifies four primary innovation strategies: process innovation, technological innovation, market innovation, and product innovation.

Product innovation functions as a strategic tool that connects a company's resources and competencies with external opportunities, promoting organizational sustainability and long-term success (Josee&Shisia, 2018). It is essential for businesses striving to enhance performance, as it often leads to increased profitability and a larger market share (Smit, 2020). Product innovation entails the introduction of new or significantly improved products, incorporating advancements in technology, material composition, integrated software, and ease of use, as well as the inclusion of additional functional features. A product innovation strategy involves introducing new goods or significantly improving existing ones to meet customer needs and intended purposes (Nwosu, Awurum, & Okoli, 2019). It encompasses the creation of new products, alterations to current designs, and the incorporation of enhanced materials or components in production (Policy Study Institute, 2010). Product innovation enhances product quality for the benefit of consumers (Barlow, 2017) and includes major

advancements in technology, materials, user experience, and other strategic improvements that boost productivity and ultimately enhance organizational performance.

Organizational performance is the measurement of value creation in relation to a company's objectives and goals (Dozier, 2019). It is a crucial determinant of an organization's sustainability, growth, and competitive standing (Payal, Ahmed, & Debnath, 2019). Performance is achieved through the efficient application of knowledge, skills, and competencies to realize organizational goals. In this study, organizational performance is linked to market share, which is further categorized into growth and profitability (Payal, Ahmed, & Debnath, 2019). Banafa, Muturi, and Ngugi (2019) highlight that organizational performance significantly contributes to market value enhancement, underscoring the necessity for firms to adopt product innovation strategies to strengthen their market position. To remain competitive, organizations must consistently implement and refine their product innovation strategies. With the growing influence of globalization, shifting consumer preferences, and rapid technological advancements, businesses operating in both local and international markets increasingly recognize product innovation as a crucial factor for maintaining performance in dynamic environments (Shisia, Sang, Matoke, & Omwario, 2019). However, despite the potential of product innovation to expand market share, many manufacturing firms in developing countries, including Nigeria, continue to struggle with performance challenges due to difficulties in implementing product innovation strategies (Ngugi & Karina, 2018). Structural and managerial barriers have hindered the full execution of these innovations in many organizations (Hayes, Hunton, & Reck, 2020). Given these challenges, this study aims to assess the impact of product innovation on the market share of manufacturing firms in Edo State.

The broad objective of the study is to determine the effect of innovation strategy on organizational performance. Specifically; this study seeks to determine the nature of relationship between product innovation and organizational performance of manufacturing firms in Edo State.

2. Review of Related Literature

Conceptual Review

2.1 Organizational Performance

Dozier (2019) describes organizational performance as the process of generating value, assessed in relation to predefined goals and objectives. It plays a crucial role in fostering economic development and the expansion of various organizations (Payal, Ahmed, & Debnath, 2019). Achieving organizational performance requires effectively applying knowledge, skills, and expertise to accomplish strategic objectives. According to Banafa, Muturi, and Ngugi (2015), enhancing market value is a significant factor in organizational performance, highlighting the importance of adopting strategies that boost performance.

Furthermore, Payal, Ahmed, and Debnath (2019) categorize organizational performance into three key areas: market share, growth, and profitability. Organizational performance is fundamentally linked to an entity's ability to generate profits and expand to fulfill its overarching strategic goals (Hult, Hurley, & Knight, 2021). It is a direct outcome of how well an organization responds to competitive forces and adapts to external environmental changes, thereby integrating efficiency and competency (Miller, as cited in Muhammad, 2023). Yahya, Marwan, and Muna (2019) emphasize that a firm's capacity for innovation is significantly influenced by opportunities in its external environment. This suggests that businesses operating in emerging markets can gain a competitive advantage by prioritizing innovation, which enhances their reputation and market presence. Essentially, organizations pursue innovation to strengthen their organizational performance and competitive positioning (Gunday, Ulusoy, Kilic, & Alpkan, 2019).

2.1.2 Innovation

Modern businesses operate under intense pressure from competitors providing similar products or services, as well as from consumers who continually demand improvements. To remain competitive, companies must consistently explore new production methods, introduce innovative products, or enhance existing offerings. Innovation encompasses transforming novel ideas and knowledge into new products and services. McDaniel (2021) describes innovation as an activity that introduces new production methods and product concepts. He

outlines several steps in the innovation process, including developing new products, implementing new production techniques, expanding into new markets, sourcing raw materials efficiently, and restructuring organizational frameworks within industries.

Lionnet (2018) defines innovation as a process in which creative ideas progress to the stage of generating financial value. It is a multifaceted technical, economic, and social endeavor that brings together individuals with diverse perspectives and motivations. Similarly, Ramadani and Gerguri (2018) describe innovation as the development of new products, technological processes, organizational structures, or the enhancement of existing ones. The UK Department of Trade and Industry (2018) characterizes innovation as the successful commercialization of new ideas, emphasizing that it requires investments in product development, business processes, and service improvements. This classification includes innovations in production—improving or developing products; innovations in services—enhancing or introducing new services; innovations in processes—optimizing production methods; and innovations in management—implementing new business structures.

2.1.3 Product Innovation

Product innovation refers to the enhancement of existing products, the redesign of established goods, or the incorporation of new materials in manufacturing (Alegre, Lapiedra, & Chiva, 2016). It involves developing completely new products that differ significantly from prior offerings, reinforcing the idea that product innovation aligns closely with the concept of novelty (Herrmann, Tomczak, & Befurt, 2019). Elsenbach (2017) describes product innovation as a process encompassing design, research and development, administration, and marketing efforts aimed at successfully introducing new products to the market. According to Wheelwright (2017), product innovation is a critical component of new product development, allowing companies to secure future profitability.

The Policy Study Institute (2010) defines product innovation as the introduction of new goods, modifications to existing product designs, or the use of advanced materials and components. Lockey (2019) emphasizes that product innovation fosters uniqueness in production, which enhances differentiation and strengthens a company's reputation. Pearce and Robinson, (2018) argue that successful innovation strategies require a clear understanding of an organization's objectives, available resources, and market opportunities. Furthermore,

product innovation is considered the foundation of an inventive organization, contributing significantly to competitive advantage in both new and established markets (Onikoyi, 2017). Firms frequently introduce new products or modify existing ones to meet evolving customer preferences (Adner & Levinthal, 2021). Consequently, product innovation plays a pivotal role in corporate strategy by leveraging diverse capabilities, identifying market opportunities, and enhancing profitability.

Product innovation is fundamentally concerned with improving product quality for consumers' benefit (Barlow, 2019). It also reflects a company's dedication to research and development, as well as its ability to minimize environmental impacts by creating durable and efficient products (Manrique & Marti-Ballester, 2017). As a driver of competitive advantage, product innovation enables firms to integrate various competencies within an established market framework. According to Nwosu, Awurum, and Okoli (2019), product innovation strategies focus on developing new or improved goods and services to meet customer needs. Polder, Van Leeuwen, Mohnen, and Raymond (2020) further describe product innovation as a method for introducing new products or improving existing ones to enhance market visibility and consumer satisfaction.

2.1.4 Product Innovation and Organizational Performance

Product innovation is closely aligned with an organization's mission, vision, and strategic objectives. To remain competitive, businesses must invest in research and development, prioritize technological advancements, and ensure high product quality. The relationship between product innovation and firm performance is based on the premise that newly introduced products face minimal direct competition initially, allowing firms to capture a significant market share and generate substantial profits. While competitors may eventually replicate these products, organizations that consistently innovate can maintain a competitive edge and sustain their performance (Sharma & Lacey, 2017).

Varis and Littunen (2020) argue that the primary motivation behind corporate innovation efforts is to enhance company performance and achieve long-term success. (OECD & Eurostat, 2015) also highlights the significant role of innovation in driving business performance. Organizations that continuously innovate can differentiate themselves in the market, strengthen customer loyalty, and achieve sustained growth.

2.2 Theoretical Framework

This research is based on Schumpeter's Theory of Innovation, which was introduced by Schumpeter (1934). The theory emphasizes the importance of organizations employing individuals with entrepreneurial skills to remain competitive in the modern business environment. According to Schumpeter, employees who possess the ability to think independently and creatively contribute significantly to enhancing organizational performance. The development of research and innovation within any organization is largely influenced by employees who share a common mental framework. Additionally, modifying organizational strategies and adapting to changes in the business landscape naturally leads to improved performance.

Schumpeter also introduced the concept of "creative destruction," which suggests that innovation is a continuous and disruptive force that drives economic growth. From his perspective, innovation is an evolving process, and organizations should consider it an essential and dynamic element of their operations. The relevance of this theory to the present study lies in its focus on how organizations can achieve their objectives through product innovation and continuous improvements in quality.

2.3 Empirical Review

Nyamao and Tari (2023) did a study on the association between product innovation and the performance of financial technology enterprises in Kenya. Their research attempted to evaluate the extent to which product innovation influenced the performance of these companies. A descriptive study design was developed, targeting all 36 financial technology enterprises in Kenya. Due to the tiny population number, a census approach was utilized. The acquired data were examined using both descriptive and inferential statistics, including frequency distributions, percentages, means, modes, standard deviations, and frequency tables. Regression analysis was also undertaken to analyze the influence of product innovation on firm performance. The study's findings demonstrated that product innovation had a large and positive influence on the financial technology sector, leading to improvements in customer happiness, market share expansion, and better employee satisfaction.

Nathan and Ande (2023) explored how product innovation methods affect the success of manufacturing enterprises in Nigeria. The study evaluated 43 manufacturing enterprises, with a sample size of 40. Content analysis was utilized to examine the data collected over a ten-year period, using STATA software. The findings suggested that product innovation methods greatly contributed to corporate success, since all factors connected to product innovation were positively correlated with organizational performance.

Adegboyega (2017) studied the effect of product innovation on business success using a case study of Nestlé Nigeria Plc. The study adopted a survey research approach, obtaining data from many departments, including production, research and development, sales, marketing, and quality control—sectors heavily involved in product creation. A total of 340 valid surveys were gathered. The data were examined using regression and correlation approaches. Findings demonstrated that product innovation had a higher influence on performance when customers perceived it as unique, useful, and superior. Additionally, the creativity and quality of the innovation process were proven to have a favorable effect on both product and organizational performance.

Tamunomiebi and Okorie (2019) evaluated the link between product innovation and company performance within the insurance sector in Rivers State, Nigeria. The study used a survey research design and analyzed data from 55 insurance firms registered with the National Insurance Commission of Nigeria. Since the population number was manageable, a census approach was chosen. Statistical analysis was performed using the Spearman Rank Order Correlation Coefficient with SPSS software. The results indicated a substantial positive link between product innovation and key performance measures such as profitability and market share. Consequently, the study showed that product innovation considerably boosts organizational performance in the insurance market in Rivers State.

Agu and Obi (2024) conducted study on the impact of product innovation on business success, concentrating on Nestlé Nigeria Plc. The study gathered data from 340 employees and examined it using regression analysis via SPSS software. Findings indicated that product innovation plays a key impact in increasing organizational effectiveness.

Research Methodology

3.1 Research Design: This study adopted a survey research design.

3.2 Population of the Study: The population of the study consist of all 1,172 employees of the three selected manufacturing firms in the state. The selected manufacturing firms are Guinness Nigeria Plc, Nigerian Bottling Company, and Seven Up bottling company. The population of the selected manufacturing firms are; Nigerian Bottling Company 272 employee, Guinness Nigeria Plc, 712 employees, and the population of Seven Up bottling company is 188 employees, all in Edo State, South-South Nigeria.

3.3 Sample Size Determination: The sample size 298 of the study was be determined using Taro Yamane's Statistical formula. The formula with its calculation is given below as:

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

Where:

n = sample size.

N = population size (1,172).

e = error limit (0.05).

$$n = \frac{1172}{1+(1172)0.0025}$$

$$n = \frac{1172}{3.93}$$

$$n= 298$$

3.4 Method of Data Collection: Primary source of data collection with the aid of a well-structured questionnaire was employed for the study.

3.5 Validity of Instrument: The instrument for data collection was subjected to content validity

3.6 Reliability of the Instrument: The Cronbach's-Alpha reliability technique was employed for the study. The reliability coefficient obtained was 0.72 which is higher than the benchmark of 0.70 recommended by Suwannoppharat and Kaewsra (2015).

Table 3.1 Reliability Table

Reliability Statistic	
Cronbach's	N of Items
Alpha	
0.72	10

Source: Field Survey 2025

3.7 Method of Data Analysis: Pearson Product Moment Correlation Coefficient was deployed in testing the hypothesis of the study.

Data Presentation and Analysis

4.1 Data Presentation

Table 4.1: Returned and Unreturned Questionnaire

Analysis of Returned and Unreturned Questionnaire		
Returned (Valid)	269	90.27%
Unreturned	29	09.73%
Total questionnaires administered	298	100%

Source: Field Survey, 2025

Table 4.1 reveals that out of the 298 copies of the questionnaire administered to the firms under study, 269 copies of the questionnaire, signifying 90.27% were returned valid, 29 signifying 9.73% were not returned. This is the justification behind the usage of only 269 copies of the questionnaire out of the 298 administered to the studied firms for data analysis.

4.2 Data Analysis

Test of Hypothesis

H₁ there is no relationship between product innovation and organizational performance of manufacturing firms in Edo State.

Table 4.2: Correlation table for between Product Innovation and organizational performance of manufacturing firms in Edo State.

Correlations

		Product Innovation	Org performance
Product Innovation	Pearson Correlation	1	.531**
	Sig. (2-tailed)		.000
	N	269	269
Org performance	Pearson Correlation	.531**	1
	Sig. (2-tailed)	.000	
	N	269	269

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

Source: Field Survey, 2025

A moderately positive correlation between product innovation and organizational performance of Edo State manufacturing enterprises is indicated by the table of correlation between product innovation and organizational performance, which displays a Pearson R coefficient of 0.531. A P-value of 0.000 indicates statistical significance, and a P-value of 0.05 indicates that the likelihood of the outcome being a random chance is extremely low. Therefore, the alternative hypothesis is accepted and the null hypothesis is rejected.

4.3 Discussion of Findings

Analysis results reveal a correlation coefficient of 0.531 and a statistically significant P-value of 0.000 less than the 0.05 significant level, this analysis's findings indicate a significant relationship between product innovation and organizational performance manufacturing firms in Edo State. This implies that the organizations under study will gain a larger market share than their competitors in the industry and improve their organizational performance if they consistently create new products, alter their designs, or use new materials or components in their manufacturing. This finding is consistent with that of Tamunomiebi and Okorie (2019), who conducted research on the relationship between product innovation and organizational performance of insurance companies in Rivers State. Their findings showed that product innovation and all organizational performance metrics (increased market share and profitability) of the companies under study were positively correlated. Additionally, it is

consistent with the findings of Agu and Obi's (2024) study, which looked at how product innovation affected organizational performance (A Survey of Nestle Nigeria Plc). The study's findings indicate that product innovation significantly affects organizational performance.

Conclusion and Recommendation

5.1 Conclusion

Based on the findings of the study which revealed that product innovation is positively related to organizational performance, it is concluded that innovation strategies has positive effect on organizational performance of manufacturing firms in Edo State, Nigeria.

5.2 Recommendation

Based on the findings of the study, it is recommended that management of manufacturing firms should make concerted effort to prioritized product innovation strategies in their organizational production strategy as this will place the organization in the best position to compete favourably in the industry and to be at the advantage to capture the higher market share.

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PROJECT RISK AND PROFITABILITY OF SELECTED TELECOMMUNICATION FIRMS IN NIGERIA

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ABSTRACT

The increase in competition has led many telecommunication firms to review factors that affect profitability including project risks on projects being implemented by these firms. However, being able to manage project risks that enables optimal profitability among telecommunication firms remains a challenge. Thus, the study examined profitability and project risk of selected Nigerian telecommunication firms. The study used a survey research design and a quantitative approach. The population for the study consisted ninety-four project team members selected from three (3) telecommunication firms. The sample size used for this study was total enumeration. A validated adapted questionnaire, for the purpose of collecting data, was distributed to the participants. A reliability test of the questionnaire was achieved with Cronbach Alpha values between 0.734 and 0.909. Descriptive and inferential statistics were used to analyse the data and test the hypotheses. The result obtained from the analysis revealed that project risk has statistically negative and significant effect on productivity of selected telecommunication firms in Nigeria ($\beta = -0.383$, $t = -4.562$, $p < 0.05$). The study concluded that project risk affect profitability of selected telecommunication firms in Nigeria. It was recommended that telecommunication firms should place high emphasis on risk mitigation techniques. Training for project employees and the employment of subject matter experts (project risk experts) are recommended to help proactively manage risks on projects.

Keywords: Negative Risk, Operating profit, Planning, Positive Risk, Profitability, Project Risk,

1.0 Introduction

In today's competitive and technology-driven business environment, telecommunication firms in Nigeria are under increased pressure to review factors that affects profitability including project risks on projects being implemented by these firms. However, being able to manage project risks that enables optimal profitability among telecommunication firms remains a challenge. The effect of project risk on profitability of leading telecommunication providers such as MTN Nigeria, Airtel Nigeria and 9mobiles high even while undertaking strategic projects that are aimed at enhancing better quality and stakeholder satisfaction (Bhullar, 2018; International Telecommunication Union [ITU], 2022). The success of such projects is frequently challenged by risks such as budget overruns, funding delays, currency fluctuations, poor duration estimates, unfamiliar technologies, integration challenges, scope creep and poor requirements gathering. These uncertainties affect project deliverables and ultimately the project objectives which are crucial factors for determining profitability (Hillson, 2009). Poorly managed project risks negatively impacts profitability while effective risk management increases efficiency, alignment with business objectives and profitability (Kerzner, 2017).

Further, the study of Williams (2017) explained that risk reduction, risk transfer, and risk retention were the elements of project risks that must be implemented to ensure the successful delivery of products for firms. The study further explained that improper project risk considerations on projects within the life cycle of information and communication technology (ICT) projects do lead to poor quality, loss of customers and delay in the release of products to the market, which eventually affected profitability of these firms (Banaitiene&Banaitis, 2012). To corroborate this assertion, Kerzner (2017) explained that when risks are poorly managed, projects may suffer delays, exceed cost estimates, or deliver products with low qualities which will eventually impact profitability of the firm concerned. While several studies have reviewed the interactions that exists between project management and organisational performance, few studies have however critically review the relationship that exist between project risk and profitability of telecommunication firms in Nigeria. The study evaluates how project risk activities such as project risk identification and documentation, project risk control and management, project risk analysis and assessment, project risk review and, project risk reporting interact with profitability among the firms.

1.1 Problem Statement

Information technology (IT) projects implementation in the telecommunications industry are vital for competition and achieving planned strategic intent of the firms. In Nigeria, telecommunications firms such as **MTN Nigeria**, **Airtel Nigeria**, and **9mobile** embark upon capital expenditure (capex) projects aimed at expanding coverage, improving products and service delivery to stakeholders (International Telecommunication Union [ITU], 2022). However, despite these project efforts, the firms continue to report drop in profitability and quality challenges traceable to improper risk management during project implementation (Ogunsanya & Ajayi, 2020).

The research work of some scholars, Golini, Kalchschmidt and Landoni (2015); Kinyua, Ogollah and Mburu (2015); Rolik (2017); Roque and Marly (2013), revealed that inappropriate project risk identification and documentation were common during implementation of projects and the project outcomes usually present problems such as cost overruns, compromised quality or outright rejection of results by stakeholders. However, the research work of other scholars, Golini, Kalchschmidt and Landoni (2015), Kinyua, Ogollah and Mburu (2015), Roque, and Marly (2013) and Rolik (2017) showed that there was not enough study to reflect the effect of project risk on the profitability, project efficiency and operational efficiency of telecommunication firms in Nigeria. However, the study of Ogunde et al., (2017) revealed that project risk identification, management and control during project implementation was a challenge being faced by telecommunication firms but did not relate this problem to their overall performance.

Project Management Offices (PMOs) are frequently used by telecommunication firms to institutionalize project risk management activities, however, it is not always clear how well these PMOs translate project risk mitigation into observable success especially in the area of profitability (Young & Jordan, 2008). There is a gap in theory and practice due to the lack of actual evidence on how project risks, as managed by PMOs, impact the profitability of Nigerian telecommunication firms. The absence of a focused research limits the establishment of a robust, evidence-based framework project risk and how it affects profitability among firms in the telecommunication sector. This would be very useful in guiding such firms in strategic decision making on projects (Zwikael&Smyrk, 2011). Therefore, with a focus on

projects overseen by the PMOs in these firms, there is a need to examine the interaction that exist between project risk and profitability of selected telecommunication firms in Nigeria. This study aims to close the gap of limited research studies by offering empirical insights into how project risk affect profitability of MTN Nigeria, Airtel Nigeria, and 9mobile.

1.2 Research Objective

The specific objective of the study is to evaluate the effect of project risk on profitability of selected telecommunication firms in Nigeria;

1.3 Hypothesis Development

The studies of Kinyua, Ogollah and Mburu (2015); Junior and de Carvalho, (2013); Roque and Marly (2013), using survey research design explored project risk during project implementation among Small and Medium Information Communication Technology Enterprises and established a positive finding between project risk and project profitability. However, Roque and Marly (2013), in addition, were able to show the importance of soft skills such as risk management capabilities and project management capabilities of the project manager towards attaining project success. The research affirmed that the soft skills of the project risk manager or project manager are crucial to successful risk management on projects. Further, the study of Nwangi and Ngugi (2018), revealed a negative relationship between project risk and profitability. The study showed that project profitability can be measured by the performance indicators of time, cost and quality. It further explained that under-funding and project delays are seen to be impacting project profitability.

However, it was challenging for firms engaging in project developments to adequately infer that managing risky projects will bring about good impact on profitability and financial performance in general. Therefore, appropriate project risk implementation is proposed for firms from the beginning of project analysis to the end of projects. Thus this study hypothesised thus:

H₀₁: Project risk has no significant effect on profitability of selected telecommunication firms in Nigeria.

2.0 Literature Review

2.1 Project Risk

Project risk refers to a range of probabilities that can cause an adverse event on a project; it is also an uncertain event that has impact on project objectives if it occurs (Williams, 2017). This definition pitched project risk as always negative to the health of projects; however, Project Management Institute (2017) gave a more concise definition and defined project risk as an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective. This implies that positive risk should be encouraged and negative risks should be avoided on projects. However, both types of risks need to be proactively managed to ensure conformity with project objectives.

Project risks characteristics can be classified based on several dimensions. This is intended to help project managers to be able to manage risk elements appropriately. Tah and Carr (2016) classified risks into external and internal risks while Shishodia, Dixit and Verma (2018) were able to classify project risks based on software development life cycle and economic sector and thus were able to classify project risks in the information and communication technology sector based on organisational environment, user involvement and team knowledge. The types of project risks identified within the sector encompass organizational environment risk, user-related risk, risks associated with managing requirements, project complexity, planning and control issues, team and personnel management challenges, scheduling and timing concerns, system functionality limitations, and risks linked to subcontracting.

Project risk has two broad characteristics, positive risks and negative risks (Junior & De Carvalho, 2013). Positive risks are those risks elements that have the tendency of leading to growth offirms such as increased sales and increased patronage due to product acceptability. Positive risks are to be encouraged by making provision for its accommodation once identified at the planning stage of a project or during the project life cycle. Negative risk are those risk elements that have the tendency of creating overrun on the project and are to be discouraged on the project.

Advantages of positive project risk include unexpected product expansion, increased sales, additional training for employees to be able to accommodate impending sales and success,

quick attainment of planned strategic objectives of the project and the firm. Positive risk helps to improve the project performance potentials and makes impact on the team, the available infrastructure and the increase market share of the project products (Project Management Institute, 2017). While negative risks provide the disadvantages of uncertainty that have the tendency of impacting the success of the project. Such disadvantages include failed deadline of tasks and deliverables, scope creep, rework and poor project quality.

2.2 Profitability

Profitability refers to a firm's capacity to generate returns from its investments (Nishanthini&Nimalathan, 2013). It is often calculated as the difference between total revenue and operational costs, which include expenses such as interest, depreciation, and taxes. In essence, profitability reflects a company's ability to generate profit. It is commonly assessed using various profitability ratios and is a critical focus for both executives and shareholders, as it indicates that the business is generating more income than it is spending. According to Gill, Bigger, and Mathur (2010), there is a notable connection between working capital management and profitability. They described working capital as comprising current assets and current liabilities, emphasizing the importance of effectively financing these assets to enhance profitability.

Profitability is a critical strategic focus for all firms, as it involves the effective utilization of available production factors—such as resources, facilities, and equipment—in a deliberate combination aimed at minimizing costs, enhancing productivity, and ultimately increasing profits. As part of this effort, firms often strive to optimize the pricing of their goods and services. This underscores the reality that no business can sustain itself over the long term without generating profit, making it essential to continually prioritize profitability. According to Alaghi (2012), operating profit reflects a firm's earning capacity derived from its core, ongoing operations. It represents the net income generated from regular business activities, excluding irregular or non-operational financial transactions and expenses (Ahmed & Shafiq, 2014). Operating profit thus serves as a key indicator of a firm's potential to generate profit and also provides an indirect measure of its operational efficiency.

2.3 Project Risk and Profitability

Kopia, Just, Geldmacher and Bubian (2017) studied the impact of project risk on project performance and found that effective project risk implementation improves project performance. The study further suggested that more research should be conducted on the impact of project risk on profitability of firms. In another study, Roque and Marly (2013), while understanding the impact of implementing project risk on project performance, found that effective project risk implementation is crucial to project success and that risk planning, identification and response are crucial to profitability through the early reduction of risk issues during project implementation. The result also showed that the presence of a risk manager helps a lot in achieving project success.

Additionally, the research conducted by Kinyua, Ogollah, and Mburu (2015) on the impact of risk management on project performance among small and medium-sized information and communication technology (ICT) enterprises in Nairobi, Kenya, revealed a positive correlation between project risk management and the performance, profitability, and overall organizational success of SMEs in the ICT sector. Similarly, Williams (2017) found that specific dimensions of project risk—namely risk reduction, risk transfer, and risk retention—significantly contributed to improved firm performance. The study emphasized that having a solid project plan or an efficient monitoring and control system alone is not sufficient to guarantee project success. Instead, firms must prioritize the effective implementation of project risk strategies throughout the execution phase. The research further highlighted that robust risk management practices play a critical role in mitigating issues such as substandard quality and schedule delays, both of which can negatively impact a firm's profitability.

Also, Mhirat and Irtemeh (2017), while reviewing the impact of project risk on project success, concluded that there is a positive relationship between the project risk dimensions and project success, which also directly impacts the profitability of firms. The research revealed that project risk components of risk planning and definition, risk analysis, response to danger, evaluation and review of risk are a set of factors that directly impact the success of projects and the growth of firms. The research further revealed that project risk dimensions of risk planning and definition when not properly managed impact the cost of projects, extend the project duration, increase time and cost resources spent on projects and reduce planned

profitability on projects. This is consistent with the earlier research work of Kinyua, Ogollah and Mburu (2015) on project risk and firm success while Naeem, Khanzada, Mubashir and Sohail (2018), in their own research established that project risk plays a mediating role between project planning and the profitability of projects.

On the contrary, Junior and de Carvalho (2013) found a weak or insignificant effect between project risk and financial performance of projects. While the study of Jaroslaw and Jadwiga (2017), found that the efficiency of project risk was weak but significantly influenced project performance in terms of market expansion and did not translate to increase in revenue. Consequently, the authors suggested that further studies need to investigate the role of project risk on profitability of telecommunication firms.

2.3 Theoretical Justification

Theoretically, the relationship between project risk and profitability is grounded in the planning theory, first introduced by Faludi (1973). This theory views planning as the application of scientific methods—however rudimentary—to the policymaking process. It emphasizes deliberate and informed efforts aimed at enhancing the validity and relevance of decisions in light of both current and anticipated future environmental conditions. Koskela and Howell (2008) expanded on this by describing planning as a structured process involving the formulation of goals—whether at the project or organizational level—and the development of strategies to achieve those objectives. This process helps to generate feasible alternatives and guide actions toward achieving the desired outcomes. The Project Management Institute (2017) aligns with this theoretical framework by segmenting project execution into distinct knowledge areas, including scope planning, activity definition, resource allocation, activity sequencing, cost estimation, schedule development, and comprehensive project plan formulation. These structured elements underscore the essence of planning theory in enhancing project execution and, by extension, improving profitability through better risk management. The core assumptions of the planning theory include the creation of a coordinated action plan for project teams, the evaluation of potential scenarios before implementation, the provision of multiple execution options, and the formulation of a roadmap for implementing the chosen strategy. These assumptions closely mirror the planning mechanisms employed in modern project management practices (Mulcahy, 2015).

However, the theory is not without critique. Allmendinger (2002) and Abukhater (2009) argue that planning is inherently complex and cannot be encapsulated by a single, universally applicable definition. The diversity of perspectives among planners—who may range from environmentalists and social advocates to developers—reflects the pluralistic and often contested nature of planning. This diversity complicates efforts to standardize planning theory and practice, but also highlights its adaptability to various contexts and priorities.

The underpinning theory for this study is the planning theory. In explaining the relevance of planning to the study of project management, Szopik-Depczynska and Lanfranchi (2016); Project management institute (2017), explained that Planning is one of the elements of management, next to organising, motivating and control. It involves decision-making and action that will lead to the achievement of specific phenomena or objectives, the occurrence of which could not be spontaneous. The research further explained that the main purpose is to plan time, cost and resources adequately in order to estimate the work needed and to effectively manage risk during project execution. Failure to adequately plan has the potential of reducing the chances of project success especially in achieving its planned goals and objectives. Planning in projects involves how to break down the project work, identify relevant resources, tools, costs, identification of project boundaries, project deliverables and logical arrangement of project activities. It also involves the identification of risk elements that can affect project performance, profitability and overall organisational performance.

2.3.2 Conceptual framework

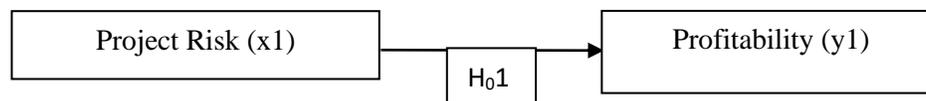


Figure 1: Conceptual framework
Source: Researcher’s conceptual model (2025)

The above framework is further illustrated in the model equation below:

$$Y_1 = \beta_0 + \beta_1 x_1 + e_i$$

From equation (1), Y_1 is profitability and x_1 is project risk. β_0 is the intercept, β_1 is the Beta coefficient which captures all other variables that could explain productivity outside the model.

3.0 Methodology

This study adopted a quantitative approach and employed a survey research design to examine the impact of project risk on the profitability of selected service firms in Nigeria. A stratified random sampling method was utilized, complemented by a proportionate sampling technique to ensure adequate representation across the strata. The choice of the quantitative method was informed by the study's reliance on numerical data and the application of statistical tools to either support or challenge existing knowledge claims.

Primary data was collected through a standardized, self-developed questionnaire specifically designed for the study. The target population included three (3) leading telecommunication companies in Nigeria, selected due to their dominance in the market and their substantial subscriber base, as indicated by the Nigerian Communications Commission (NCC) subscriber data (2018).

The secondary population comprised ninety-four (94) project personnel working within the Information Systems (IS) departments of these selected firms. Given that this population was fewer than two hundred (200), the study adopted a total enumeration approach in line with the recommendations of Ajay and Micah (2014) and Glenn (2009). This method was chosen to draw accurate inferences from the entire population, identify significant differences where applicable, minimize sampling error, and provide comprehensive data across all identified participants. The distribution of the sample size among the selected firms is presented in Table 3.1 below.

Table 3.1: Sample size distribution

S/N	Firm	No. of project employees in the IS department
1	MTN Nigeria	32
2	Airtel Nigeria	30
3	9 mobile	32
TOTAL		94

Source: Human Resource Department of Selected Telecommunication Firms (2025)

Total enumeration, also known as census, was used to sample all the items in a universe leaving no element of chance to ensure that highest accuracy is obtained. Total enumeration is used when the universe is small and it is no use resorting to a sample survey. The respondents

selected should be representative of the population concerned to give better responses representative enough for meaningful analysis and reporting (Kothari, 2004).

3.1 Reliability of Research Instrument

The research instrument underwent internal consistency reliability testing to assess the extent to which all the constructs within the instrument were related to the other variables used in the study. To evaluate this, Cronbach's alpha was employed as a measure of internal consistency (El Hajjar, 2018). The validity of the instrument was also verified using Average Variance Extracted (AVE) and the Kaiser-Meyer-Olkin (KMO) measure, both of which yielded values exceeding the 0.5 threshold, indicating acceptable validity. Furthermore, the overall Cronbach's alpha reliability coefficient for the instrument was found to be 0.800, reflecting a high level of internal consistency. Specifically, the Cronbach's alpha values for the individual constructs were 0.739 for project risk and 0.819 for profitability, demonstrating strong reliability and consistent measurement across both constructs.

Validity of Research Instrument

The research instrument was evaluated for both content and construct validity to confirm the adequacy of content coverage and to ensure that the items accurately reflected the domains of project risk and profitability (Yaghmale, 2003). Content validity was established by aligning the instrument's items with relevant literature and consulting subject matter experts in the field of Project Management. This process ensured that the instrument comprehensively represented the constructs under investigation. Construct validity was assessed using Exploratory Factor Analysis (EFA), a statistical method that evaluates whether the observed variables are related to their underlying latent constructs. EFA is particularly useful for testing hypotheses regarding the structure of relationships among variables. The validity of the factor structure was further confirmed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The KMO values obtained 0.664 for project risk and 0.766 for profitability exceeded the recommended threshold of 0.5, indicating that the items effectively measured the intended constructs in the study.

3.2 Method of Data Analysis

The data collected for this study were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics were employed to calculate measures of central tendency, including the mean, mode, and median, to analyze and summarize the demographic data. This approach facilitated the categorization and interpretation of data gathered from respondents (Dicksen, 1996).

For hypothesis testing and addressing the research questions, linear regression was used. The researcher selected this statistical method to assess the strength and nature of the relationship between the variables outlined in the conceptual model. Descriptive statistics provided a summary of the key features of the demographic data, offering insights into the characteristics of the study sample (Dicksen, 1996). Regression analysis, a quantitative technique, was applied to examine the relationship between the dependent variable (profitability) and the independent variables (project risk). It helped to draw meaningful conclusions and determine whether the independent variables had a significant impact on the dependent variable, revealing the relative strength of each independent variable's effect on profitability (Sarstedt & Mooi, 2014).

Inferential statistics were utilized to evaluate the influence of project risk on profitability and test the formulated hypotheses. These statistical techniques allowed the researcher to make inferences about the broader population based on the sample data and test the hypotheses of the study (Adeyemi, 2009). The analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 23 software.

4.0 Data Analysis

To ensure data quality, the analysis process involved data cleansing, sorting, and coding, which included verifying the consistency of the completed questionnaires. To align with the objectives of the study, tests for normality, linearity, homoscedasticity, and multicollinearity were conducted on the collected data.

The normality of the data distribution was assessed by examining skewness and kurtosis values. A variable was considered skewed if its absolute skewness exceeded 3.0, and extreme kurtosis was identified if the kurtosis index surpassed 8.0. For the data to be deemed normally

distributed, the skewness value should be below 2.0, and the kurtosis value should be less than 7.0 (Kline, 2005). The results of skewness and kurtosis confirmed that the data followed a normal distribution, satisfying the normality assumption.

Linearity was tested using Pearson’s moment correlation coefficient, which helped to identify the relationship between the dependent variable (profitability) and the independent variable (project risk) (Field, 2009). Homoscedasticity was assessed using the Glejser test (Green, 2012). The test’s null hypothesis suggested the absence of heteroscedasticity, as the p-value for the independent variable was greater than 0.05. Multicollinearity was evaluated through the variance inflation factor (VIF) and tolerance levels. The assumption was that the VIF should be less than 10, and the tolerance level should exceed 0.1 to indicate low multicollinearity (Landau & Everitt, 2004). The results showed that for project risk, the VIF was below 10, and tolerance was greater than 0.1, confirming no multicollinearity with other independent variables.

To address the study’s objective of determining the effect of project risk on the profitability of selected service firms in Nigeria, respondents were asked to rate their level of agreement with statements related to project risk and profitability on a six-point Likert-type scale. The scale aimed to capture respondents’ opinions on various aspects of project risk as it pertains to the profitability of selected telecommunication firms.

4.1 Response rate

The researcher distributed out 94 copies of questionnaire to project employees in the information system (IS) department at the selected telecommunication firms. From these, 74 of them were dully filled and returned to the researcher. This was equivalent to a response rate 78.7%, which was a good representation and sufficient to make generalisations. Table 4.1 present results of the response rate.

Table 4.1: Response rate

Responses	Frequency	Percent (%)
Completed usable copies of questionnaire	74	78.7%
Unusable, unreturned and disqualified questionnaires	20	21.3%
Total	94	100%

Source: Researcher’s field survey (2025)

4.2 Demographics (n = 94)

The descriptive statistical analysis of the respondents' opinions is presented in this section, starting with the independent variables followed by the dependent variables. The responses were recorded using a six-point Likert-type scale, which was coded for ease of analysis. The scale was as follows:

- **6** for Very High (VH)
- **5** for High (H)
- **4** for Moderately High (MH)
- **3** for Moderately Low (ML)
- **2** for Low (L)
- **1** for Very Low (VL)

The results were interpreted using descriptive statistics, such as percentages, mean, and standard deviation. To interpret the mean values, the following class interval widths were applied:

- **5.50 - 6.00**: Very High Degree
- **4.50 - 5.49**: High Degree
- **3.50 - 4.49**: Moderately High Degree
- **2.50 - 3.49**: Moderately Low Degree
- **1.50 - 2.49**: Low Degree
- **0.50 - 1.49**: Very Low Degree

A standard deviation of more than one (1) indicated that the responses were widely spread out or lacked consensus, while a standard deviation of less than one (1) indicated consensus among the respondents.

The summarised responses based on the descriptive statistics are presented in the tables below, which will show the mean, standard deviation, and the interpretation of responses for each variable under consideration.

Table 4.2: Analysis of descriptive statistics of responses of respondents on project risk

Items	Very High	High	Moderately High	Moderately Low	Low	Very Low	Mean	Std. Dev.
Project Risk identification and documentation	9.5%	64.9%	25.7%	0.0%	0.0%	0.0%	4.84	.574
Project Risk control and Management	6.8%	45.9%	47.3%	0.0%	0.0%	0.0%	4.59	.618
Project Risk analysis and assessment	31.1%	52.7%	16.2%	0.0%	0.0%	0.0%	5.15	.676
Project risk review	48.6%	43.2%	8.1%	0.0%	0.0%	0.0%	5.41	.639
Project risk reporting	25.7%	43.2%	27.0%	4.1%	0.0%	0.0%	4.91	.830

Source: Field survey, (2025)

Project risk identification and documentation was rated as extremely high by 9.5% of respondents, high by 64.9%, and moderately high by 25.7%, according to the data in Table 4.2. With a mean score of 4.84 and a standard deviation of 0.574, the respondents generally said that project risk identification and documentation was high. Additionally, the results showed that 47.3% of respondents rated project risk control and management as moderately high, 45.9% as high, and 6.8% as very high. On the average, the respondents said that project risk control and management was high with a mean of 4.59 and standard deviation of 0.618.

Project risk analysis and evaluation was also rated as extremely high by 31.1% of respondents, high by 52.7%, and moderately high by 16.2%. With a mean score of 5.15 and a standard deviation of 0.676, the respondents generally said that project risk analysis and assessment was high. Additionally, the results showed that 48.6% of respondents gave the project risk evaluation a very high rating, 43.2% gave a good rating, and 8.1% gave a moderately high rating. With a mean of 5.41 and a standard deviation of 0.639, the respondents generally said that project risk review was high.

Additionally, according to Table 4.2, 25.7% of respondents said that project risk reporting was extremely high, 43.2% said that it was high, 27% said that it was moderately high, and 4.1% said that it was moderately low. On the average, the respondents indicated that project risk reporting is high with a mean of 4.91 and standard deviation of 0.830. The fact that all of the

standard deviation numbers were low indicated that the opinions of the respondents strongly converged.

The findings for profitability are also indicated on Table 4.3 below:

Table 4.3: Analysis of descriptive statistics of responses of respondents on profitability

Items	Very High	High	Moderately High	Moderately Low	Low	Very Low	Mean	Std. Dev.
Cost savings activities performed on the project	12.2%	66.2%	21.6%	0.0%	0.0%	0.0%	4.91	.577
Process improvement activities on the project	9.5%	36.5%	54.1%	0.0%	0.0%	0.0%	4.55	.665
Overall profitability on the project	21.6%	58.1%	20.3%	0.0%	0.0%	0.0%	5.01	.652
Return on asset in the last five years	50.0%	28.4%	18.9%	2.7%	0.0%	0.0%	5.26	.861

Source: Field survey, (2025)

According to results in Table 4.3, 12.2% of the respondents indicated that cost savings activities performed on the project is very high, 66.2% indicated high and 21.6% moderately high. On the average, the respondents indicated that cost saving activities performed on the project was high with a mean of 4.91 and standard deviation of 0.577. The results also indicated that 9.5% of the respondents responded very high to process improvement activities on the project, 36.5% indicated high and 54.1% moderately high. On the average, the respondents indicated that process improvement activities on the project were high with a mean of 4.55 and standard deviation of 0.665. Additionally, 21.6% of the respondents indicated that overall profitability on the project was very high, 58.1% indicated high, 20.3% moderately high. On the average, the respondents indicated that overall profitability on the project was high with a mean of 5.01 and standard deviation of 0.652.

Moreover, the result shows 50% of the respondents that indicated that Return on asset in the last five years is very high, 28.4% indicated high, 18.9% moderately high and 2.7% indicated moderately low. On the average, the respondents indicated that Return on asset in the last five years was high with a mean of 5.26 and standard deviation of 0.861. All the values of the

standard deviations are low showing that there was a strong convergence in the views expressed by the respondents. The grand mean for profitability is 4.93 with standard deviation of 0.689, indicating that profitability of the selected firm is high.

When comparing the results in Tables 4.2 and 4.3, descriptive statistics showed that a greater proportion of respondents gave high ratings to the majority of the project risk and profitability question items, and that these ratings followed a similar upward trend, with grand means of 4.98 and 4.93, respectively. The findings revealed that the selected telecommunication firms completed project risk review as well as project risk analysis and assessment as most of the respondents' perceptions to these issues inclined towards "high" ratings. Furthermore, the results showed that the project was profitable overall and had a high return on asset during the previous five years. Accordingly, these results implied that project risk might or might not have an impact on the financial success of the selected telecommunication firms. This provided answer to the research question and enabled the researcher to achieve the objective of this study.

4.3 Test of research hypothesis

H₀₁: Project risk has no significant effect on profitability of selected telecommunication firms in Nigeria.

To test the hypothesis, linear regression analysis was conducted. The data for the independent variable (Project Risk) and the dependent variable (Profitability) were generated by aggregating the responses from the various items associated with each variable. This approach allowed for the calculation of the regression coefficients, which were then used to interpret both the direction and magnitude of the relationship between the variables. The beta coefficients (β) represent the degree of responsiveness of the dependent variable (Profitability) to a one-unit change in the independent variable (Project Risk). These coefficients indicate how much profitability is expected to change as a result of changes in project risk. The error term (e_i) represents the unexplained variations or errors in the regression model, capturing factors that are not accounted for by the model. The dependent variable in this regression model was Profitability, while Project Risk served as the independent variable. The results from the linear regression analysis are presented in **Table 4.4**, which includes the regression coefficients, standard errors, t-statistics, and p-values for each of the variables in the model.

These results help in understanding the strength and significance of the relationship between project risk and profitability.

Table 4.4: Results of regression of Project Risk on Profitability

Variables	B	Std. Error	T	ρ-value	R	R²
Constant	21.88 6	2.872	7.621	0.000	0.234	0.055
Project risk	- 0.383	0.084	-4.562	0.000		

Source: Field survey, (2025)

Table 4.4 present the findings of the linear regression results on the effect of project risk on profitability of selected telecommunication firms in Nigeria. The findings showed that project risk significantly and negatively affects the profitability of selected Nigerian telecommunication firms ($\beta = -0.383$, $t = -4.562$, $p < 0.05$). Despite being negative, the model parameter is statistically significant, according to the t-value ($t = -4.562$, $p < 0.05$). Furthermore, the results indicate a weak negative correlation ($R = 0.234$) between project risk and the profitability of selected telecommunication firms. This implies that the project's profitability as determined by its outcomes decreases with increasing project risk.

The coefficient of determination (R^2) was 0.055, meaning that project risk accounts for roughly 5.5% of the changes in the profitability of the selected telecommunication firms in Nigeria, with other factors not included in the model accounting for the remaining 94.5% of the changes. This calls for investigation through study to determine the other factors influencing the profitability of Nigerian telecommunication firms. The simple regression model explaining the variation in profitability due to project risk is thus expressed as follows:

$$\text{Profitability} = 21.886 - 0.383\text{Project risk}$$

According to the regression equation above, the profitability of selected telecommunication firms in Nigeria would be 21.886 if project risk were held constant at zero. Further analysis of the data reveals that the project risk regression coefficient was -0.383. This is a negative factor, meaning that the profitability the selected telecommunication firms will drop by 0.383 units for every unit change in project risk on the measurement scale. But since the model's significant value is 0.000, the level of significance is below 0.05 ($p < 0.05$). This means that project risks significantly and negatively predicts profitability of selected telecommunication

firms in Nigeria. Overall, the result shows that project risk has a weak negative and significant effect on profitability of selected telecommunication firms in Nigeria. Therefore, this shows that we reject the null hypothesis (H_01), which states that project risk has no significant effect on profitability of selected telecommunication firms in Nigeria.

5.0 Discussion

The finding of the hypothesis (H_01) revealed that project risk has a weak negative and significant effect on profitability of selected telecommunication firms in Nigeria. The result of the descriptive statistics showed that on the average majority of the respondents indicated that project risk in telecommunication firms in Nigeria is high (Mean = 4.98, SD = 0.667) because of the high project risk identification and documentation, high project risk analysis and assessment, high project risk review, and high project risk reporting. These high risks associated with the various project parameters have negatively influenced profitability of selected telecommunication firms in Nigeria.

Several studies are in agreement with the findings that project risk has negative and significant effect on profitability (Jaroslaw & Jadwiga, 2017; Junior & de Carvalho, 2013; Kululanga & Kuotcha, 2010; Nwangi & Ngugi, 2018; Yirenyki-Fianko & Chileshe, 2015). The findings of this study conforms with the research work of Kululanga and Kuotcha (2010) on measuring project risk management process for construction contractors and found that poor profitability of firms is attributed to poor implementation of project risk, which lead to project failure attributes such as not meeting deadlines, derailed cost targets and poor quality performance. However, Kopia, Just, Goldmacher, and Bubian, (2017) studied on the impact of project risk on project performance and found that effective project risk implementation improves project performance. The study further suggested that more research should be conducted on the impact of project risk on profitability of firms.

The current study has found out that project risk has a weak negative and significant effect on profitability of selected telecommunication firms in Nigeria. Based on the findings of this study and its extant supporting literature, this study, therefore, rejects the null hypotheses (H_01), stating that project risk has no significant effect on profitability of selected telecommunication firms in Nigeria.

6.0 Conclusion

The empirical study investigated the relationship between project risk and profitability of selected telecommunication firms in Nigeria and formulated a hypothesis that was analysed by simple linear regression. Result from the test of hypothesis revealed that project risk has significant and negative effect on profitability. Therefore, the researcher concluded that project risk has a negative relationship with profitability and the higher the risk within projects, the lower the profitability. Based on the finding of the study, project risk among telecommunication firms' projects is based on high project risk identification and documentation, many project risks are reviewed and analysed. These risks inversely affected profitability.

7.0 Recommendation and Policy Implementation

This study therefore recommends that telecommunication firms should place high emphasis on risk mitigation techniques. Training for project employees and the employment of subject matter experts (project risk experts) are recommended to help proactively manage risks on projects. The findings of this study indicated that there are other dimensions that influenced profitability aside project risk, further research should be conducted to reveal these dimensions and how they influence profitability of telecommunication firms in Nigeria.

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MANAGEMENT AND UTILIZATION OF THE DELTA STATE CONTRIBUTORY HEALTH SCHEME AMONG HEALTHCARE WORKERS IN DELTA CENTRAL SENATORIAL DISTRICT, DELTA STATE, NIGERIA

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Abstract

The perception of enrolees on the health services received under the Delta State Contributory Health Scheme (DSCHS) are vital for optimizing services, re-shaping policies and evaluating the quality, successes and challenges of these services. This study assessed the management and utilization of scheme among health workers in Delta central Senatorial District with emphasis on the successes and obstacles. Survey research design was used using self-administered questionnaires. Data were collated and analyzed using SPSS version 26.0. A Chi-square test was carried out. The level of Confidence was set at 95%, and the P-value ≤ 0.05 . Out of a total of 300 respondents, 268 (89.3%) are aware of the scheme, 246 (82%) registered under the scheme and 212 (70%) utilized the services of the scheme. Although, 58% of the respondents were unsatisfied with health care services, 64% preferred the scheme to paying out-of-Pocket. Majority of respondents (69.8%) attested to improvement in health seeking behavior due to the scheme. Age ($X^2 = 28.249$; $P < 0.001$), marital status ($X^2 = 39.477$; $P = 0.003$) and years of experience of respondents ($X^2 = 31.635$; $P < 0.001$) were significantly associated with level of registration of the DSCHS. Training of staff, improving registration procedure and up scaling of health services were recommended.

KEYWORDS: Health system, Insurance, Healthcare workers, Utilization

INTRODUCTION

The Health system includes all the people, institutions, resources, organization and mechanisms aimed at promoting, restoring, maintaining health and delivering health care services to meet the health needs of populations. (Chan, M. 2012). Health care financing is a core function of health systems referring to the aspect of the system concerned with the

mobilization and allocation of financial resources to cover the health needs of the people either individually or collectively (Chan, M. 2012; Amegor et al., 2023). Health is a right of all people of the world. However, millions of people today do not access health services due to the cost. Some others receive substandard quality of health services even when they pay out-of-pocket (Razaet al., 2016). This is made even worse by inequalities and inequities, civil unrest, lack of political will in developing countries (McIntyre & Kutzin, 2016).

In achieving 'health for all', the World Health Organization formulated the Universal Health Coverage (UHC) as a key strategy. The UHC was aimed at narrowing the wide gaps in accessing health care between the affluent and the poor in both resource poor and developed countries (Uzochukwu et al., 2015). The WHO's strategy in health care financing is aimed at three core functions which include; revenue raising (via government subventions, insurance schemes, direct out-of-pocket payments by end users, and external aid), pooling of funds (the accumulation of funds for some or all of the population) and purchasing of services (payment or allocation of resources to health care providers).

In Nigeria, rising costs of healthcare Services, shortage of healthcare professionals, poor data and insecurity coupled with corruption, poor funding of the health care sector by government, migration of health practitioners (brain-drained) for greener pastures have continue to degrade and deplete the health system. (Amegor et al., 2023) The resultant effects are downsizing of health facilities with low patronage, propagation of medical tourism by the rich while others have resulted to unorthodox practices such as the herbalists and the spiritualists (Bassi et al., 2021). Mortality and morbidity from common illness and disease have become the order of the day. Little wonder life expect ancyin Nigeria is 56 years, infant mortality rate is 52.608 deaths per 1000 live births compared to other African countries like South Africa with life expectancy of 65 years and infant mortality rate 22.686 deaths per 1000 live births. In Ghana, life expectancy of 66 years and infant mortality rate 29.296 deaths per 1000 live births (WHO statistics, 2024). These challenges have strengthen the resolve of government to implement various International and regional health intervention designs which included but not limited to; the Bamako initiative and Drug Revolving Fund (Uzochukwu et al., 2004). The National Health Insurance Scheme (NHIS) was established as a veritable means of health care financing and the path to attaining Universal Health Coverage in Nigeria. Although the

Scheme was signed into law in 1999, it only became officially launched on 6th June, 2005 (National Health Insurance Scheme, 2020). The scheme currently has a coverage of about only 5% of Nigerians in the past decade and has been faced with challenges of poor funding and management (Adebisi & Adeniji, 2021). Amazingly, only the Formal Sector of the NHIS have comprehensively taken off (Eze et al., 2024).

Over the years, the States in Nigeria have been encouraged to design a state-based Social Health Insurance Programme. Some states like Lagos, Rivers and Delta currently have such programmes running. In Delta State, the Delta State Contributory Health Commission (DSCHC) is a healthcare financing system vested by the State Government to ensure access to good and safe healthcare services for all residents of Delta State irrespective of their socio-economic status or political affiliation. It is geared towards achieving the United Nations' Sustainable Development Goal 3 by the year 2030. On the 4th of February, 2016, Senator Dr Ifeanyi Okowa, then Governor of Delta State signed the bill establishing the Commission into Law. The Governing Board of the DSCHC superintends, implement, evaluate and ensures an optimal management of the Delta State Contributory Health Scheme (DSCHS) for residents of Delta State across all 25 Local Government Areas. The DSCHS has four (4) Enrollee Health Plans which include: Formal Health Plan for those whose premium are paid via percentage deduction from Payroll with a counterpart contribution from employer for each Principal Enrollee; it covers husband, wife and maximum of 4 children below 18 years (Delta State Contributory Health Scheme, 2018). Informal Health Plan for those whose premium of 7,000 Naira per year are paid per individual enrollee covering only the individual enrollee. Equity Health Plan for those who have been classified as belonging to the poor and vulnerable Group (Pregnant Women, Children Under-5 Years, elderly above 65 years, physically and mentally challenged), here the State Government pays for their Premium of 7,000 Naira per year for each Enrollee. Private Health Plan for persons who subscribe to pay extra premium for additional health service under the scheme (Delta State Contributory Health Scheme, 2018; Onyebadi et al., 2023).

The DSCHC currently has over 500 accredited Public and Private health care provider spread across the State for Primary healthcare and Secondary healthcare services. It has collaboration with non-governmental organizations such as Servier Pharmaceutical and SANOFI in the

areas of human capacity training, provision of medications and infrastructural development. It also has collaborations with federal Ministry of Health and its relevant agencies, local and International Non-Governmental Organizations such as Centre for Disease Commission (CDC), United Nations Children's Fund UNICEF and WHO etc. The scheme is also involved in advocacy, health promotion and disease prevention. Referral for Tertiary care is possible following a request for authorization within 24 hours by the health care provider (Delta State Contributory Health Scheme, 2018; Onyebadi et al., 2023).

Despite the popularization of the scheme by the managers and governing board and the commitment and enthusiasm shown by the health care providers, appraising the overall performance of the scheme from the end users who are the civil servants and residents of Delta state is imperative. This will help in planning, implementing and evaluating of health programmes and also contribute to general knowledge. The research questions are: Is the scheme perceived to be well managed by civil servants? What is the level of utilization of the scheme? What are the perceived successes and obstacles (challenges) with the scheme. This study is therefore aimed at assessing the management of DSCHS, utilization of DSCHS and the perceived successes and obstacles of the DSCHS.

The theories and conceptual frameworks taken into cognizance were mainly from the Disciplines of Economics new institutionalism (Bertone & Meessen, 2013) and the field of Health policy and systems research (HPSR); Health policy triangle framework (O'Brien, 2020; Jones, et al., 2021). Political science; Beveridge to Bismarck model of health care financing (Arhin et al., 2023), Political economy of reform in Low Moderate Income Countries (Agyepong and Adjei, 2008) and The Re-aim framework which is designed for health promotion program. 'Re-aim' stands for reach, efficacy, adoption, implementation and maintenance (Glasgow, Vogt & Boles, 1999).

These frameworks and theories have in-depth analysis on policy performance by examining inputs, processes and outcome. The Bismarck model uses an insurance system financed jointly by employers and employees through payroll deduction unlike the Beveridge model where healthcare is paid for exclusively by the government on a national scale. The RE-AIM (Reach, Effectiveness, Adoption, Implementation, and Maintenance) framework is a tool used to

appraise the impact of community-based health programs, focusing on these five key elements.

RESEARCH HYPOTHESIS

H₀1: There is no significant association between respondents' age and their registration of DSCHS services.

H₀2: There is no significant association between respondents' sex(gender) and their registration of DSCHS services.

H₀3: There is no significant association between respondents' marital status and their registration of DSCHS services.

H₀4: There is no significant association between respondents' years of working experience and their registration of DSCHS services.

H₀5: There is no significant association between respondents' professional group (affiliation) and their registration of DSCHS services.

MATERIALS AND METHODS

The descriptive cross sectional survey research using quantitative methods was employed in the study. This study was carried out January 2025 to March 2025 among health care workers in Delta Central senatorial district of Delta State, Nigeria.

The sample size was determined using the Cochran sample formula (Cochran, 1977).

$$n = \frac{Z^2 p(1 - p)}{d^2}$$

A total of 300 health care workers were sampled using multi-stage sampling technique with the first stage involved selecting 2 from the 8 Local Government Area (LGA) in Delta central senatorial district using simple random sampling technique by balloting (Sapele and Ethiope West LGAs), the second stage was by Systematic Sampling technique in selecting 2 health facilities each from Ethiope west LGA (Government Hospital Ugbewwe and Primary Health Centre Ijomi) and 2 health facilities from Sapele LGA (Central Hospital Sapele and Primary Health Centre Orhorho). The Final stage the healthcare workers were recruited by simple

random sampling technique by balloting from a list of staff. Data was collected between January, 2025 to February, 2025.

A semi structured self-administered questionnaire was used to obtain data. The study variables included socio-demographic data, perceived utilization and perceived successes/challenges affecting the Delta State Contributory Health Scheme. The data was analyzed using Statistical Package for Social Sciences (SPSS, 26.0) for descriptive statistics (frequencies and percentages) and inferential statistics (chi-square). The level of confidence was set at 95%, and P values < 0.05 were considered to be statistically significant.

RESULTS

Table: Socio-demographic characteristics of respondents

Variable	Frequency	Percentage
Age (in years)		
20 – 29	57	2.3
30 – 39	83	21.6
40 – 49	66	6.0
50 – 59	71	5.3
60 and above	23	1.0
Mean age	41.73	
Gender		
Male	137	45.7
Female	163	54.3
Marital Status		
Married	120	40.0
Single	97	32.3
Separated/Divorced	23	7.7
Widow/widower	60	20.0
Highest Qualification		
SSCE	65	21.6
Diploma.	83	19.3
Bachelor	94	12.9
Masters	38	12.7
Doctorate	20	6.7
Years of experience		

1 – 5	88	29.2
6 – 10	72	24.3
11 – 15	66	21.9
16 – 20	56	18.6
Over 20	18	6.0
Mean years of experience	9.74	

Professional group

Physician	50	16.7
Pharmacist/	22	7.3
Nurse/midwife	76	25.3
Laboratory scientist	24	8.0
Technologist	20	6.7
Medical records	21	7.0
Health Assistants	24	8.0
Administrative	42	14
Others (e.g Physiotherapist, radiographer, optometrist)	21	7.0

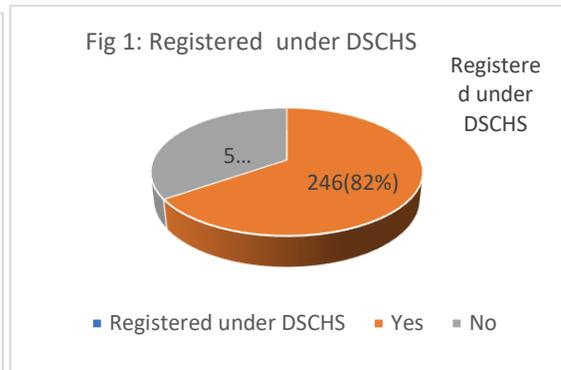
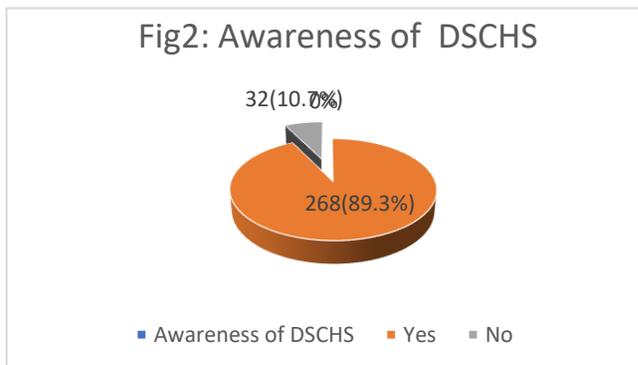


Table 2: Utilization and factors influencing Utilization of the DSCHS

Utilization Variable	Frequency	Percentage
Utilizing the DSCHS		
Yes	212	70.3
No	88	29.7
Utilized the health scheme in the last one year(n=212)		
Once	34	16.0
Twice	51	24.1
Thrice	55	25.9
More than Thrice	72	40.0
Willing to pay more if the services are of high quality		
Yes	234	78
No	66	22
Preferred method of payment for health services		
Out of pocket	108	36
DSCHS	192	64
Are you satisfied with the health services of DSCHS		
Yes	96	32
No	174	58
Indifferent	30	10
Services received (multiple response)		
Consultation General check-up	56	12.5
Laboratory services	115	54.2
Maternal services	84	38.6
Surgical service	72	27.8
Radiology services	25	7.7
Ophthalmology services	12	4.7
Dental services	16	5.5
Pharmacy	128	56.4
Preferred health facility for DSCHS		
Government hospital	124	41.3
Private hospital	148	49.3
None	28	9.4
Level of care used under the scheme (multiple response)		
Primary	192	90.6
Secondary	67	31.6
Tertiary	28	13.2
DSCHS improve health seeking behaviour		
Yes	148	69.8
No	64	30.2
Indifferent	0	0
Confidence in the improvement of DSCHS		
Yes	118	55.7
No	72	33.9
Indifferent	22	10.4

Source: Field Survey, 2025

Majority (212, 70.3%) utilized the DSCHS and from these most (72, 40%) used the services more than thrice a year. Majority of respondents were not satisfied with the DSCHS but preferred it to paying out-of-pocket, they were willing to pay more if the services was improved. Majority claimed the scheme has improved their health seeking behavior and expressed confidence in the scheme.

Table 3: Factors influencing registration under the DSCHS

Factors	Frequency	Percentage
Registration Factors		
<i>Cumbersome registration</i>		
Yes	252	84
No	48	16
<i>Delay in registration/approval of DSCHS</i>		
Yes	228	76
No	72	24
Clinical factors		
<i>Poor health Services</i>		
Yes	198	66
No	102	34
<i>Poor Attitude of Staff</i>		
Yes	134	44.7
No	166	55.3
<i>Delay in getting Services</i>		
Yes	167	55.7
No	133	44.3
<i>Lack of improvement of Clinical State</i>		
Yes	125	41.7
No	175	58.3
Geographical factors		
<i>Long Distance of residence from DSCHS</i>		
Yes	214	71.3
No	86	28.7
<i>Distance of Primary Service Provider to Referral Centre</i>		
Yes	105	35
No	195	65

Source: Field Survey, 2025

Majority of respondents identified the cumbersome registration and delay in registration process and delay in getting care as factors affecting the utilization of the scheme. Majority

affirmed that the attitude of health care provider was good and there was improvement in their clinical state after using the scheme.

Table 4: Association between socio-demographic characteristics and Registration of DSCHS

Socio-demographic Variable	Registered DSCHS		X ²	p-value
	Yes	No		
Age (n = 300)				
20 – 29	23 (40.4)	6 (59.6)	28.249	<0.001
30 – 39	68 (81.9)	15(18.1)		
40 – 49	53 (80.3)	13(19.7)		
50 – 59	62 (87.3)	9 (12.7)		
60 and above	13 (56.5)	10 (43.5)		
Sex (n = 300)				
Male	101 (56.8)	36 (43.2)	3.896	0.048
Female	145 (45.1)	18 (54.9)		
Marital Status (n = 300)				
Married	116 (57.9)	4 (42.1)	39.477	0.003
Unmarried	70 (32.9)	27 (67.1)		
Separated/Divorced	5 (60.0)	18(40.0)		
Widow	55 (75.0)	5 (25.0)		
Years of experience (n = 300)				
1 – 5	76 (86.4)	12 (13.6)	31.635	<0.001
6 – 10	56 (77.8)	16 (22.2)		
11 – 15	57 (84.8)	9 (15.2)		
16 – 20	48 (85.7)	8 (14.3)		
Over 20	9 (50.0)	9 (50.0)		
Professional group (n = 300)				
Physician	77 (55.0)	31(45.0)	2.788	0.003
Pharmacist	19 (40.4)	5 (59.6)		
Nurse/midwife	26 (66.7)	4 (33.3)		
Laboratory scientist	17 (50.0)	5 (50.0)		
Technologist	19 (95.0)	1 (5.0)		
Medical records	21 (100)	0 (0.0)		
Health Assistant	23 (95.8)	1 (4.2)		
Administrative	39 (92.9)	3 (7.1)		
Others	17 (81.0)	4 (19.0)		

Source: Field Survey, 2025

From the table representing inferential statistics(chi-square) between socio-demographic variable and registration of DSCHS, significant variable associated included: Age ($X^2=28.249$; $P<0.001$), therefore, the null hypothesis (H_{01}) was rejected. Marital status($X^2=39.477$; $P=0.003$), therefore, the null hypothesis (H_{03}) was rejected. Years of experience of respondents($X^2= 31.635$; $P<0.001$), therefore, the null hypothesis (H_{04}) was rejected.

The variables that were not significant included: Sex ($X^2= 3.896$; $P=0.048$), therefore, the null hypothesis (H_{02}) was not rejected. Professional group($X^2= 2.788$; $P=0.003$), therefore, the null hypothesis (H_{05}) was not rejected.

DISCUSSION:

The ultimate goal in managing health insurance is to ensure accessibility to quality health care. This research evaluates the management and utilization of the Delta State Contributory Health Scheme among healthcare workers in the Delta-Central Senatorial District thereby highlighting the successes and obstacles. In this study, the majority of respondents were aware of the Delta State Contributory Health Scheme as seen in a related study by Owhojedo and colleagues in 2023 and by Obelebra and Foluke, 2021 among teachers in Delta State and federal civil servants in Rivers State respectively. The findings are also in tandem with another study done among civil servants by Odo & Ukawuilulu, 2019 which revealed a high level of awareness 63.9% of the NHIS among civil servants.

The utilization of the health insurance (DSCHS) in this study was high (212, 70.3%) among respondents and this is similar to a previous study which reported that a large proportion of respondents (243, 69.4%) were utilizing DSCHS (Owhojedo, et al. 2023). This was also observed in a previous study in Rivers State where majority of respondents (203, 72.5%) used the health insurance services. This finding is highly suggestive of the acceptance of DSCHS by respondents which was hitherto the concerns raised by other studies (Amegor et al., 2023; Fenny et al., 2021; Eze et al., 2024).

Majority of health services utilized under the scheme by the respondents include laboratory services, pharmacy and maternal care. However, only 32% of respondents were satisfied with services provided under DSCHS. This level of satisfaction observed in this study was low when compared with a similar study done in Rivers state, Nigeria, where majority of the

respondents (56.4%) were satisfied with health services received under NHIS (Obelebra and Foluke, 2021). This level of satisfaction was by far higher than a similar study in Delta state with abysmally low 4.3% of respondents satisfied with services (Owhojedo, et al. 2023). This difference could be due to the different professional group and because health workers themselves are involved in the provision of healthcare.

There were several factors encountered by most respondents and highlighted as obstacles to the utilization of DSCHS in this study. They included cumbersome and delay in registration procedure, poor health services, delay in getting services and long distance from residence to DSCHS accredited health facility. These factors were similarly reported by Owhojedo et al., 2023 and Gbadamosi, 2017. Contrary to previous studies (Adebiyi, & Adeniji, 2021; Owhojedo et al., 2023 and Gbadamosi, 2017), the present study showed that majority of respondents were satisfied with the attitude of health workers. This was the case in the study by Obelebra and Foluke, 2021. The fact that respondents were health workers themselves may be a reasons why they are satisfied with the attitude of health care providers .Despite these obstacles, majority of respondents (192,64%) prefer using the DSCHS for health care financing instead of out-of-pocket payment. Furthermore, significant number of respondents (246, 89.4%) are registered under the scheme. In fact more than half of respondents (175, 58.3%) attest to the fact that their clinical state improved with the use of the scheme. Majority of respondents (69.8%) that utilize the scheme acknowledge that DSCHS has improve their health seeking behavior. Also observed, is that majority of respondents utilizing the scheme express having confidence in the improvement of services by DSCHS contrary to findings in study by Onyebadi and colleagues. Unlike the findings in Obelebra and Foluke, 2021, were majority of the respondents preferred Government facilities, the present study reveals that majority of respondents preferred using private hospitals as their healthcare providers instead of public health facilities. This is may be due to the perception of longer waiting time in Government facilities and the fact that the DSCHS is new compared to NHIS. Age was significantly associated with registration of DSCHS which was similar in study by Adebiyi & Adeniji, 2021. Marital status and years of experience of respondents were also significantly associated with the registration of the DSCHS in present study, these findings were in tandem with studies done by Onyebadi and colleagues, 2023; Gbadamosi, & Famutimi, 2017.

CONCLUSION

This study has revealed that there is a high rate of awareness and utilization of the DSCHS among respondents despite being unsatisfied with the health services rendered. It also shows that respondents are willing to pay more to get better services. The respondents still believe that the scheme is better than paying out-of-pocket payment for health care. They are satisfied with the attitude of the health care providers however not satisfied with the registration procedures because of its cumbersome nature and delay in time and distance of accredited centers from their residence. A lot of respondents have had better health seeking behavior because of the scheme and majority express confidence in the improvement of the DSCHS. The study also revealed that socio-demographic characteristics such as age, marital status and years of working experience were associated with registration of DSCHS.

Despite the obstacles or challenges of the scheme, the high level of awareness, utilization and confidence in the DSCHS reflects the effective management, success and acceptance of the scheme by the healthcare workers in Delta Central Senatorial District.

RECOMMENDATIONS

The following recommendations are hereby made in order to improve the Delta State Contributory Health Scheme. Firstly, there should be more training for operational staff of the DSCHS in improving dexterity with the registration process. Secondly, up scaling of health services to meet the demands of the enrollees of the scheme and also decrease patient waiting time. This may involve employing more staff, creating more consulting rooms and provision of more hospital consumables and drugs. Thirdly, the Government should make efforts to accredit more health facilities in order to reduce the geographical barriers to utilization of DSCHS.

The socio-demographic characteristics of respondents should also be taken into cognizance, unmarried workers should be encouraged to register and not wait until they are married and duly informed that their registration can be updated if they become married. Older staff especially those with longer working years of experience should be educated that despite being health workers, the scheme goes beyond provision of care for acute or emergency cases but also for preventive and rehabilitative services as well from health promotion which they and their families will benefit from.

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ARTIFICIAL INTELLIGENCE AND SMALL AND MEDIUM SCALE ENTERPRISE (SMEs) MANAGEMENT IN NIGERIA

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Abstract

This paper explores the role of AI in SME management in Nigeria, using Flutterwave, a leading fintech company, as a case study. The study examines how AI-driven payment solutions improve SME efficiency and financial security. A survey research design was employed, with 142 online respondents who engage with Flutterwave's AI-powered financial services. Census sampling was used, and data were collected via structured questionnaires. The analysis was conducted using descriptive statistics (percentages) and inferential statistics (Pearson correlation analysis) to measure the relationship between AI adoption and SME performance. The findings reveal that AI-driven payment solutions significantly enhance SME operational efficiency, transaction security, and fraud detection. However, cost, infrastructure limitations, and a lack of AI expertise remain key barriers to widespread AI adoption among SMEs in Nigeria. The study concludes that increased AI adoption can revolutionize SME management, provided those strategic interventions such as government incentives, AI training programs, and improved digital infrastructure are implemented.

Keywords: Artificial Intelligence, SMEs, Payment Solutions, Fraud Detection, Business Efficiency, Nigeria, Flutterwave

Introduction

Small and Medium Enterprises (SMEs) are the backbone of Nigeria's economy, contributing approximately 48% to the national GDP and employing over 80% of the country's workforce (NBS, 2023). SMEs play a vital role in driving economic diversification, innovation, and poverty reduction. However, they continue to face significant challenges, including limited access to finance, inefficient operations, poor market penetration, and weak financial management structures (Adebayo & Okonkwo, 2023). The increasing complexity of global

business environments has made it imperative for Nigerian SMEs to adopt advanced technologies such as Artificial Intelligence (AI) to enhance efficiency, optimize decision-making, and remain competitive. AI has emerged as a transformative tool in modern business management, offering automation, data-driven insights, and predictive analytics to improve business performance (Obi & Eze, 2024). AI-driven applications, including chatbots, intelligent payment systems, fraud detection mechanisms, and personalized marketing strategies, have revolutionized how businesses interact with customers and manage internal operations (Ogunleye et al., 2023). In Nigeria, fintech companies, particularly Flutterwave, have successfully integrated AI-driven solutions to enhance their operational efficiency and financial transactions, setting a benchmark for SME adoption of AI technology. Flutterwave, one of Africa's leading fintech firms, has leveraged AI to optimize payment processing, detect fraudulent transactions, and improve customer service through automation (Adekunle & Bello, 2024). The company provides an intelligent payment platform that enables businesses, including SMEs, to process transactions securely and efficiently. AI-driven fraud detection mechanisms analyze transactional patterns in real time, identifying and mitigating potential risks, thereby improving the financial security of businesses (Onyekachi & Ibrahim, 2024). Additionally, AI-powered customer service chatbots enhance user experience by providing instant and accurate responses to inquiries, reducing the operational burden on human agents (Umeh et al., 2023).

Despite the potential benefits of AI, many Nigerian SMEs are yet to embrace its full potential due to high implementation costs, limited digital literacy, and infrastructural deficiencies such as poor internet connectivity and irregular power supply (Okoro & Chukwuma, 2023). These challenges hinder the widespread adoption of AI-driven solutions, limiting SMEs' ability to compete effectively in the global digital economy. This paper examines the impact of AI on SME management in Nigeria, focusing on Flutterwave as a case study. Specifically, it explores how AI-driven payment solutions and fraud detection mechanisms enhance SME efficiency and financial security. The findings will provide valuable insights into the opportunities and challenges of AI adoption in Nigeria's SME sector, offering recommendations for businesses and policymakers.

Hypotheses

- 1.** H0: AI-driven intelligent payment solutions do not significantly impact SME efficiency in Nigeria.
Ha: AI-driven intelligent payment solutions significantly impact SME efficiency in Nigeria.
- 2.** H0: AI integration in SMEs does not significantly improve financial management.
Ha: AI integration in SMEs significantly improves financial management.

Literature Review

Conceptual Review

Artificial Intelligence (AI)

Artificial Intelligence (AI) in business management involves the application of machine learning, automation, and data analytics to optimize operations, improve efficiency, and enhance decision-making (Adebayo & Okonkwo, 2023). AI-driven solutions are increasingly being adopted by businesses worldwide, including SMEs, to automate routine processes, improve financial transactions, and provide predictive insights that aid strategic planning (Ogunleye et al., 2024). AI has the potential to revolutionize SME management by enabling real-time data processing, customer behavior analysis, and intelligent automation of business operations (Onyekachi & Ibrahim, 2024). In the Nigerian business landscape, AI applications in SMEs are primarily utilized in customer service automation, fraud detection, financial analysis, and intelligent payment solutions (Okoro & Chukwuma, 2023). AI-powered chatbots and virtual assistants are increasingly being used to enhance customer engagement, provide instant responses, and reduce human workload, leading to improved service delivery and customer satisfaction (Adekunle & Bello, 2024). Fraud detection mechanisms use AI algorithms to analyze transaction patterns, identify anomalies, and mitigate financial risks, which is particularly crucial for SMEs operating in the digital economy (Umeh et al., 2023). AI also plays a key role in financial analysis and intelligent payment solutions, enabling SMEs to track transactions, automate invoicing, and optimize cash flow management (Obi & Eze, 2024). These capabilities help businesses make data-driven financial decisions, minimize errors, and improve overall efficiency (Ogunleye et al., 2023). As AI adoption continues to

grow, its role in SME management is expected to expand, offering businesses increased competitiveness, operational efficiency, and long-term sustainability in Nigeria's evolving economic landscape.

Intelligent Payment Solution

Artificial Intelligence (AI)-driven payment solutions have revolutionized financial transactions by enhancing speed, accuracy, and security, making them essential for the growth and sustainability of SMEs in Nigeria's evolving digital economy (Adebayo & Okonkwo, 2023). As SMEs increasingly rely on digital financial transactions, AI-powered payment systems provide seamless, efficient, and secure solutions that reduce human errors, detect fraudulent activities, and optimize cash flow management (Ogunleye et al., 2024). One of the most crucial aspects of AI-driven payment systems is fraud detection and prevention. Cybercrime and financial fraud have become major threats to SMEs in Nigeria, with businesses losing substantial revenue due to fraudulent transactions (Okoro & Chukwuma, 2023). AI-based fraud detection mechanisms use machine learning algorithms to analyze transactional patterns in real time, flagging suspicious activities and blocking fraudulent transactions before they are completed (Onyekachi & Ibrahim, 2024). This proactive approach reduces financial risks, enhances security, and builds trust in digital payment platforms, thereby encouraging more SMEs to transition to cashless operations (Adekunle & Bello, 2024). Moreover, AI-driven payment systems increase transaction speed and accuracy. Traditional manual transaction processing is often slow, prone to errors, and susceptible to delays caused by human intervention (Umeh et al., 2023). AI-powered payment gateways streamline transactions by automating invoicing, payment processing, and reconciliation, ensuring that SMEs can complete transactions efficiently and with minimal errors (Obi & Eze, 2024). By integrating AI into payment systems, businesses can handle multiple transactions simultaneously, process real-time payments, and improve customer satisfaction (Ogunleye et al., 2023). Another key advantage of AI-powered payment solutions is their ability to provide predictive analytics for cash flow management. AI tools analyze historical financial data, forecast future cash flow trends, and help SMEs anticipate revenue fluctuations (Okoro & Chukwuma, 2023). This predictive capability enables businesses to make data-driven

financial decisions, optimize budgeting, and prevent liquidity crises, which are common challenges faced by Nigerian SMEs (Adebayo & Okonkwo, 2023).

Furthermore, intelligent payment systems offer automated financial reporting, which enhances transparency and supports strategic decision-making. AI-driven reporting tools generate real-time financial statements, track expenditures, and provide insights into financial performance, allowing SMEs to identify inefficiencies and optimize resource allocation (Adekunle & Bello, 2024). By adopting AI-driven payment solutions, Nigerian SMEs can significantly improve operational efficiency, reduce financial risks, and enhance overall business performance. This integration is crucial for competing in the digital economy and achieving long-term sustainability in an increasingly technology-driven business environment (Ogunleye et al., 2024).

AI in SMEs in Nigeria

Small and Medium Enterprises (SMEs) play a vital role in Nigeria's economy, contributing significantly to job creation and GDP growth. However, many Nigerian SMEs struggle with inefficiencies, financial limitations, and poor market penetration. Artificial Intelligence (AI) has the potential to transform SME management by automating processes, improving decision-making, and enhancing financial transactions. AI-powered solutions such as process automation, predictive analytics, and fraud detection can help businesses streamline operations and achieve greater efficiency. Despite these benefits, AI adoption among Nigerian SMEs remains low due to several challenges. One major obstacle is the lack of awareness. Many SME owners and managers are unfamiliar with the potential of AI in improving productivity, customer service, and financial management. As a result, they continue to rely on traditional manual processes, missing out on the benefits of AI-driven automation. Another challenge is infrastructure limitations. Poor internet connectivity, unreliable power supply, and inadequate digital infrastructure hinder the seamless integration of AI solutions. AI-driven platforms require stable internet and real-time data processing, which are not always available, especially in rural areas.

Financial constraints also pose a significant barrier to AI adoption among SMEs in Nigeria. Implementing AI-powered solutions often requires substantial investment in software, cloud computing, and skilled personnel. Given that many SMEs operate on tight budgets, they

struggle to allocate funds for AI implementation. Additionally, the lack of AI talent in Nigeria further slows adoption. Many SMEs do not have in-house AI experts and find it difficult to recruit or afford skilled professionals who can implement and manage AI technologies effectively.

Despite these challenges, AI is making a noticeable impact in Nigeria's SME sector, particularly in fintech. Companies like Flutterwave have demonstrated how AI-driven solutions can revolutionize financial transactions, fraud detection, and customer engagement. AI-powered fraud detection systems analyze real-time transactional data to identify suspicious activities, reducing financial risks and improving security. AI-driven chatbots and virtual assistants also help businesses improve customer service by automating responses and providing personalized support. These advancements highlight the potential of AI in enhancing SME performance. For Nigerian SMEs to fully leverage AI, there is a need for greater awareness, investment in digital infrastructure, and government support in promoting AI-driven business solutions. By addressing these challenges, AI can serve as a powerful tool to enhance productivity, optimize financial transactions, and improve business efficiency in Nigeria's growing digital economy.

Theoretical Framework

This study is pioneered on the Technology Acceptance Model (TAM) developed by Davis (1989), which explains how individuals and organizations accept and use technology. TAM posits that technology adoption is primarily influenced by perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which a technology enhances performance and efficiency, while perceived ease of use relates to how effortlessly users can interact with the technology. When both conditions are met, organizations are more likely to integrate new technologies into their operations. Venkatesh and Davis (2000) extended TAM by incorporating external factors such as organizational support, infrastructure, and financial resources, which play crucial roles in determining technology adoption. In the context of Nigerian SMEs, AI adoption is often hindered by financial constraints, lack of AI expertise, and inadequate infrastructure (Adebayo & Okonkwo, 2023). However, if SME owners and managers perceive AI-driven solutions as beneficial in automating financial transactions,

reducing operational costs, and improving decision-making, they are more likely to adopt them (Okoro&Chukwuma, 2023).

Moreover, Ogunleye et al. (2024) assert that training and awareness programs can significantly enhance perceived ease of use, making AI tools more accessible to SME operators. By applying TAM, this study examines how Nigerian SMEs perceive AI-powered payment solutions, fraud detection mechanisms, and automation tools, and how these perceptions influence AI adoption. Understanding these factors is crucial for developing strategic policies that facilitate AI integration in the SME sector, ensuring long-term business sustainability and competitiveness.

Empirical Review

Several studies have examined the impact of AI on SME management, providing insights into how AI-driven solutions improve business operations, financial transactions, and decision-making.

Adebayo (2022) conducted a quantitative study involving 200 SMEs across Lagos and Abuja to assess AI's impact on business efficiency. Using structured questionnaires and regression analysis, the study found that AI adoption improved operational efficiency by 40%, with the most significant improvements observed in automated customer service, inventory management, and fraud detection. The study recommended increased AI adoption to enhance SME competitiveness in Nigeria.

Okonkwo and Eze (2023) carried out a mixed-methods study on fintech businesses in Nigeria, specifically analyzing AI-driven payment solutions. Using survey data from 150 fintech SMEs and in-depth interviews with financial analysts, their research revealed that AI-powered fraud detection reduced fraudulent transactions by 60%. Additionally, their findings highlighted that machine learning algorithms improve transaction security and customer trust, making AI adoption a crucial strategy for financial technology firms.

Bello et al. (2024) conducted a longitudinal study on 100 SMEs in Kano and Port Harcourt, assessing AI's role in financial decision-making. The researchers used panel data analysis over a three-year period and found that AI-enhanced data analytics helped SME owners make more

informed investment and pricing decisions. The study emphasized that AI-driven financial insights improved profitability by 35% over the study period.

Umeh and Adekunle (2023) examined AI adoption barriers among Nigerian SMEs through a qualitative case study of 10 small businesses in Ibadan. Using semi-structured interviews and thematic analysis, the study identified lack of AI awareness, high implementation costs, and limited digital infrastructure as key obstacles. Their findings suggest that government incentives and AI training programs could drive SME adoption of AI technologies.

Ogunleye et al. (2024) analyzed the impact of AI chatbots on SME customer engagement in a quantitative study involving 250 SMEs in Lagos and Abuja. Using descriptive statistics and Pearson correlation analysis, they found that AI-driven chatbots improved customer response time by 55% and increased customer satisfaction rates by 48%. The study recommended that SMEs integrate AI-powered customer service tools to enhance customer retention and brand loyalty.

Obi and Ibrahim (2024) investigated the role of AI in predictive analytics for SME supply chain management. Conducting a survey with 180 SMEs in Nigeria's manufacturing sector, they applied structural equation modeling (SEM) to analyze data. Their results indicated that AI-driven supply chain analytics reduced inventory costs by 30% and improved demand forecasting accuracy by 50%. The study concluded that AI-powered predictive analytics enhances SME agility and competitiveness in fluctuating markets.

These studies collectively demonstrate that AI adoption significantly enhances SME performance in Nigeria by improving operational efficiency, reducing fraud, enhancing financial decision-making, increasing customer engagement, and optimizing supply chain management. However, challenges such as high implementation costs, lack of awareness, and infrastructure limitations continue to hinder AI integration in SME operations. Addressing these barriers through government policies, AI education, and affordable AI solutions could accelerate AI adoption among Nigerian SMEs.

Methodology

A survey research design was used to assess the impact of AI on SME management. The study focused on Flutterwave's online operations as a case study. The target population consisted of

142 online users of Flutterwave who engage with its AI-driven services. A census sampling technique was used, meaning all 142 respondents participated in the study. Primary data were collected through structured questionnaires distributed online. The collected data were analyzed using descriptive statistics (percentages) and inferential statistics (Pearson correlation analysis) to test the research hypotheses. Descriptive statistics were used to summarize participants' responses, while Pearson correlation analysis was conducted to measure the strength and direction of the relationship between AI adoption and SME efficiency, as well as between AI-driven financial management and fraud detection.

Data Presentation and Analysis

Table 1: Impact of AI-Driven Payment Solutions on SME Efficiency

Response	Frequency	Percentage (%)
Strongly Agree	60	42.3%
Agree	50	35.2%
Neutral	20	14.1%
Disagree	8	5.6%
Strongly Disagree	4	2.8%
Total	142	100%

Source: *Field Survey (2025)*

The results in Table 1 indicate that 77.5% of respondents (Strongly Agree + Agree) believe that AI-driven payment solutions enhance SME efficiency, while only 8.4% (Disagree + Strongly Disagree) hold an opposing view. This suggests a positive perception of AI's role in improving transaction speed, accuracy, and overall operational efficiency in Nigerian SMEs.

Table 2: Pearson Correlation Analysis – AI and SME Efficiency

Variables	AI-Driven Payment Solutions	SME Efficiency
AI-Driven Payment Solutions	1.000	
SME Efficiency	0.712 (p < 0.01)	1.000

Source: *Field Survey (2025)*

The Pearson correlation coefficient ($r = 0.712$, $p < 0.01$) shows a strong positive relationship between AI-driven payment solutions and SME efficiency. This indicates that as AI adoption increases in financial transactions, SME efficiency improves significantly.

Table 3: Impact of AI on Financial Management and Fraud Detection

Response	Frequency	Percentage (%)
Strongly Agree	55	38.7%
Agree	52	36.6%
Neutral	22	15.5%
Disagree	9	6.3%
Strongly Disagree	4	2.8%
Total	142	100%

Source: *Field Survey (2025)*

Results from Table 3 show that 75.3% of respondents (Strongly Agree + Agree) believe that AI improves financial management and fraud detection, while only 9.1% (Disagree + Strongly Disagree) disagree.

Table 4: Pearson Correlation Analysis – AI and Financial Management/Fraud Detection

Variables	AI in Financial Management	Fraud Detection
AI in Financial Management	1.000	
Fraud Detection	0.695 (p < 0.01)	1.000

Source: *SPSS v23*

The Pearson correlation coefficient ($r = 0.695$, $p < 0.01$) reveals a strong positive relationship between AI-driven financial management and fraud detection. This suggests that SMEs using AI for financial analytics and fraud prevention experience better financial security and risk management.

Interpretation of Findings

The data analysis confirms that:

- AI-driven payment solutions significantly improve SME efficiency by enhancing transaction accuracy and speed.
- AI integration in financial management leads to better fraud detection and financial decision-making.
- Pearson correlation results indicate strong positive relationships between AI adoption and SME performance metrics, supporting the study’s hypotheses.

The findings suggest that increasing AI adoption in Nigerian SMEs could lead to enhanced operational efficiency, reduced financial fraud, and improved business sustainability. However, addressing challenges such as cost, infrastructure, and AI expertise remains essential for maximizing AI's benefits in SME management.

Findings

The study's findings reveal that AI-driven intelligent payment solutions play a crucial role in enhancing SME efficiency by streamlining financial transactions, automating processes, and improving decision-making. SMEs that integrate AI-powered solutions experience faster transaction processing, reduced operational costs, and improved customer satisfaction due to seamless payment experiences. AI-enabled automation also minimizes human errors in financial transactions, ensuring accuracy and compliance with financial regulations.

The study further confirms that AI adoption in SMEs significantly improves financial management and fraud detection. AI-driven fraud detection systems use machine learning algorithms and real-time data analysis to identify suspicious transactions, reducing the risk of cyber fraud and unauthorized access. SMEs leveraging AI for financial analytics benefit from better cash flow management, predictive financial forecasting, and automated expense tracking, leading to more informed financial decision-making.

Despite these benefits, several challenges hinder AI adoption among Nigerian SMEs. The study identifies high implementation costs, limited AI expertise, inadequate digital infrastructure, and resistance to change as major barriers. Many SMEs lack the financial resources to invest in AI software, cloud computing, and skilled personnel. Additionally, poor internet connectivity and an unreliable power supply restrict AI-driven solutions from operating efficiently, particularly in rural areas.

However, SMEs that successfully integrate AI into their operations report improved transaction security and enhanced business analytics. AI-driven solutions provide real-time insights into consumer behavior, market trends, and operational inefficiencies, enabling SMEs to make strategic business decisions. Companies that utilize AI-powered customer service chatbots also experience higher customer engagement and satisfaction levels. The findings

highlight the need for increased AI awareness, government incentives, and investment in digital infrastructure to facilitate AI adoption and maximize its benefits for SMEs in Nigeria.

Summary

This study examined the role of Artificial Intelligence (AI) in SME management in Nigeria, with a particular focus on Flutterwave as a case study. The findings reveal that AI-driven payment solutions have a significant impact on SME efficiency, leading to faster transaction processing, improved accuracy, and enhanced financial decision-making. SMEs leveraging AI experience better cash flow management, predictive analytics, and real-time fraud detection, which contribute to business growth and sustainability.

Conclusion

AI has the potential to transform SME operations in Nigeria. Flutterwave's success in integrating AI solutions demonstrates the benefits of automation, fraud detection, and data analytics in financial transactions. However, widespread adoption requires strategic interventions. The study further highlights that AI adoption in financial management and fraud prevention has helped SMEs enhance transaction security, detect suspicious activities, and reduce financial risks. AI-powered automation tools, such as intelligent payment gateways and predictive financial analytics, allow SMEs to optimize resource allocation and improve operational efficiency.

However, despite these benefits, several challenges hinder AI adoption among Nigerian SMEs. The study identifies high implementation costs, inadequate digital infrastructure, and a lack of AI expertise as the major barriers. Many SMEs struggle to afford AI-powered software and data analytics tools, while poor internet connectivity and an unstable power supply limit their ability to leverage AI effectively. Additionally, the lack of skilled AI professionals in SMEs further slows adoption and implementation.

Overall, the study concludes that AI has the potential to revolutionize SME management in Nigeria, particularly in the areas of payment processing, financial management, and fraud detection. However, to maximize AI's benefits, policy interventions, capacity-building initiatives, and infrastructural improvements are necessary to address the cost, infrastructure, and skills gaps that hinder widespread adoption.

Recommendations

Government Support – Policies should promote AI adoption through incentives and funding programs.

Training Programs – SMEs should invest in AI training to build technical expertise.

Public-Private Partnerships – Collaboration between AI firms and SMEs can facilitate affordable AI solutions.

Infrastructure Improvement – Investments in digital infrastructure will enhance AI accessibility.

This study provides valuable insights into the role of AI in SME management in Nigeria. Future research should explore AI's impact on other industries beyond fintech.

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WORKFORCE CAPACITY PLANNING AND PERFORMANCE OF BREWING FIRMS IN SOUTH-SOUTH, NIGERIA

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Abstract

Despite the recognized importance of workforce capacity planning, there remains a significant gap in understanding how workforce capacity planning directly influences the performance outcomes of organizations. The broad objective of this paper is to determine the relationship between workforce capacity planning and performance of brewing firms in South-South, Nigeria. This study is grounded on the Human Capital Theory (HCT) developed by Becker (1964). Survey research design was employed, a sample size of two hundred and ninety (290) derived using Krejcie and Morgan (1970) sampling technique was employed by the researchers. Questionnaire was the data collection instrument employed while regression analysis was used to ascertain the relationship between the studied variables. Findings obtained from a test of the hypothesis revealed that the relationship between skill inventory and performance (firm competitiveness) is significant and positive since (F -statistics=210.4351; R -squared=0.764; p <0.05). Sequel to that, the researchers concluded that the relationship between workforce capacity planning and performance of brewing firms in South-South, Nigeria is strong, significant and positive. Base on that, the researchers recommended a regular stock taking of skill sets of employees, as well as training and re-training of employees of the studied brewing firms so as to stay competitive.

Key words: Workforce capacity planning, skill inventory, performance, firm competitiveness

INTRODUCTION

Workforce capacity planning is pivotal for organizations seeking to align their human resources with strategic goals and operational demands. In today's dynamic business environment, this strategic process becomes even more critical, especially in regions like Nigeria where companies encounter distinctive challenges and opportunities in optimizing their workforce to enhance overall performance and competitiveness (Dibie&Okafor, 2023). For corporations operating in Nigeria, the brewing industry represents a competitive landscape where effective workforce planning could play a crucial role in sustaining organizational success (Ogbonna& Harris, 2021). The introduction of workforce capacity planning into

Nigerian businesses can be accrued to several ingredients. Firstly, the liberalization of the Nigerian economy and its integration into the global market have necessitated a strategic approach to human resource management (Ojo&Akinola, 2020). Organizations operating in sectors such as telecommunications, banking, manufacturing, and services have experienced heightened competition, prompting them to optimize their workforce to enhance productivity and innovation (Akpan&Udofia, 2021). The emergence of workforce capacity planning has evolved as a strategic imperative for organizations globally, driven by the need to align human resources with organizational goals and operational demands (Oluwaseun&Adeniji, 2023). This strategic approach ensures that organizations possess the right talent with the necessary skills and competencies to meet current and future business needs effectively (Armstrong & Taylor, 2020).

In Nigeria, organizations often grapple with unique workforce challenges such as skill shortages, demographic shifts, and regulatory complexities (Okafor&Adeleye, 2023). These factors underscore the importance of tailored workforce planning strategies that take into account local dynamics while aligning with global best practices (Ojo&Akinola, 2020). For instance, brewing firms in Nigeria must navigate cultural diversity, regional disparities in talent availability, and the need for continuous skills development to stay competitive (Akpan&Udofia, 2021). Also the adoption of workforce capacity planning has gained prominence over the past decade, influenced by globalization, technological advancements, and competitive pressures in various industries (Okafor&Adeleye, 2023). Nigerian businesses, including multinational corporations and local enterprises, have increasingly recognized the importance of proactive workforce planning to navigate the country's unique socio-economic challenges and capitalize on growth opportunities (Dobie&Okafor, 2023). Additionally, regulatory reforms and labor market dynamics in Nigeria have prompted organizations to adopt more structured workforce planning practices (Oluwaseun&Adeniji, 2023). For example, changes in labor laws and regulations concerning employment practices have compelled businesses to ensure compliance while maintaining operational efficiency through effective workforce planning strategies (Beardwell, 2021).

Recent studies emphasize the direct correlation between effective workforce planning and organizational performance metrics such as productivity, employee satisfaction, and financial outcomes (Beardwell, 2021). By strategically aligning workforce capabilities with business

objectives, Nigerian organizations can achieve higher levels of operational efficiency and employee engagement, leading to sustained competitive advantage (Barney & Wright, 2019). Workforce capacity planning is not merely a technical exercise but a crucial demand for organizations operating in dynamic environments like Nigeria. For brewing firms, leveraging robust workforce planning practices ensures resilience amidst market uncertainties and positions the company for long-term success.

Despite the recognized importance of workforce capacity planning, there remains a significant gap in understanding how this strategic practice (workforce capacity planning) directly influences the performance outcomes of organizations. While the theoretical benefits of workforce capacity planning are well-documented, empirical evidence on its specific impact on operational efficiency, employee productivity, and overall performance metrics in Nigerian businesses, including the brewing sector, is limited (Okafor&Adeleye, 2023). Bridging the gap in understanding the direct influence of workforce capacity planning on organizational performance in the brewing sector requires empirical research that examines specific implementation strategies, outcomes, and contextual factors unique to the Nigerian business environment. By addressing these research gaps, the researchers seeks to examine the relationship between workforce capacity planning and performance of brewing firms in South-South, Nigeria. Specifically, this study seeks to ascertain the relationship between skill inventory and firm competitiveness.

REVIEW OF RELATED LITERATURE

Conceptual Review

Workforce Capacity Planning

Workforce capacity planning is a strategic and systematic process crucial for aligning an organization's human element with its operational and strategic aims. It ensures that an organization has the required number of employees with the necessary skills to meet both current and future business needs (Taylor, 2020). This process is essential for maintaining operational efficiency, adapting to changes in the market, and fostering organizational growth. At its core, workforce capacity planning involves a comprehensive assessment of the existing workforce to determine its capabilities and limitations. This includes evaluating current

employee skills, identifying gaps, and forecasting future requirements based on anticipated business demands and strategic objectives (Cascio, 2019).

By accurately predicting these needs, organizations can make informed decisions about recruitment, training, and development to ensure they have the right talent in place. A key component of effective workforce capacity planning is demanding forecasting. This involves predicting the future needs of the workforce based on factors such as market trends, technological advancements, and changes in customer behavior (Lussier & Hendon, 2018). For instance, advancements in technology may necessitate new skills and roles, requiring organizations to plan for these changes in advance. Additionally, analyzing workforce supply involves assessing the availability of current employees and external talent pools to meet forecasted demands (Brewster, 2021). Key components of workforce capacity planning include analyzing workforce supply and demand, creating skill inventories, and implementing succession planning. Analyzing workforce supply and demand involves evaluating the current and future availability of talent and comparing it with the organization's needs (Brewster, 2016). This study focuses on the skill inventory component of workforce capacity planning.

Skill Inventory

A skill inventory is a comprehensive record of the skills, competencies, and qualifications possessed by an organization's workforce. It serves as a critical tool for workforce capacity planning by helping organizations identify their existing capabilities, determine skill gaps, and plan for future training and development needs (Brewster, 2016). Maintaining an up-to-date skill inventory is essential for aligning the talent pool with strategic objectives and operational requirements. The process of creating a skill inventory involves systematically cataloging the skills and competencies of employees across various roles and functions within the organization. This includes documenting qualifications, experience levels, and any specialized skills that employees possess (Becker & Huselid, 2022). A detailed skill inventory allows organizations to gain a clear understanding of their current human resources and how these resources can be leveraged to meet business goals. Identifying existing capabilities through a skill inventory helps organizations assess whether they have the right mix of skills and expertise to achieve their strategic objectives. This assessment is crucial for determining if additional skills are needed or if current capabilities are sufficient (Jiang et al., 2023).

Organizational Performance

Organizational performance refers to the efficiency and effectiveness of operational processes and outcomes within an organization. It encompasses how well an organization achieves its strategic goals and objectives, often measured through various key performance pointers such as productivity, quality, and financial metrics (Kaplan & Norton, 1996 as cited in Brewster, 2016). Understanding and managing performance is critical for organizations seeking to enhance their operational efficiency and overall effectiveness. Productivity is one of the crucial metrics used to observe the performance of employees in an organization. It measures the output produced relative to the input used, such as labor hours or material costs. High productivity indicates that an organization is efficiently utilizing its resources to generate goods or services (Huselid, 2022). Huselid (2022) opines that some organizational performance indicators include financial- profitability, dividend, return on investment, return on asset, market share e.t.c; non-financial- service quality, competitive position, market leadership e.t.c. This study focuses on competitive position.

Firm Competitiveness

Firm competitiveness refers to a company's ability to offer products or services that meet or exceed customer expectations more effectively than its competitors. This concept encompasses the various ways in which a firm can differentiate itself and gain an edge in the marketplace (Porter, 1985 as cited in Kotler & Keller, 2016). Obtaining and maintaining a competitive edge is critical for long-term success and market leadership. Competitive advantage can be realized through several strategic approaches. One common method is innovation, which involves developing new or improved products, services, or processes that offer unique value to customers (Teece, 2018). Innovative firms are often able to capture market share by providing solutions that address unmet needs or by introducing novel features that differentiate their offerings from those of competitors. Cost leadership is another strategy for gaining a competitive edge. By minimizing production costs and operating expenses, firms can offer products or services at reduced prices than their competitors while maintaining profitability (Porter, 1985 as cited in Kotler & Keller, 2016).

Theoretical Framework

This study is grounded on the Human Capital Theory (HCT), which was developed by Becker (1964). Human Capital Theory postulates that an individual's knowledge, skills, and experiences are critical economic assets that tremendously contribute to organizational productivity and significant economic growth. From this perspective, investments in human capital, through education, training, and development, are essential for enhancing organizational performance and achieving competitive advantage. In the context of workforce capacity planning, Human Capital Theory emphasizes the strategic importance of acquiring, developing, and retaining a skilled workforce to meet current and future business needs. Workforce capacity planning involves systematically analyzing workforce supply and demand, forecasting future requirements, and implementing strategies to bridge gaps existing in the studied firms.

Empirical Review

Kumar and Sharma (2017) investigated the relationship between workforce capacity planning and employee productivity in one hundred and fifty (150) Indian IT firms. The study utilized a quantitative approach with regression analysis, finding that accurate demand forecasting played a key role in ensuring that the right number of employees were available to meet business needs. The research concluded that effective demand forecasting aligned with workforce planning improved operational efficiency and service quality.

Frost and Sullivan (2018) examined the effect of workforce capacity planning on innovation in small and medium-sized enterprises (SMEs). Using a qualitative methodology involving case studies of SMEs in the technology sector, they found that organizations with well-defined skill inventories could better support innovation and adapt to market changes. The study showed that skill inventory management played a crucial role in fostering a culture of innovation and maintaining competitiveness.

Chen and Li (2019) investigated the role of workforce capacity planning in driving firm competitiveness in the Chinese manufacturing industry. The study employed a quantitative approach, analyzing data from over 200 firms. Their research showed that firms with comprehensive workforce planning strategies achieved better market performance, attributing this to enhanced operational efficiency and innovation capacity.

Adebayo and Olaniyan (2021) explored the impact of workforce capacity planning on firm competitiveness in one hundred (100) Nigerian service firms. The researchers employed a survey-based quantitative approach, concluding that firms with strong planning frameworks achieved better market positioning. This was attributed to the alignment of workforce skills and business strategies, directly enhancing competitiveness.

Gap in Knowledge

A review of extant literature from studies done in Nigeria and other climes reveals that there seems to be no existing focusing on workforce capacity planning at it concerns brewing firms in South-South, Nigeria. This is the crack or lacuna in literature/knowledge that this study seeks to fill.

METHODOLOGY

Survey research design was utilized for this study, a population of one thousand one hundred and eighty seven (1,187)-Guinness Nigeria Plc (712); Pabod brewery (246); Champion brewery (229) was used for the study. However, a sample size of two hundred and ninety (290) determined using Krejcie and Morgan (1970) sampling technique was used for the study. Questionnaire was the data collection tool utilized, face validity test was used while a reliability coefficient of 0.87 was ascertained using Cronbach alpha reliability test. Mean was the descriptive statistics employed for an analysis of the research questions while regression analysis was used to ascertain the relationship between the studied variables.

Data Presentation and Analysis

Table 4.1: Analysis of Returned and Unreturned Questionnaire

Returned (Un-mutilated)	245	84.48%
Returned (Mutilated)	15	05.17%
Unreturned	30	10.35%
Total Copies Administered	290	100.00%

Source: Field Survey, 2025

The table above shows that from the two hundred and ninety (290) copies of the questionnaire administered, two hundred and forty five (245) clean copies of the questionnaire were returned by the respondents. As a result of that, two hundred and forty-five (245) copies of the questionnaire were seen as valid for the analysis.

Is there a relationship between skill inventory and performance of brewing firms in South-South, Nigeria?

Table 4.2: Descriptive Statistics for Skill Inventory

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Q1	245	1.00	5.00	3.1000	1.42638
Q2	245	1.00	5.00	3.2000	1.52172
Q3	245	1.00	5.00	3.5000	1.37431
Q4	245	2.00	5.00	3.6000	.97248
Q5	245	1.00	5.00	3.3000	1.10224
Valid N (listwise)	245				

Source: Field Survey, 2025

The analysis above reveals that mean scores for questions bothering on skill inventory are >2.5. This makes the responses adequate for the study.

Table 4.3: Descriptive Statistics for Organizational Performance (Firm Competitiveness)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Q1	245	1.00	5.00	2.8721	1.31528
Q2	245	1.00	5.00	3.3522	1.52753
Q3	245	1.00	5.00	3.7048	1.37731
Q4	245	1.00	5.00	3.6723	.97274
Q5	245	1.00	5.00	3.2056	1.08344
Valid N (listwise)	245				

Source: Field Survey, 2025

The analysis above reveals that mean scores for questions bothering on organizational performance (firm competitiveness) are >2.5. This makes the responses adequate for the study.

Test of Hypothesis

Ho: The relationship between skill inventory and performance of brewing firms in South-South, Nigeria is not significant and positive.

Table 4.4: Regression Results

Dependent Variable: ORG_PERF
Method: Least Squares
Date: 04/01/25 Time: 04:38
Sample: 1 245
Included observations: 245

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.430394	0.730664	12.16937	0.0000
SKILL_INV	0.644444	0.044425	14.50638	0.0000
R-squared	0.764091	Mean dependent var		16.99184
Adjusted R-squared	0.761886	S.D. dependent var		6.728330
S.E. of regression	4.935653	Akaike info criterion		6.038977
Sum squared resid	5919.643	Schwarz criterion		6.067558
Log likelihood	-737.7747	Hannan-Quinn criter.		6.050487
F-statistic	210.4351	Durbin-Watson stat		1.593177
Prob(F-statistic)	0.000000			

Source: Field Survey, 2025

After testing the formulated hypothesis, results revealed that skill inventory has a significant effect on performance of the studied brewing firms ($\beta = 0.644$, t-statistics = 12.16937, $p < 0.05$). Again, skill inventory is a predictor of organizational performance (F-statistics = 210.4351; R-squared = 0.764; $p < 0.05$). The predictor variable explained 76.4% of the variance in performance of the studied firms, while the remaining 23.6% could be as a result of the effect of the extraneous variables. The Durbin Watson value of 1.6 reveals that there is no first order serial correlation. This makes the result appropriate.

Discussion of Findings

Results obtained from a test of the formulated hypothesis shows that there exists a nexus between skill inventory and the performance of the studied brewing firms in South-South, Nigeria. This is in agreement with the submission of Adebayo and Olaniyan (2021) who explored the impact of workforce capacity planning on firm competitiveness in one hundred (100) Nigerian service firms. Findings of the study revealed that an alignment of workforce skills and business strategies, directly enhance competitiveness. The study of Frost and Sullivan (2018) who examined the effect of workforce capacity planning on innovation of small and medium-sized enterprises (SMEs) also agrees with findings obtained from a test of the hypothesis. The study revealed that skill inventory management played a crucial role in fostering a culture of innovation and maintaining competitiveness. The work of Chen and Li (2019) who investigated the role of workforce capacity planning in driving firm

competitiveness in the Chinese manufacturing industry is also in tandem with findings obtained from a test of the formulated hypothesis. Findings showed that firms with comprehensive workforce planning strategies achieved better market performance.

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

Findings obtained from a test of the hypothesis revealed that skill inventory has a significant effect on performance of the studied brewing firms ($\beta = 0.644$, t -statistics = 12.16937, $p < 0.05$). Again, skill inventory is a predictor of organizational performance (F -statistics = 210.4351; R -squared = 0.764; $p < 0.05$).

Conclusion

The study reveals that there exists a strong significant positive relationship between workforce capacity planning and performance of brewing firms in South-South, Nigeria. Findings revealed that a regular stock taking, training and re-training of the employees of the studied brewing firms in South-South, Nigeria could by implication impact the competitive edge of these firms in the industry they belong.

Recommendation

As a follow up to the findings obtained from a test of the formulated hypothesis, the researchers recommend a regular stock taking of the skill sets of employees as well as training and re-training of the employees of the studied brewing firms so as to stay competitive.

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DIVIDEND POLICY AND FIRM PERFORMANCE: A CONCEPTUAL REVIEW

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ABSTRACT

The effect of dividend policy on firm's performance has been a really big contentious issue among scholars in financial management. The researcher examined dividend policy and performance of business organizations. The study examined dividend policy, types of dividend policies and the relationship between dividend policy and firm performance. The study was fastened on the dividend irrelevance theory propounded by Miller and the bird in the hand theory postulated by Kirshman (1933) and Modigliani in 1961. Library based methodology was the methodology used as the conclusion of the researcher was based on a review of extant literature. The study concludes that dividend policy have effect on the performance of business organizations. As a result of that, managers are encouraged to act in the best interest of investor asto reduce the agency problem, thus complete information about the dividend policies of the firm should be provided.

Keywords: Dividend policy, firm performance, business organizations

INTRODUCTION

A company's dividend policy outlines both the amount and timing of dividend payments to shareholders. Upon earning profits, companies must choose between retaining those profits within the business (recorded as retained earnings) or distributing them as dividends to shareholders. This decision plays a crucial role in determining the portion of earnings reinvested versus that paid out, impacting overall firm strategy (Ross, Westerfield & Jaffe, 2002). It is the responsibility of financial managers to establish a dividend policy that aligns with the interests of both the business and its shareholders. Ideally, this policy should aim to enhance shareholder returns, thereby increasing investment value (Akinsulire, 2011). There is on-going debate regarding the significance of dividend policy, particularly its relevance to shareholder wealth. Patterns in corporate dividend behavior vary across periods and geographies, especially when comparing manufacturing firms in developed versus

developing markets (Amidu, 2007). Research indicates that companies in developing countries typically have dividend payout ratios approximately two-thirds of those in more developed nations (Amidu, 2007).

Siyanbola, Benjamin, Amuda, and Lloyd (2020) note that management must make operational decisions that ensure business continuity and competitiveness, which often includes determining funding sources for both short-term and long-term needs. Funding can be sourced internally or externally, with equity and debt being common instruments. These decisions fall under capital financing strategies, which also include deciding the proportion of earnings to be distributed as dividends versus retained. According to Okoro, Ezeabasili, and Alajekwu (2018), retained earnings can support investment efforts, and management must evaluate financial health, regulatory demands, and debt covenants before deciding on dividend payments. Dividend policy, which significantly affects share prices, must be managed carefully to maintain investor confidence. Stakeholders are particularly concerned with dividend policy due to its implications on market value, shareholder returns, and broader economic performance (Jabbouri, 2016).

It is widely acknowledged that maximizing shareholder value is a fundamental corporate objective (Adeiza, Sabo & Abiola, 2020). As such, management must focus on profitability to drive up share prices. In Nigeria, firms face challenges such as currency devaluation and economic uncertainty, which can hinder these objectives (Sasona, 2017). Also, dividend policy has become a contentious topic in finance, given the variety of factors influencing firm performance and the potential role dividends play in curbing managerial self-interest. Despite extensive research, the link between dividend policy and financial performance, especially in Nigeria's corporate environment, remains debated and most managers of Nigerian business organizations fail to enact dividend policies that could attract investors and by extension impact overall organizational performance. Transparency and governance challenges further complicate empirical assessments of dividend policy. This paper therefore aims to examine how dividend policy impacts the performance of firms.

LITERATURE REVIEW

Conceptual Review

Dividend Policy

According to Nwude (2003), dividend policy serves as a strategic guideline that helps determine what portion of a firm's post-tax earnings will be distributed to shareholders as dividends in a fiscal year. He posits that the primary goal of such policy is to enhance shareholder wealth through a combination of dividends and capital appreciation. Banerjee (2012) categorizes dividend policy as one of the principal decision areas within financial management, highlighting that its impact on firm value must guide the final decision. As financial managers consider how long-term choices affect stock value, the trade-offs associated with dividend policy must be carefully evaluated. Yusuf (2015) outlines four primary dividend policy types: residual dividend policy, stable dividend policy, constant payout ratio, and a low or bonus dividend approach.

Shukla (2011) identifies various dividend policy types:

Stable Dividend Policy – This involves consistent dividend payments, regardless of changes in company earnings.

Constant/Fixed Dividend per Share – The firm distributes a fixed dividend per share consistently, regardless of profitability. This appeals to those reliant on dividend income.

Constant Payout Ratio – A fixed percentage of earnings is allocated for dividends each year. In loss years, no dividend is paid. This approach may cause variability in investor returns.

No Immediate Dividend Policy – New or financially struggling firms may withhold dividends to fund expansion. Companies must communicate this clearly to maintain shareholder trust and may offer bonus shares instead.

Irregular Dividend Policy – Dividends are paid sporadically, depending on earnings and liquidity. This is common in companies dealing in luxury goods.

Regular Plus Extra Dividend Policy – Common among firms with cyclical profits, this policy includes a base dividend with an additional pay-out during profitable years. If profits increase consistently, the extra dividend may be incorporated into the regular payment.

Dividend Policy and Firm Performance

Corporate decisions inherently involve financial considerations. According to Giang and Tuan (2016), corporate finance decisions fall into three categories: investment (allocating resources), financing (raising capital), and profit distribution (reinvesting or returning funds to shareholders). The core aim remains the maximization of firm value. Dividend decisions, in particular, determine how much is returned to investors and how much is reinvested (Ross, Westerfield & Jaffe, 2002). These choices signal company health to stakeholders and influence future earnings and capital costs (Foong, Zakaria & Tan, 2007). Manum, Hoque, Mohammad, and Manum (2013) argue that dividend declarations do not enhance investor wealth; in fact, share prices often decline before and after such announcements due to market corrections. The debate about dividend policy's effect on corporate performance persists globally. Despite numerous theories—some affirming its importance, others refuting it—consensus remains elusive.

Theoretical Framework

Irrelevance Theory

Miller and Modigliani (1961) postulated the dividend irrelevance theory. Miller and Modigliani (1961) posited that dividend policy does not influence a firm's market value or capital cost. In an ideal market without taxes, transaction costs, or market imperfections, investors are indifferent to whether their returns come from dividends or capital gains. The firm's value, under this model, is driven solely by its asset performance. The assumptions of the theory are thus; the existence of no company taxes, the existence of no personal tax, a lack of transaction costs, the existence of a stable or static budgeting system.

This theory is relevant to this study because when investors perceive that their annual dividend is devoid of unnecessary expenses and taxes, it could propel them to invest in an organization.

Bird-in-the-Hand Theory

This theory was postulated by Kirshman (1933). Kirshman (1933) noted that investors tend to favor higher dividend-paying stocks over those with similar earnings but lower payouts, due to a preference for present income. Lintner (1956) and Gordon (1959) expanded on this, asserting that investors perceive current dividends as less risky than uncertain future gains. This view supports the relevance of consistent dividend policies for firm performance. This study adopts both the irrelevance theory and the bird-in-the-hand theory, representing the two major perspectives on dividend policy—one viewing dividends as nonessential and the other recognizing their value. This theory is relevant to this study because when investors perceive that their dividend is high, it could propel them to invest further.

Empirical Review

Adesola and Okwong (2009) carried out an empirical study of dividend policy in quoted Nigerian firms. Twenty seven (27) quoted Nigerian firms were used for the study. Data was collected for a period of 1996-2006. Regression analysis was used to analyze the collected data. Findings revealed that the dividend policy of a firm could attract investors and by extension increase the company's market share.

Simon-Oke and Ologunwa (2016) examined how dividend policy affects Nigerian firms using time series data and OLS regression. They found dividend policy is influenced by variables such as ROI, EPS, and DPS.

Olfa and Anis (2023) examined the effect of dividend policy of earnings management of French firms. Data collected between 2008 and 2015 was employed for the studies. Linear regression was used to test the hypothesis developed for the study. Findings revealed that there exists favourable dividend policies when we have a large number of the board of directors in an organization.

Maldajian and El-Khoury (2014) carried out an empirical analysis of dividend policy of listed Lebanese financial institutions. A panel data of 2005 to 2011 was analysed using OLS as well as dynamic panel regressions. Findings revealed that organizations remit dividend to shareholders so as to reduce conflict in organizations.

Akinleye and Ademiloye (2018) investigated five quoted Nigerian manufacturing firms using panel data analysis. Their findings indicated that dividend per share had a minimal positive effect on performance, while pay-out ratios showed a negligible negative impact—suggesting dividend policy plays a limited role in performance outcomes.

Williams and Duro (2017) analyzed 20 listed firms from 2005 to 2016, concluding that dividend policy positively correlates with return on equity and dividend per share.

Narang (2018) studied 20 National Stock Exchange-listed firms between 2012 and 2017. The analysis revealed that proxies of dividend policy (EPS, P/E ratio, and payout ratio) had no significant correlation with performance indicators like ROE and ROA.

Salwa (2024) studied how dividend policy could influence the outcomes of business organizations. The library study made use of the works of scholars done between 2007 and 2023. The study concludes that environmental factors influence the dividend policies by managers.

Buti and Wiyarni(2023) used dividend policy as a moderating variable to examine firm performance. Data covering a period of 2016-2020 was collected from 38 manufacturing companies listed in the Indonesian stock exchange. Regression analysis was employed to test the developed hypothesis. Results revealed that the dividend policy adopted by a firm does not determine the dividend rate.

CONCLUSION

The research explored the impact of dividend policy on Nigerian firm performance. A library analysis revealed that board size, dividend rate, company's market share and other environmental factors could influence dividend policies as could be seen in the results of related studies obtained by different scholars in Nigeria and other climes of the world. In other

words, the type of business environment an organization or institution exists can influence its decisions in no small measure. The study suggests that dividend policies can influence corporate outcomes and remain a critical financial management decision. As such, managers should prioritize shareholder interests when formulating these policies to minimize agency problems. Full transparency in dividend policy is essential; therefore, the study concludes that aligning dividend strategy with shareholder value creation should guide corporate decision-making.

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ASSESSING THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON THE PERFORMANCE OF DEPOSIT MONEY BANKS IN EDO STATE

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Abstract

The study examined the performance of deposit money banks through the use of information and communication technology using Zenith Bank Plc. Edo State as a case study. The main objective of the paper is to ascertain whether the introduction of information and communication technology in the banking sector has enhanced its performance. The study also examined the level of customer's satisfaction since the implementation of information and communication technology in Zenith Bank Plc, Edo State. Three hypotheses were formulated for the study and the methodology includes the use of questionnaire and a sample size of 70 respondents from Zenith Bank Plc. The analysis of data collected was done using percentage (%) and Chi-square (x^2) test statistics. The study showed that the level of customers' satisfaction has increased tremendously since the adoption of information and communication technology in Nigerian banks. Also, the use of information and communication technology has enhanced the overall performance of bank services and it was found to be statistically significant. Premised on this, deposit money banks operators in Nigeria are strongly advised to take advantage of the marginal benefits of using information technology in their operations.

Key Words: Deposit money banks, Performance, Information Technology.

1. Introduction

The current business world experiences intense dynamism which results from customer awareness growth and technological innovations along with changing consumer demands. Economic predictability and operational complexity have surrounded digital banking enterprises in their 21st century operations resulting from fast-evolving market conditions. According to Laudon&Laudon (1991) business managers should not disregard information and communication technology since they establish the foundation for modern organizational development. All banks currently view information and communication technology adoption for banking services as an essential matter that needs attention from top to bottom. Information and communication technology maintains necessity for local and global market competitiveness. Furthermore, information and communication technology directly affect the

banking industry's service offerings. The banking industry and corporate relationships worldwide experience continuous organizational changes thanks to information technology which concurrently influences the delivery of faster more superior quality services through diverse innovative devices.

During the past years the Nigerian banking sector underwent significant developments due to information and communication technology implementation (Ekwueme, 2012). The quest for survival, global relevance, maintenance of existing market share and sustainable development has led to exploitation of the various advantages of information and communication technology through the use of automated devices imperative in the banking industry. information and communication technology has brought enormous changes, challenging how organizations are structured and how businesses are run. information and communication technology is continually evolving, breaking new barriers, defining new horizons, and bringing new dimensions to our lifestyle. information and communication technology can simply be defined as a systematized body of tools, techniques and infrastructure for generating, collecting, storing, processing and transmitting information and data. Business data processing during the late 1950s and during all of the 1960s relied upon punched card equipment and electronic accounting machines and large mainframe computers with capabilities that were lower than modern microcomputers possess. EDP stands for Electronic Data Processing and its data processing duties were handled by the department. Terminals during the 1970s started connecting to massive mainframes to create the first primitive multi-user networks. The growing business data quantity triggered the development of database management systems which served as a solution to these data challenges. This marked the initial era of information system (IS) as well as Management Information Systems (MIS) and Decision Support Systems (DSS). A central authority used third-generation programming language-based applications for managing all departmental processes.

During the succeeding decades business adoption finally occurred through the merger of telecoms and networking technologies. The introduction of distributed data processing systems and Office Information Systems followed by Personal Computers happened shortly afterward. The leading organizations of the 1980s decided to focus their strategy on TQM investments to improve product and service quality. Advanced technology during the 1990s

brought forward numerous programming language innovations which optimistic technology specialists would have deemed improbable only a few years beforehand. The “Information Superhighway” emerges as the most significant information technology advancement during current times. The total breakthrough in information and communication technology emerged in the mid-1990s. This period was the era of information super highway which organizations used to expand business frontiers by using the new technologies to exploit opportunities. Today’s business environment is very dynamic and it undergoes rapid changes as a result of technological innovation, increased awareness and demands from customers. Business organizations, especially the banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information technology is at the center of this global change curve.

Information to a modern-day organization is of paramount importance to its survival. Such a resource holds tremendous value because of its essential nature. Throughout centuries human beings have attempted to gather information alongside storage and information processing and retrieval functions alongside fastest possible means of distribution. Throughout generations human beings have implemented diverse recording and information distribution techniques to develop effective solutions for competing challenges. According to Senn (1999) information represents processed data which transforms into practical usable data containing knowledgeable elements to resolve uncertain situations. The world steadily moves toward a unified objective through the technological power that controls its evolution (Levitt, 1992). Historians confirm that technology emerged as a fundamental force for human advancement when the world began (Coombs, 1987). Technology modifications throughout the last two centuries have consistently led to economic expansion by creating fresh product types and service offerings. Information and communication technology refers to electronic technology applied to fulfill business information needs across all organization levels. The system combines computer technology with telecommunications technology for handling information storage and processing and distribution operations (Princharde & Cole, 1997). The information age's business and governance system face additional complexities from important concepts including democratization, competition, deregulation, privatization, commercialization, liberalization, internalization and computerization. Information and communication technology blocks the survival and development pathways for organizations along with

countries because they cannot function without it. After this introductory section the document divides into four parts that start with literature research review. After the research methodology the paper presents data collection together with analysis in its subsequent section. The paper ends with a concluding remark and recommendations.

Statement of the Problem

The banking industry is characterized by high degree of inefficiency and ineffectiveness. In the past, banks in Nigeria rendered substandard and non-qualitative services to their customers and their delivery systems were poor. Many banks in Nigeria have failed due to fraud and other related financial crimes. This is due to the fact that the banks still depended on ledger card and branch local network banking transactions as compared to modern banking systems in advanced countries. Also, accurate records were not maintained by the banks, and prompt attention was never granted to customers. All these lapses and deficiencies accounted for the underdevelopment that is being experienced in present day banking sector. (Ekwueme, 2012). This has made it difficult for the Nigerian banking sector to withstand global competition from other banks in developed nations. The problem arises as to how information technology can be applied to banking operations in Nigeria in order to develop and.

Research Questions

The research questions for the paper are as follows:

- i. What is the degree of impact of information and communication technology in the bank industry and profitability of Zenith Bank Plc?
- ii. To what extent has the adoption of information and communication technology in the banking industry improved customers satisfaction or employees welfare in Zenith Bank Plc?
- iii. To what extent has the use of information and communication technology in the banking industry improved the level of survival with Zenith Bank Plc?

enhance performance in the Nigerian banking industry.

Objectives of the Paper

The main objective of the paper is to ascertain the impact of information technology in enhancing performance of banking industry with Zenith bank Plc as a case study.

The specific objectives of this research include:

- i. To ascertain the impact of information and communication technology in the banking industry and the profitability of Zenith Bank Plc.
- ii. To ascertain the impact of information and communication technology in the banking industry and customers/employees' satisfaction
- iii. To ascertain the impact of information and communication technology in the banking industry and the survival of Zenith Bank Plc.

Hypotheses of the Study

The hypotheses for this study are as follows:

H₀: The introduction of information and communication technology has no impact on profitability in deposit money banks.

H₀: The adoption of information and communication technology in deposit money banks has no significant impact in employees' welfare/customer satisfaction.

H₀: The introduction of information and communication technology in the banking industry has not impacted on the survival of Zenith Bank Plc.

2. Review of Related Literature

Conceptual Review

Information and Communication Technology (ICT)

The gathering storing manipulating and transmission of information defines the concept of information and communication technology. The automation of process, control and information production utilizes computers along with telecommunication, software and ancillary equipment including Automated teller machine and debit cards. Electronic technology facilitates information needs through all business levels which makes up this fundamental term.

According to Laudon&Laudon (2001) information and communication technology handles the physical components and software which maintains computer hardware connections for data movement between different locations. Wirsiy&Shafack (2002) described Information Communication Technology as an extensive term that explains the process of gathering data while using combined computer systems and communication networks for data organization, packaging, storage, retrieval, and multimedia distribution. Modern information technology has driven extensive progress throughout the worldwide banking industry. Global

banking operations have undergone dramatic and dynamic changes since information and communication technology became part of the banking process.

Igwe (2005) showed that electronic mail and personal computers installed on every desk alongside internet application to banking operations resulted in remarkable outcomes. Financial institutions currently operate with extensively improved computer and information technology foundations. Research from 1980s shows organizations spent half their new capital investment funds on information technology systems (Westland & Clark 2000). The acceptance of information technology as fundamental for business operations is recognized by all practitioners while corporations have employed computers over multiple years because of ongoing improvements in IT capabilities. Different research studies concerning ICT strategy have emerged in both empirical and prescriptive areas.

Womboh and Abba (2008) considered information communication technology (ICT) and Information Technology (IT) as interchangeable concepts. Information technology extends beyond its previous roles as support services and electronic data processing because its functional domains have universal reach. Modern computer email facilities together with the internet enable better functionality for previous technological developments including the fax and telephone. Data recognition equipment together with factory automation hardware and services and telecommuting devices using real time and online systems constitute other information and communication technology devices (Adeoti, 2005). Information and communication technology represents the automated implementation of processes coupled with controls alongside the assembly of information using computers alongside telecommunications and software systems along with related machinery including automated teller machines and debit cards (Johnson 2005).

The use of information technology revolutionized banking services according to Irechukwu (2000) with particular examples being account opening operations and customer account mandate and transaction processing and recording functions. Communication technology deals with the physical devices and software that link various computer hardware components and transfer data from one physical location to another (Laudon&Laudon; 2001). information and communication technology products in use in the banking industry include automated teller machine, smart cards, telephone banking, magnetic ink character recognition

(MICR), electronic funds transfer, electronic data interchange, electronic home and office banking (Johnson, 2005 & Akpan, 2008).

Information and communication technology keeps banking industry alive because banking remains central to economic operations. The worldwide economy now operates on a newly established infrastructure through information communication technology which provides technological users with advantages over their competitors. Financial transactions now primarily utilize electronic banking systems as the central transformation of technology in banking operations. Banks have used their resources to build extensive telecommunication networks and electronic systems. Proof shows that users consider the electronic banking system both practical and effortless to operate (Adesina & Ayo, 2010). According to Castells (2001) one button use enables electronic circuits to carry out transactions which amount to billions of dollars across the global network in less than a single second. The banking industry together with how people live and conduct their activities has received increased focus due to the technological revolution in information systems throughout the previous decade. Executives in both academia and marketing industries still face ongoing difficulties with information technology. The application of information technology in banking services improvement gives customers outside branch networks essential access and helps generate efficient solutions in addition to cost reduction advantages (Spanos, Prastacos & Poulymenakou, 2001). A knowledge-based economy now dominates worldwide with information technology becoming its core driving force due to the rapid changes among global economic drivers. Wide-ranging improvements from information technology manifest in better productivity alongside solid economic development at both firm and national levels (Stiroh, 2002).

Interestingly, information technology in particular plays an important role in the financial industry and this is one reason why the banking sector is among the most intensive industries deploying information technology. With the increase in internet services and cash machines available in various locations, the most recurring problems have been mitigated and, in some cases, solved; as an effect, the volume of customers' services became easier to deal with. It is noticeable that the new technologies, particularly in information technology, enabled banks to service customer not only in branches and other dedicated servicing sites, but also in

domiciles, work places and ‘stop and shop’ stores, as well as in a myriad of other channels (Al-Hawari, Hartey& Ward, 2005).

The information technology revolution has given banks the ability to break their established systems and value chains thus enabling separate businesses for customer service delivery. Internet banks distribute their group-made insurance along with securities and banking products to their customers (Delgado & Nieto, 2004). Information technology delivers unanticipated prospects to banking institutions through their internet-based methods for developing financial products and distributing them to customers. The banking sector enjoys modern possibilities through information and communication technology but faces various implementation hurdles including technological advances as well as market consolidation and industrial deregulation and new competitive forces and enterprise structures (Cheung, & Liao, 2003). Technological innovation through the information and communication revolution led the banking sector to transition from traditional operation methods to improved digital practices that improve efficiency levels. The decreasing cost of information technology hardware during recent times has motivated banks to enhance their operations with Information and communication technology. The decrease in information technology device costs probably has boosted bank IT technology utilization levels.

Theoretical Framework

The research applied resource-based theory to understand the connection between information systems (IS) resources and capabilities and organizational performance. Performance analysis for a firm depends on the effectiveness of its information and communication technology usage for performance support and enhancement. The resource-based theory view of the firm attribute’s superior financial performance to organizational resources and capabilities. Research by Imran (2012) examined both the impact of information technology on banking efficiency and the connection between IT investments and efficiency indicators in the banking industry. The examination demonstrated information system investments create new products which benefits customers. This research applies the theory to establish information and communication technology as an organizational capability before conducting empirical studies regarding information technology capability's impact on bank performance. According to Werner (2019), multiple theories connected to banking apply in financial research literature

including credit creation theory and fractional reserve theory and debt intermediation theory. Such banking theories establish reference points for banking research activities as well as regulatory structures. The credit creation model provides insights into how banks use money creation for loan distribution and accounting processes whereas the financial reserve theory demonstrates collective banking money generation and in the financial intermediation model banks function to receive deposits then disperse them for interest benefit.

Empirical Review

Ekwneme,(2012) investigated the operational efficiency of information and communication technology in enhancing performance of banks in Nigeria with a focus on the twenty-one deposit money banks listed on the Nigeria Stock Exchange at the end of the year. They employed correlation techniques which confirmed that the introduction of information and communication technology enhanced deposit money banks performance in core banking operations. The study revealed that the introduction of information technology with respect to e-banking would continue to increase the operational efficiency of Nigeria banks. However, the paper concluded with a recommendation to the government to help provide adequate security measures towards the various e-banking products in Nigeria.

The study of Bilkisu&Kabiru (2015) investigated whether information technology investment affects banking financial outcomes in Nigeria. The research analyzed secondary information that stemmed from banking institution annual reports together with Nigeria stock exchange documents and central bank of Nigeria (CBN) records. Analysis of the collected data relied on the panel data regression model to validate the proposed hypotheses. The resulted data indicated that independent variables show meaningful relationships with dependant variables because information technology investment produces significant effects on the financial performance measured by return on assets (ROA), return on equity (ROE) and earnings per share (EPS) at 5% significance level.

The study undertaken by Balogun (2016) examined how Nigerian banks perform under employee and customer responses to technology innovation. The formulated null hypotheses derived from both employee and customer surveys evinuated whether technology innovation affects satisfaction levels of bank customers and employee performance at Nigerian banks. Banks employee performance together with customer satisfaction along with increased bank

profits resulted from technological innovations according to the study. The study showed that regulated technological innovation management should improve employee performance while enhancing customer satisfaction and sustainable profit alongside increased return on investment as well as return on equity to promote industry competitiveness in Nigerian banking.

The work of Akande and Yinus (2013) on the impact of information technology on organization's performance revealed a statistical significance and the end result showed that information technology has impact on performance. Accordingly, the paper maintained that the adoption of information technology no doubt will continue to enhance organization's performance in the area of profitability, productivity, as well as boost the overall economy of the nation.

3. Methodology

This part deals with the methods and related issues in the conduct of this research, the method used for collecting data was the questionnaire design and technique of data analysis are appropriately discussed here. The purpose of this is to enable the researcher to properly analyze and draw conclusion as it applies to the case study.

Research Design

Survey research design was utilized by the researcher for the study.

Population of the Study

The population of the study ought to be all deposit money banks in Nigeria. For the purpose of this paper, the population of employees of Zenith bank Plc, Edo State was adopted. In particular, the population of the employees comprise the management employees, senior staff and junior staff; as well as some customers included in the sample for the study.

Sample Size

Zenith bank plc was chosen as the sample bank for the study, while the sample size comprises 75 employees.

Instrument of Data Collection

Instrument of data collection comprises the use of a structured questionnaire administered to a selected sample for the study. In particular, a Likert scale system was adopted with a four-point scale in the order, SA (strongly agree), A (agree), D (disagree), SD (strongly disagree).

Source of Data

In the selection of data for the paper, the researcher adopted the used of primary source of data. The method used to collect the primary data was the questionnaires, which involved the use of questions relevant to the paper, and it was structured into two sections to deal with possible dimension of the research problem.

Data Analysis Technique

The data collected through the questionnaire was analyzed with two statistical instruments, the simple percentage and Chi-square. The simple percentage (%) and Chi-square were adopted in the analysis. The chi-square statistical test was employed to analyze the data obtained and also test the various hypotheses formulated for the paper. Quantitatively, this is most appropriate to establish a distinction between the independent and dependent variables; and provides a direction to follow to a logical conclusion. Below is a mathematical representation of the Chi-square test statistics.

$$x^2 = \sum_{i=1}^n \frac{(O_i - e_i)^2}{e_i}$$

Where

x^2	=	chi-square
O_i	=	observed frequency
e_i	=	expected frequency

4. Data Presentation and Analysis

The data generated are presented and interpreted below. The first analysis is presented in textual form using percentage, while the second analysis involved the use of Chi-square test statistics to carry out a test on the various hypotheses highlighted for the study. The data analyzed was based on the 70 questionnaires returned out of the 75 administered.

Table 1: Respondents opinion on extent to which introduction of information and communication technology in deposit money banks relate to profitability in Zenith bank Plc.

Questions	SA	A	D	SD	Total
Adoption of information and communication technology has a number of positive results in enhancing Zenith bank overall profitability	39 (55.7)	27 (38.6)	4 (5.7)	-	70 (100)
The use of information and communication technology improved productivity in Zenith Bank Plc	30 (42.7)	32 (45.7)	8 (11.4)	-	70 (100)
Adoption of information and communication technology improved innovation in Zenith Bank Plc	45 (64.3)	20 (28.6)	5 (7.1)	-	70 (100)

Source: Field Survey, 2025

The table 1 indicates that 39 respondents representing 55.7% strongly agree that adoption of information and communication technology has a number of positive results in enhancing profitability of Zenith Bank Plc, 38.6% of the respondents agreed, while 5.7% of the respondents disagreed. The table also indicates that 42.7% of the respondents strongly agreed that the use of information and communication technology improved productivity in Zenith Bank Plc, 45.7% of the respondents agreed, while 11.4% of the respondents disagreed. Table 1 further revealed that 45 respondents representing 64.3% strongly agreed that adoption of information and communication technology improved innovation in Zenith Bank Plc, 28.6% of the respondents agreed, while 7.1% of the respondents disagreed.

Table 2: Respondents view on the extent to which introduction of information and communication technology in deposit money banks relate to employees' welfare/customers satisfaction

Questions	SA	A	D	SD	Total
Introduction of information and communication technology improved employee's commitment to duty and organizational effectiveness	40 (57.2)	25 (35.7)	5 (7.1)	-	70 (100)
The use of information and communication technology has improved customers' satisfaction with the bank services	60 (85.7)	10 (14.3)	-	-	70 (100)
Introduction of information and communication technology has improved the working relationship in Zenith Bank Plc.	50 (71.4)	15 (21.5)	5 (7.1)	-	70 (100)

Source: Field Survey, 2025

The table 2 indicates that 40 respondents representing 57.2% of the respondents strongly agreed that the introduction of information and communication technology in deposit money banks improved employees' commitment to duty and organizational effectiveness, 35.7% of the respondents agreed, while 7.1% of the respondents disagreed. The table also indicates that 85.7% of the respondents strongly agreed that the use of information technology has improved customers satisfaction with the bank services, while 14.3% of the respondents agreed. Table 2 further revealed that 50 respondents representing 71.4% strongly agreed that the adoption of information and communication technology in deposit money banks has improved working relationship in the bank, 21.5% of the respondents agreed, while 7.1% of the respondents disagreed.

Table 3: Respondents opinion on extent to which introduction of information and communication technology relate to the survival of Zenith Bank Plc

Questions	SA	A	D	SD	Total
Introduction of information technology contributed to corporate survival of Zenith Bank Plc	35 (50)	25 (35.7)	6 (8.6)	4 (5.7)	70 (100)
The use of information technology in bank has helped to minimize the incident of fraud and other related financial crimes	35 (50)	20 (28.6)	15 (21.4)	-	70 (100)
The use of information technology has improved the financial performance in Zenith Bank Plc.	25 (35.7)	20 (28.6)	14 (20)	11 (15.7)	70 (100)

Source: Field Survey, 2025

Table 3 indicates that 35 respondents representing 50% strongly agreed that the introduction of information and communication technology in deposit money banks contributed to corporate survival of Zenith bank Plc, 35.7% of the respondents agreed, 8.6% of the respondents disagreed, while 5.7% of the respondents strongly disagreed. The table also revealed that 50% of the respondents strongly agreed that the introduction of information and communication technology in deposit money banks has helped to minimize the incident of frauds in the banking sector, 28.6% of the respondents agreed, while 21.4% of the respondents disagreed. Table 3 further revealed that 25 respondents representing 35.7% strongly agreed that the use of information and communication technology has improved the security of information systems in Zenith Bank Plc; 28.6% of the respondents agreed, 20% of the respondents disagreed, while 15.7% of the respondents strongly disagreed.

Hypothesis

The chi-square statistical test was employed to analyze the data obtained and also test the various hypotheses formulated for the paper.

The following hypothesis was tested to determine if there is significant difference in the time proportion or respondents that answered (SA & A) as Yes and respondents that answered (D & SD) as No.

For the purpose of this paper the first hypothesis was tested to demonstrate the fact that IT has impact on profitability, productivity and innovation of deposit money banks. The reader can follow through from this demonstration for the test other related hypotheses in this paper.

$$H_0 \text{ (null):} \quad P(\text{yes response}) = P(\text{No response})$$

$$H_1 \text{ (alternate):} \quad P(\text{yes response}) \neq P(\text{No response})$$

Table 4: Test of Hypothesis

Res/Par	Yes(SA & A)	No(D & SD)	Total	Proportion
IT influence on profitability	65	5	70	0.33
IT impact on productivity	70	-	70	0.33
IT impact on innovation	65	5	70	0.33
Total	200	10	210	1
Proportion	0.95	0.05	1	

Note that the table above is a 3x2 contingency.

Now suppose we denote the expected number by e_{ij} , then from the table above we have that:

$$n_{11} = 65, \quad n_{12} = 5$$

$$n_{21} = 70, \quad n_{22} = 0$$

$$n_{31} = 65, \quad n_{32} = 5$$

$$e_{11} = (n_{1.}n_{.1})/n = 0.33 \times 200 = 66$$

$$e_{21} = (n_{2.}n_{.1})/n = 0.33 \times 200 = 66$$

$$e_{31} = (n_{3.}n_{.1})/n = 0.33 \times 200 = 66$$

$$e_{12} = (n_{1.}n_{.2})/n = 0.33 \times 10 = 3.3$$

$$e_{22} = (n_{2.}n_{.2})/n = 0.33 \times 10 = 3.3$$

$$e_{32} = (n_{3.}n_{.2})/n = 0.33 \times 10 = 3.3$$

Profitability (respondents):

O:	65	O:	5
E:	66	E:	3.3
O-E:	1	O-E:	-1.7

Productivity (respondents):

O:	70	O:	0
E:	66	E:	3.3
O-E:	-4	O-E:	3.3

Innovation (respondents):

O:	65	O:	5
E:	66	E:	3.3
O-E:	1	O-E:	-1.7

$$\begin{aligned}
 x^2 &= \sum_{j=1}^2 \sum_{i=1}^3 \frac{(O_{ij} - e_{ij})^2}{e_{ij}} \\
 &= (O_{11} - e_{11})^2 + (O_{21} - e_{21})^2 + (O_{31} - e_{31})^2 \\
 &\quad + (O_{12} - e_{12})^2 + (O_{22} - e_{22})^2 + (O_{32} - e_{32})^2 \\
 &= \frac{(1)^2}{66} + \frac{(-4)^2}{66} + \frac{(1)^2}{66} + \frac{(-1.7)^2}{3.3} + \frac{(3.3)^2}{3.3} + \frac{(-1.7)^2}{3.3}
 \end{aligned}$$

$$0.015 + 0.242 + 0.015 + 0.876 + 3.3 + 0.876$$

$$X^2_c = 5324$$

But the degree of freedom (df) is:

$$(r-1)(c-1) = (3-1)(2-1) = 2;$$

: at 0.05 level of significance we have:

$$X^2_{k-1}(\alpha) = X^2_{3-1}(0.05) = X^2_2(0.05) = X^2_t$$

$$X^2_t = 5.991$$

Remark:

Since $X^2_c > X^2_{tab}(\alpha)$; it implies a rejection of the null hypothesis.

Consequently, there exists a significant difference in the true proportion of people in the organization favouring YES over No answer. This implies that a significant percentage of the workers are of the opinion that the introduction of information and communication technology

in deposit money banks has impact on profitability, productivity, and innovation in Zenith bank Plc.

Discussion of Findings

The chi-square statistical test was employed to analyze the data obtained and also test the various hypotheses formulated for the paper. The first finding showed that the introduction of information and communication technology in deposit money banks have a number of positive results in enhancing performance in the banking sector. This finding is in line with the assertion of Ekwueme (2012) that the introduction of information and communication technology enhanced deposit money banks performance in core banking operations. The findings also support the work of Akande and Yinus (2013) who opined that the impact of information and communication technology on organization performance is statistically significant.

The second finding revealed a customers' satisfaction, as well as employees' decent working relationship as a result of the introduction of information and communication technology. This finding is in line with the work of Balogun (2016) who asserted that technological innovation influenced banks employees' performance, customers' satisfaction and improvement in banks profitability.

The third finding showed that the survival of the bank to some degree depends on the use of information and communication technology which no doubt would help in minimizing fraud, as well as enhancing financial performance in Nigerian banks. This finding is supported by the work of Bilkisu and Kabiru (2015) who asserted that investment in information technology with respect to financial performance is statistically significant.

Conclusion

This paper has empirically examined the application of information and communication technology and deposit money banks performances. The study has shown that deposit money banks performance has been enhanced through the use of information technology and it is found to be statistically significant. In view of this development banks must continue to invest resources on information and communication technology in order to continue to match with the competition in the financial industry both local and global environment. In order to achieve a cashless society bank must continue to embrace information and communication technology and its innovations.

Recommendations

Based on this research's results it becomes necessary for deposit money banks to maintain consistent information and communication technology usage because it has observed positive growth within banking institutions. The primary obstacle in the Nigerian banking industry for implementing information and communication technology stems from insufficient electricity power supply. The federal government should solve the power supply problems throughout the country to establish effective information and communication technology applications across banking institutions while making them more appealing to potential customers otherwise the 100% banking performance target with technological implementation remains out of reach.

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THE IMPACT OF CORPORATE GOVERNANCE ON DEPOSIT MONEY BANK PERFORMANCE IN NIGERIA: POOLED AND FIXED EFFECT APPROACH

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Abstract

The research study investigated the impact of corporate governance and Deposit Money Bank performance. The data was obtained from the banks' openly available audited financial statements for the years 2003–2023. The Pooled OLS and panel regression of fixed effects was employed, the Hausman test was used in the study, and board size, board meeting, and bank size are the independent variables, while the ROA was employed as proxy for bank performance as the dependent variable. The findings showed that bank size (BAS) and bank performance are positively correlated. Additionally, board size (BOS) and board meetings (BOM) were found to have a significant favorable impact on bank performance. The study came to the conclusion that corporate governance improved bank performance in Nigeria over the study period. It is recommended that increase in bank size may have an impact on the financial system's overall stability as well as a bank's capacity to lend to small enterprises. Mean banks ought to expand their size in order to enhance their bank profitability or performance.

Keywords: Bank Performance, Corporate Governance, ROA

INTRODUCTION

Corporate governance has a significant impact on how a business operates. Corporate governance, on the other hand, consists of a collection of rules and procedures meant to ensure that businesses are run and governed in a way that maximizes the wealth and value of their owners while also taking stakeholders' interests into consideration. The general viability of deposit money institutions, which are seen as crucial in the financial industry, is directly impacted by corporate governance.

Corporate governance effect comprising individuals with diverse skills, experiences and independence is more likely to provide effective strategic guidance and principles. According to Saeed, Alnori and Yaqoob (2023) argue that corporate governance that practice transparency, accountability and ethical decision-making contribute to building investors' confidence in any companies or organizations, which in turn, can positively affect the operational effectiveness of these organizations. The key focus of corporate governance is the supervision and

monitoring of the performance of firms and ensuring responsibility of the managerial behaviour towards better organizations performance and efficiency. However, resolving conflicts of interest that emerge from the principal-agent relationship is one of corporate governance's goals and objectives, especially when management's self-interest conflicts with that of the organization's owners and other stakeholders. In addition to monitoring and disciplining management for the benefit of all shareholders, the directors are tasked with providing independent scrutiny of the organization's performance (Kiel & Nicholson, 2019). Additionally, Yan (2021) came to the conclusion that, according to the stakeholder theory, a large and diverse board can offer excellent coordination and take into account the interests of those groups that are crucial to the success of the organizations. They also argued that board independence is thought to have an impact on the performance of the firm.

Additionally, the percentage of independent non-executive directors to a company's total number of directors is determined by board independence. Oziegbe and Cy (2021) came to the conclusion that there is a direct correlation between the effectiveness of corporate governance and an organization's overall performance. This implies that the way an organization is run, controlled, and organized has an effect on how well it performs.

. Additionally, given Nigeria's significant position as Africa's largest economy and its diverse financial sector (see International Monetary Fund, (IMF) 2023), in addition to its substantial GDP of USD 477.38 billion, the country is rapidly emerging as a highly sought-after emerging market in Africa, attracting both local and international investors and becoming a primary destination for foreign investment. This underscores the need for a thorough study on the impact of corporate governance and the performance of deposit money banks in Nigeria.

This study rightfully takes an active role in defining the complicated relationship between deposit money bank performance and corporate governance, offering insightful information that can be used to develop sensible regulations, policies, and strategic choices that will promote sustainable banking throughout Nigeria. Researchers and academics have determined that good corporate governance is a system that may restrain managers' excesses and protect the interests of both domestic and foreign investors.

Statement of the Research Problem

Numerous mergers and acquisitions (M&A) have occurred in Nigerian deposit money banks as a result of various consolidation policies and the experiences of failed banks in 2006 and 2011. This has led to a number of perspectives and opinions from different researchers regarding the necessity of improving corporate governance of Nigerian deposit money banks in order to promote financial soundness and bank performance. Mugisha, Jaya, Joseph, and Mbabazi (2015) contend that efficient corporate governance is necessary for banks' performance and behavior to function well.

However, Bank supervisors are particularly interested in ensuring that every banking institution has sound corporate governance. However, research indicates that the Nigerian financial sector does not appear to have consistent and effective corporate governance features. In support of this, it was determined that the majority of banks face financial strain due to board members' failure to maintain appropriate corporate governance practices due to personal interests, which frequently causes discord, delayed or incorrect decision-making, and an excessive number of non-performing loans in the banking industry (Adeleke, 2019). The financial and operational results of a bank, such as its profitability, return on assets (ROA), liquidity, and general stability, are referred to as bank performance.

Nevertheless, This cannot be accomplished without sufficient, sound corporate governance; various scholars have looked into the main reasons why corporate governance fails in Nigeria. For example, Adekoya (2011) emphasizes that corporate governance issues in Africa as a whole are caused by institutionalized corruption, self-interest, political favoritism, and a lack of government agencies' dedication to enforcing and monitoring compliance. According to Gatsi et al. (2020), Nigeria and other African countries have strong legal systems; yet, political meddling in the affairs of law enforcement agencies makes it difficult for these laws to be implemented effectively.

According to Wati, (2023) argue that board meeting and board size affect bank performance in Indonesia. Also, George, (2023), concluded that board meeting negatively influences Bank performance in India. This study aims to fill this gap by providing a comprehensive analysis of how bank size influence bank performance in Nigeria.

Objectives of the Study

The main Objective of the research work is to examine the relationship between Corporate Governance and Deposit Money Banks in Nigeria.

The specific objectives are:

- i) To find out the relationship between Bank Size and Nigeria bank performance
- ii) To establish the relationship between Board size and Nigeria bank performance
- iii) To examine the relationship between Board meeting and Nigeria bank performance

LITERATURE REVIEW

Conceptual review

Corporate Governance

According to the 2018 Nigeria Code of Corporate Governance, the federal government of Nigeria established measures to safeguard shareholder funds from being mismanaged by the management of quoted companies in Nigeria. This was done in recognition of the critical role that good governance practices play in organizational survival, business growth, and the appreciation of the bank's value as well as its ripple effect on the country's economic growth.

Also, Corporate governance is a collection of procedures, rules, regulations, and intuition that influence how a company is guided to function. It symbolizes the ways in which organizations are managed and a framework that balances the interests of shareholders with vested interests. It also illustrates the interactions between the organization's board, shareholders, administration, and other interested parties (Mayowa, Olusola&Olaiya, 2021). According to the Principles of Corporate Governance, a strong corporate governance framework can lower capital costs and motivate businesses to use resources more effectively, which will boost economic expansion.

Bank Performance

In general, return on equity (ROE), which indicates how much bank profit generated in relation to shareholders' equity, and return on assets (ROA), which focus on a company's ability to generate income through asset optimization, can be used to assess a bank's performance in the banking industry. The quota of a bank's net earnings and preferred stock dividends that are allocated to each share of common stock is also shown by earnings per share, or EPS. Additionally, the amount produced by a bank after all tax-related charges have

been subtracted is known as profit after tax, or PAT (Adigwe, Onyenwe& John 2016; Lamichhane, 2018).

Bank performance, which assesses how well business economic goals and objectives are met, has long been a topic of interest for managerial researchers. On the other hand, bank performance refers to the different subjective indicators of how well a company can employ its available resources from the primary method of operation to generate bank profitability.

Board Size

A bank's board size is the total number of directors on the board. A large board of directors, it has been said, allows for a range of abilities that can improve the company's performance. However, a large board has access to a wealth of information that can be very helpful to the bank (Wati, 2023).

Bank Size

Bank size is determined by dividing the total assets and total equity into different categories. When a bank's size is defined in terms of its total assets, it indicates that the larger the bank and the more value it creates, the more assets it has. In contrast to a bank with a small amount of total assets, one with a large amount of total assets indicates that the bank is stable and can have a favorable impact on its performance (George, 2023).

Board Meeting

A company's board of directors convenes formally to deliberate and make decisions on matters concerning the organization's governance, performance, and strategic orientation. It is from this core corporate governance function that most directors draw their obligations. These meetings help ensure that the business is conducting its operations in an ethical and effective manner. Regular board meetings are necessary for the board to carry out its primary responsibility and bank performance. According to Jikeme (2017), frequent board meetings increase bank profitability. According to Joseph, Madugba and Okpe (2015), corporate board meetings have a beneficial effect on the earnings per share (ROA) of a few Nigerian listed businesses.

Theoretical Review

The impact of corporate governance on financial performance is explained by the following theories, including the Resource Dependency theory, Stakeholder theory, and Agency theory.

Agency Theory

The concept of agency was first proposed in 1976 by William Meckling and Michael Jensen. Although the theory has origins in earlier research, their 1976 article, "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," is considered the basic work that established the idea. Any discussion of the effects of corporate governance typically begins with the agency theory, a neoclassical economic theory (Ping & Wing 2011). The separation of ownership (principal) and management (agent) is the foundation of the notion. Additionally, the study contends that when knowledge asymmetry exists, the agent is more inclined to pursue interest rates that could be detrimental to the principal (Sanda, Mikailu&Garba, 2005).

Stakeholder Theory

Freeman first proposed this theory in 1984. Similar to corporate governance, social responsibility, free enterprise, and agreement theory, this approach aims to resolve morality and values in the management of a firm. It was chosen to close the study gap caused by the agency theory's omission finding, which states that a company's shareholders are its exclusive interest group.

Resource Dependency Theory

While resource dependency theory emphasizes the board of directors' character in granting access to resources required by the bank, stakeholder theory concentrates on ties with numerous groups for personal gain (Abdullah & Valentine 2009). This argument states that the board of directors' main duty is to supply the bank with resources that will boost economic growth. It is mentioned that directors are thought to be a valuable asset to the bank's operations.

Theoretical Framework

This study expands upon Freeman's (1984) stakeholder theory, which holds that businesses should prioritize the needs and interests of all stakeholders, including employees, customers, and communities, over just shareholders. Freeman came to the conclusion that businesses have a larger obligation to society than to maximize profits for their shareholders.

Empirical Review

Table 1: Summarized Table of some of the Empirical Literature Discussed

S/N	Author(s)	Year	Country	Methodology	Period of Study	Findings
1	Aslam and Haron	2021	South Asia	panel data	2008 to 2017	The results analysis shows a strong and significant relationship between credit and liquidity risk and board size and Shariah board.
2	Kojima, Bishnu and Le	2020	Japan	Panel data	2014–2018	The findings demonstrated that family businesses have a negative impact on return on assets (ROA).
3	Olabisi, Olowookere and Agbetunde,	2020	Nigeria	Random effects least squares (RLS)	2010- 2019	The study found that board size, independence of the audit committee, and meeting frequency all positively affect share market value.
4	Zgarni and Fedhila	2022	Tunisia	panel data	2008-2019	The findings demonstrated that, as indicated by disposable revenue on equity

						securities, board gender diversity has a positive disciplinary role in real earnings management.
5	Abdullah and Tursoy	2023	Germany	Panel data	2002-2018	The study came to the conclusion that Germany's insider-controlled corporate governance structure appeared to benefit from a higher board size.
6	Alabdullah	2023	Saudi Arabia	Panel data	2011-2021	According to the study's findings, Saudi companies' financial results have an effect on a larger board.
7	Enoidem	2023	Nigeria	Panel data	2012-2021	The study found that the earnings management of non-financial companies listed on the Nigeria Stock Exchange floor is significantly impacted negatively by board size, board independence, and board gender diversity.
8	Zhou, Sun, Luo, and Liao	2021	China	Panel data	2008-2018	According to the results, China Bank first has a detrimental impact on bank financial

						performance but eventually turns out to be advantageous.
9	Amahalu and Okudo	2023	Nigeria	linear regression	2009 - 2021	According to the results, putting corporate social responsibility into practice assisted Nigerian oil and gas companies maximize their future profits.
10	Kabir and Chowdhury	2023	Bangladesh	panel vector auto-regression	2006 to 2018	The study found that corporate social responsibility influences corporate financial performance, corporate financial performance is not always impacted by CSR over the long term.

Source: Author's Conception, 2025

Gap in the Empirical Literature

The effects of corporate governance on the performance of deposit money banks in Nigeria was the focus of recent studies conducted in Nigeria and other countries. The researchers narrowed the independent variables into bank size, board size, board meeting, and return on asset (ROA), which served as a proxy for bank performance of deposit money banks in Nigeria from 2003 to 2023, when the Nigerian code of corporate governance was fully implemented and underwent numerous trends to improve it. From the above empirical literature reviewed on corporate governance and effect of deposit money banks performance in Nigeria. The study used the combination of panel regression and Pooled OLS econometric technique to analyze the fixed effect and random effect regressions for the model and the study also adopted bank size as one major key explanatory variable in filling the research gap.

Methods

Research Design

Longitudinal research design was used. Since the longitudinal research design found that the same variables are frequently detected in the same individuals over an extended period of time, typically years, the study chose to employ this methodology. The design aids in establishing an empirical relationship between the study's independent variables (bank size, board size, and board meeting) and the dependent variable return on asset (ROA).

Sources of Data

The published annual reports of the chosen banks from their own corporate websites served as the researcher's instrument for gathering data. The information was taken from the banks' publicly available audited financial statements for the years 2003–2023.

Population/ Sample Size of the study

The study's population consists of all Nigerian deposit money banks (DMBs). Out of the fourteen (14) Deposit Money Banks that are listed on the Nigeria Stock Exchange as of the most recent quarter of 2023, five (10) banks make up the sample size for this study. This amounts to 90% of the listed Deposit Money Banks with the largest network of bank branches in Nigeria. Access Bank, First Bank, Guaranty Trust Bank, United Bank for Africa, and Zenith Bank are the names of the ten deposit money banks that were chosen as the sample size. Polaris Bank, Fidelity Bank, Union Bank, Ecobank, and Stanbic IBTC.

Technique of Data Analysis

The study employed panel regression and Pooled OLS econometric technique to assess the fixed effect and random effect regressions for the model, and descriptive statistics, correlation matrix, and unit root test were performed. To get better findings, additional diagnostic tests, including the Hausman test, were also conducted. Because each panel's 21-year time range is lengthy, unit root testing is crucial in this effort. Return on assets (ROA), a financial statistic that shows a bank's profitability in relation to its total assets, was chosen as the dependent variable in the study because ROA quantifies how banks make profits. The study used three independent variables board size, bank size, and board meeting and the ROA as a proxy for bank performance.

Model Specification

The study used Freeman's 1984 model, which is shown below, to investigate the relationship between corporate governance and bank performance.

Model: ROA

Model in a functional form

$$ROA = F(BAS, BOS, BOM) \dots \dots \dots (i)$$

With the variables defined as follows

ROA= Return on asset (ROA proxy for bank performance)

BAS= Bank size

BOS = Board size

BOM= Board meeting

Equation in linear form

$$ROA = \beta_0 + \beta_1 BAS + \beta_2 BOS + \beta_3 BOM + \mu_t \dots \dots \dots (ii)$$

3.8 A priori expectation

According to economic theory, the parameter estimations' expected or presumptive signs are:

$\beta_1 < 0$, $\beta_2 < 0$, β_3

Data Presentation

Data presentation analysis, the researcher presented the variables gathered from the ten (10) Deposit Money Banks' yearly reports and accounts, which are shown below.

4.2 Descriptive Statistics of variables

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
ROA	210	188.77	254.665	9	544
BAS	210	11.9	4.323	4	19
BOS	210	4.64	3.644	2	4
BOM	210	5.33	2.71	6	10

Source: Authors computation, 2025 (STATA 15.0)

The results revealed that the mean value of ROA is 188.77 with a minimum of 9 and maximum of 544. This means that deposit money banks experience about 188.77 percent improvement on (ROA).

The result revealed that on the average of bank size (BAS), about 11.9 percent of deposit money banks bank size, min of 4 and max of 19 numbers result shows that the numbers of bank size influence bank performance (ROA).

The result also shows average of board size (BOS) of deposit money banks in Nigeria maintain about 11 members, and other firms maintain larger boards members (19 members) while some maintain a minimum board member of 4. If board size directly affects the level of performance, those deposit money banks with larger board size would have performed better than the other firm.

The Board meeting (BOM) result also shows average of board meeting of deposit money banks in Nigeria maintain about 5 members. In some of the firms, they maintain larger boards meeting 10 while some maintain a minimum board member of 6. If board meeting directly affects the level of performance, those deposit money banks with larger board meeting member would have performed better than the other firm

4.3 Correlation Matrix Results

	ROA	BOS	BAS	BOM
ROA	1.0000			
BAS	0.8475	1.0000		
BOS	-0.4282	-0.4848	1.0000	
BOM	-0.2526	0.2288	0.5177	1.0000

Source: Authors computation, 2025 (STATA- 15.0)

The correlation table shows that all the explanatory variables with the exception of Bank size (BAS) have a very high negative relationship with the dependent variable Return on Asset (ROA) within the period. Although bank size (BAS) also has a positive relationship with

ROA, mean bank size has a high relationship of about 0.84% with return on asset (ROA). Meanwhile, the board size (BOS) -0.42% and board meeting (BOM) -0.25% has negative significant correlation with Return on Asset (ROA).

Table 4.4: Pooled OLS regression

ROA	Coefficient	Standard Error	T	P> t	[95% Conf. Interval]	
					Lower limit	Upper limit
BAS	16.24239	9.904513	1.64	0.108	-3.718847	36.20362
BOS	8.356397	10.84865	0.77	0.445	-13.50762	30.22042
BOM	774.2487	251.0835	3.08	0.004	268.2232	1280.274

R-sq. = 0.4254

Adj. R-sq. = 0.3601

Prob> F = 0.0001

No of Obs. = 210

Source: Authors computation, 2025 (STATA- 15.0)

Table 4.5: Fixed-effect (Within) Regression

ROA	Coefficient	Standard Error	T	P> t	[95% Conf. Interval]	
					Lower limit	Upper limit
BAS	40.12569	6.399364	6.27	0.000	27.13429	53.11709
BOS	17.33482	5.422703	2.27	0.027	1.326145	23.34349
BOM	444.4606	171.1967	2.40	0.024	63.91281	759.0083
CONSTANT	-444.8149	210.7877	-2.11	0.042	-872.7366	-16.8931

R-sq. within = 0.6034

Prob value >F = 0.0000

No of Obs. = 210

Source: Authors computation, 2025 (STATA- 15.0)

Table 4.6: Random-effects GLS regression

ROA	Coefficient	Standard Error	T	P> t	[95% Conf. Interval]	
					Lower limit	Upper limit
BAS	38.24497	6.4 22458	5.95	0.000	25.65718	50.83275
BOS	-174.3991	210.532	-0.83	0.407	-587.0343	23.34349
BOM	-5.632726	10.67	-0.53	0.598	-26.54553	15.28008
CONSTANT	-236.8149	211.7809	-5.4	0.123	-872.7366	-16.8931

R-sq. within = 0.5997

Wald chi2 (5) = 49.00

Prob> chi2 = 0.0000

No of Obs. = 210

Source: Authors computation, 2025 (STATA- 15.0)

Table 4.7: The Hausman Test

Coefficients of the Variation			(b-B)	Standard Errors
	(b) fixed effect	(B) random effect	Difference effect	
BAS	40.12569	38.24497	1.880727	-
BOS	17.33482	-174.3991	.6608484	-
BOM	444.4606	-5.632726	4.982836	2.412679

Prob> Chi2 = 0.0000 Chi2 (5) = 32.53 Source: 2025 Author's computation (STATA-15.0)

In order to distinguish between the Fixed Effect (FE) and Random Effect (RE) regressions, a Hausman test was performed. The results of the Hausman test supported the FE, hence the FE result should be interpreted. According to table 4.5's FE result, there is a positive correlation between bank size, board size, and board meeting, with coefficients of 40.12569, 17.33482, and 444.4606 correspondingly. These relationships are also statistically significant, with respective prob. values of 0.000, 0.027, and 0.024.

Discussion of findings

The study, which investigated at how corporate governance affected the performance of deposit money banks in Nigeria between 2003 and 2023, found a positive correlation between

corporate governance and bank performance. Throughout the study period, the dependent variable and the independent factors had a positive relationship, according to the regression result.

1. According to the findings, bank size (BAS) positively correlates with bank performance, meaning that larger banks have higher ROA and profitability. Contrary to Enoidem's (2023) findings, deposit money banks in Nigeria should increase their capitalization and assets in order to enhance their lending capacity and, consequently, bank performance.
2. Bank performance is positively impacted by board size (BOS); this finding indicated that companies with larger boards do use members' varied perspectives to make decisions that will enhance bank performance. It is also believed that CEOs of companies with larger boards will have a harder time persuading members to do things that are not in the best interests of the company's owners. Additionally, this works opposed to Zgarni and Fedhila's (2022) findings. and support Boachie's (2023) findings.
3. Board meetings (BOM) have a positive correlation with bank performance; therefore, increasing the effectiveness of board meetings can be an effective means to improve bank performance, which has important implications for sub-Saharan African bank governance. This result is consistent with the research conducted by Bezwada and Adavelli (2020).

Conclusion

The following conclusion can be obtained from the empirical data:

1. Bank performance and bank size (BAS) are significantly positively correlated.
2. Board size (BOS) positively and significantly affects bank performance. The results of the study show that the return on assets (ROA) of Nigerian deposit money banks is positively and significantly impacted by board size.
3. Based on this study's findings that corporate governance affects return on assets (ROA), it can be said that board meetings (BOM) significantly improve bank performance. In light of this, banks' profitability was positively impacted by board size, bank size, and board meetings.

Recommendations

Based on the results, the study concluded that corporate governance had a favorable impact on Nigerian deposit money banks' performance. Consequently, the following recommendations are offered.

1. Deposit money banks shouldn't choose a board size (BOS) that is less than average in size. Since board size has positive effect on the return on assets of deposit money banks in Nigeria, it is not necessary to allocate multiple responsibilities to each director in an emergency situation in an organization.
2. The average number of board meetings (BOM) held annually should be increased from six to at least twelve by the banks' regulating body; this might have a major positive impact on the financial performance of deposit money banks in Nigeria.
3. Greater bank size (BAS) may have an impact on the financial system's overall stability as well as a bank's capacity to lend to small enterprises. Mean banks ought to expand their size in order to enhance their profitability or performance.

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WORK PLACE INCIVILITY AND EMPLOYEE PERFORMANCE OF DEPOSIT MONEY BANKS IN ANAMBRA STATE, NIGERIA

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Abstract

This study focuses on workplace incivility and employee performance in of deposit money banks in Anambra State, Nigeria. The objective of the study was to determine the nature of the relationship between workplace incivility and employee performance, with a specific focus on examining the relationship between workplace ostracism and employee engagement of the selected banks. A survey research design was adopted to gather data from a sample of 346 employees, determined using Taro Yamane's formula from a total population of 2,563 employees across 12 selected deposit money banks in the study area. Correlation analysis was used to analyze the data, and the findings reveal a negative correlation coefficient of -0.731 between workplace ostracism and employee engagement in the selected banks. Based on this finding, it was concluded that workplace incivility has a negative effect on employee performance of deposit money banks in Anambra State. The study recommends that the management of deposit money banks should implement policies that prohibit all forms of workplace incivility and enforce appropriate penalties against violators of these regulations.

Keywords: Workplace Incivility, Workplace Ostracism, Employee Performance, and Employee Engagement

INTRODUCTION

Many assume that business organizations are inherently respectful and civil environments. However, several workplace dynamics such as reliance on part-time staff, increasing diversity, organizational restructuring, layoffs, budget reductions, pressure to boost productivity, and autocratic leadership styles have contributed to a surge in negative and hostile behaviours at work (Porath & Pearson, 2020). As companies evolve into flatter and more informal structures, the clear boundaries of acceptable professional behaviour have diminished (Oboreh, Emmanuel & Opatayo, 2022). Respect is a universal expectation in all types of relationships—whether personal or professional. People naturally desire to work in environments where they feel valued. Disrespectful conduct often results in dissatisfaction, strained workplace relationships, and a toxic atmosphere. Unfortunately, behaviours such as ignoring colleagues, rude remarks, sarcasm, and impolite interactions have become increasingly common (Tarraf, 2021). Workplace incivility is a subtle yet widespread issue in

modern organizations. It encompasses rude, impolite, or unprofessional behaviours that may be covertly hostile or openly aggressive (Kessler 2020). These behaviours can originate from peers, supervisors, or clients and have significant implications for individuals and institutions alike. Though less severe than overt mistreatment, incivility reflects a disregard for others, often without a clear intention to harm. To classify behaviour as uncivil, there must be an absence of a definite motive to cause harm. Common examples include gossiping, making disrespectful comments, ignoring directives, sending hostile emails, and demonstrating general contempt in workplace interactions (Guo & Kumar, 2020).

Tepper (2018) describes workplace incivility as employees' perception of prolonged exposure to hostile verbal and non-verbal conduct from their superiors, excluding physical aggression. Manifestations include verbal assaults like belittling or patronizing speech, non-verbal cues like exclusion or dismissive gestures, passive-aggressive actions like procrastination or sabotage, and exclusion from key discussions or events. Other disrespectful acts include constant interruptions, invalidating contributions, or showing disregard for others' perspectives and emotions. The banking sector, particularly deposit money banks, is not exempt from these challenges. Bank employees operate under intense pressure to manage financial transactions, hit sales quotas, and cater to demanding clientele. Such high-stress environments often become breeding grounds for incivility, leaving workers feeling undervalued and unsupported (Ng & Feldman, 2020). Furthermore, intense internal competition can foster aggressive and uncivil workplace cultures (Harris, 2020). Research by Arshad and Ismail (2018) supports the view that such behaviours can hinder organizational performance. Managerial interference, in particular, can dampen employee productivity (Aruoren & Oisamoje, 2023).

Employee performance refers to the achievements or outcomes of an individual's tasks within an organization. It is measured by the quality and quantity of work completed in alignment with assigned responsibilities (Robbins, 2010). Key elements of performance include employee commitment, job engagement, satisfaction, innovation, turnover intention, and service delivery. Organizations aim to enhance job performance because it directly contributes to both individual and collective success (Oboreh, Emmanuel & Opatayo, 2022). Evidence suggests that incivility in the workplace negatively affects performance, well-being, and job satisfaction. Victims of such behaviour often experience reduced productivity, increased absenteeism, and a stronger desire to leave their jobs (Cortina et al., 2001; Pearson et al., 2000). It also diminishes organizational citizenship behaviours—voluntary actions that sustain a cooperative and productive environment—such as offering help to colleagues or taking on additional responsibilities (Chen, 2020). The adverse impact of incivility is especially troubling in banking, where professionalism, accuracy, and customer service are paramount. Exposure to uncivil behaviour can distract and demotivate employees, resulting in more errors, subpar customer service, and weakened job and organizational commitment. This also leads to decreased satisfaction, diminished innovation, and lower overall productivity (Ng &

Feldman, 2020). Over time, such behaviours may erode workplace morale, creating a toxic environment where employees feel alienated and undervalued, ultimately undermining organizational effectiveness (Penney & Spector, 2020).

In Nigeria, where this research is centered, the banking sector plays a crucial role in driving economic progress. However, it too grapples with the challenges of workplace incivility. Intense competition, regulatory demands, and high customer expectations put considerable strain on employees, potentially fuelling uncivil conduct. Additionally, the hierarchical nature of many Nigerian banks, coupled with strong power imbalances, further increases the risk of such behaviour. Cultural and social dynamics also influence how incivility is expressed and perceived. The intense work pressure in this sector often magnifies its impact on employee outcomes. Despite its importance, there is limited research specifically examining how workplace incivility affects employee performance within Nigeria's deposit money banks. Most existing studies focus on Western settings, underscoring the need for localized research. Understanding these dynamics can offer valuable insights for policymakers, managers, and HR professionals seeking to foster a more respectful and productive work culture in Nigerian banking institutions.

The broad objective of the study is to determine the effect of workplace incivility on employee performance of money deposit banks in Anambra State, while specifically the study seeks to determine the effect of Workplace Ostracism on employee engagement of money deposit banks in Anambra State.

REVIEW OF RELATED LITERATURE

Conceptual Review

2.1 Workplace Incivility

Lim, Cortina, and Magley, (2017) describe workplace incivility as a relatively emerging area in the study of negative workplace behaviours. It involves discourteous, dismissive, or exclusionary actions that breach commonly accepted standards of respect in the professional environment. Andersson and Pearson (2019) define it as a subtle form of deviant behaviour, characterized by low intensity and an unclear intent to cause harm, yet still in violation of norms surrounding mutual respect. Such behaviours are often considered less aggressive forms of workplace mistreatment and typically reflect a disregard for colleagues. According to Oboreh et al. (2022), for a behaviour to be deemed uncivil, the harm intended must be ambiguous—there should be no clear or direct intent to injure or demean the target. Examples include sarcastic remarks, patronizing language, belittling others, and ignoring colleagues through non-verbal cues.

Han, (2022) also regards incivility as an abnormal workplace behaviour, where established professional norms are broken without sufficient evidence of malicious intent. Hassan (2021) adds that such behaviours can lead to confusion, disorder, and a breakdown of workplace

culture. Razzaq, Bowra, and Khan (2023) highlight that workplace incivility involves three main participants: the instigator, the victim, and the observer. These roles are integral to the development and persistence of uncivil behaviour in organizational settings.

Workplace Ostracism

Workplace ostracism refers to the experience of being deliberately or unintentionally ignored or excluded by others in the workplace (Ferris, Brown, Berry, & Lian, 2018). This phenomenon transcends demographic boundaries and can manifest in a variety of ways (Kaya Ataman, & Aydin, 2017). Irshad and Hussain (2021) note that ostracism can be both verbal and non-verbal in nature. Common examples include being left out of team meetings, having one's contributions disregarded, receiving the silent treatment, or not being acknowledged in group communications (Balliet & Ferris, 2013).

Not every instance of exclusion is intentional; sometimes employees may unintentionally isolate colleagues due to distractions or misconceptions (Robinson O'Reilly, & Wang, 2013). For instance, an employee might omit a colleague from a group email believing they were already included. Nonetheless, ostracism can also be intentional and strategically used to isolate others (Robinson et al., 2013). Whether deliberate or accidental, these behaviours can harm social dynamics and personal well-being. Research links ostracism to reduced self-esteem (Williams, 2007), diminished sense of belonging (Williams, 2009), impaired self-worth (Al-Atwi, Cai, & Amankwah-Amoah, 2021), and negative behavioural and psychological consequences (Tan Yam, Zhang, & Brown, 2021).

Ostracism also undermines work-related attributes such as motivation (Ferris, Brown, Berry, & Lian, 2008), performance (De Clercq, Haq, & Azeem, 2019), and engagement (Samo, Khan, Ali, & Ali, 2019). Work engagement, defined as an employee's level of enthusiasm and commitment to their role (Leung, Wu, Chen, & Young, 2011), can deteriorate significantly under the influence of persistent ostracism. Organizations must be proactive in recognizing and addressing these behaviours to foster a positive and inclusive work culture.

Employee Performance

The term "performance" in a work context often refers to the measurable output or accomplishments of an employee in fulfilling their job responsibilities. Al Mehrzi and Singh (2016) describe performance as the extent to which an individual successfully completes tasks during a specified timeframe, based on agreed-upon standards or goals. Yang et al. (2016) view employee performance as encompassing both what is done and what is neglected. Shmailan (2016) emphasizes that performance is directly linked to how well employees fulfill expected duties within the organization. Importantly, employee performance is influenced by factors such as job satisfaction, recognition, individual competencies, and personality traits, indicating it is not an isolated variable but one that interacts with multiple workplace elements. Employee performance refers to the level of achievement or accomplishment of an

individual's job responsibilities and tasks within an organization, encompassing aspects such as quality of work, productivity, efficiency, and overall contribution to organizational goals (Campbell, 1990). Key antecedents or predictors of employee performance include job satisfaction (Judge, Thoresen, Bono, & Patton, 2021), employee engagement (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2022), and organizational commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2022), which can influence an individual's motivation, attitude, and behavior, ultimately impacting their performance outcomes. For the purpose of this study, employee engagement shall be used as a predictor of employee performance of interest.

Employee Engagement

Employee engagement reflects the emotional and cognitive commitment employees have toward their organization, its mission, and its goals. According to Rameshkumar (2020), high engagement is evidenced by enthusiastic conversations, visible pride in the organization, and genuine interest in its products, services, and people. Since human capital is a core driver of competitive advantage, organizations that successfully engage their workforce are more likely to achieve strategic objectives.

The concept of engagement combines management's efforts to motivate employees with strategies to harness their dedication toward organizational success. Kahn (1990) defined engagement as the process by which employees express themselves through physical, emotional, and cognitive involvement in their roles. In this state, individuals are fully invested in their work, aligning personal identity with their job responsibilities to create meaning and drive productivity.

Workplace Ostracism and Employee Engagement

Workplace ostracism, defined as the extent to which an individual perceives they are being ignored or excluded by others at work, significantly affects employee engagement. Employee engagement refers to the emotional and cognitive connection an employee has with their job and organization, reflected in their enthusiasm, involvement, and commitment to their work (Kahn, 1990). When employees experience social exclusion, their psychological needs for belonging and validation are undermined, often resulting in a decrease in engagement and overall job performance (Ferris et al., 2008).

Employees who feel ostracized tend to withdraw from their work roles, both emotionally and behaviorally. Social exclusion at work can lead to feelings of isolation, lowered self-esteem, and reduced morale, all of which are detrimental to the willingness to invest oneself in work tasks (Williams, 2007). Research has shown that ostracized employees are more likely to disengage, reduce discretionary effort, and exhibit signs of emotional exhaustion (Wu et al., 2012). The lack of meaningful social interaction in the workplace reduces their motivation to actively contribute to organizational goals.

Workplace Incivility and Employee Performance (Employee Engagement)

Incivility in the workplace undermines employees' ability to focus, collaborate, and remain motivated. Employees exposed to rude or dismissive behaviour often report increased stress, reduced job satisfaction, and emotional exhaustion, which impair their ability to perform effectively (Cortina et al., 2001). Such behaviours distract from task execution, disrupt cognitive functioning, and diminish an employee's willingness to go above and beyond in their roles (Porath & Erez, 2007). Over time, the mental fatigue caused by repeated incivility can lead to burnout and disengagement from work responsibilities.

Additionally, workplace incivility can damage interpersonal relationships and teamwork, which are essential to high performance. When employees perceive their environment as disrespectful or hostile, trust and communication break down, reducing collaboration and overall team efficiency (Lim & Cortina, 2005). Incivility not only affects the targets but also bystanders who witness these behaviours, creating a toxic culture that discourages cooperation and mutual support. This kind of climate undermines collective performance and weakens organizational cohesion.

Theoretical Framework

Social exchange theory, originally introduced by Homans (1958), is a fundamental concept within the social sciences that explores interpersonal relationships based on reciprocal interactions. Homans emphasized that individual behaviors in social settings are guided by the expectation of mutual exchange. In his 1961 work, he described social exchange as a process involving two or more individuals who trade activities—whether tangible or intangible—that carry varying degrees of cost and reward. The “cost,” in this context, typically refers to the sacrifices or foregone opportunities associated with engaging in particular interactions.

Homans' theory is grounded in the idea that human behavior is shaped by rewards and punishments. According to his "success proposition," individuals are more likely to repeat behaviors that have previously led to positive outcomes. The "stimulus proposition" further suggests that when a specific action has yielded a reward in the past, individuals will likely replicate that behavior under similar conditions. Lastly, the "value proposition" posits that the perceived importance of a reward influences how frequently a behavior is performed. Since workplace incivility involves reciprocal interactions between individuals, this theoretical framework is highly relevant to the present study. The theory implies that when employees experience incivility—whether from supervisors, colleagues, or management—their motivation and engagement levels may decline, which can ultimately result in decreased job performance.

Empirical Review

DeClercq et al. (2017) examined the relationship between perceived workplace ostracism and employee performance, and explored how self-efficacy might buffer this effect. Their study

utilized data from longitudinal surveys administered to employees and supervisors across 22 companies in Pakistan, spanning industries such as telecommunications, banking, and textiles. Out of 500 distributed questionnaires, data were collected over three survey phases. Regression analysis revealed a negative correlation between workplace exclusion and job performance, though the impact was mitigated in individuals with higher self-efficacy—particularly those in senior positions.

Irsan, Hendryadi, Saida, and Sukisno (2020) conducted research in Indonesia to assess how workplace incivility influences employee engagement and the intention to leave. The study sampled 644 professionals from various industries through a structured questionnaire and analyzed the responses using partial least square multi-group analysis (PLS-MGA). Results showed that workplace incivility significantly reduced work engagement and increased turnover intention, with gender acting as a moderating factor in the strength of these relationships.

In a study by Cingoz and Kaplan (2015), the researchers investigated the effects of incivility on job satisfaction and organizational trust among 123 administrative staff from industrial firms in Kayseri, Turkey. Through correlation analysis, they found a negative but statistically insignificant link between incivility and job satisfaction.

Nwaeke and Akani (2019) explored how downward workplace incivility—disrespect from higher-ranking staff—affects organizational health in commercial banks across Rivers State, Nigeria. Using a quasi-experimental design, they surveyed 346 respondents from 17 banks listed on the Nigerian Stock Exchange. Utilizing Spearman's rank correlation and SPSS for analysis, the results indicated no significant relationship between downward incivility and factors such as resource use and team cohesion.

Chang, Alola, Asongu, and Alola (2021) investigated the impact of supervisory incivility on employees' embeddedness and cynicism, with self-efficacy as a mediating factor. Drawing on conservation of resources theory and self-efficacy theory, they collected responses from 245 frontline staff in four- and five-star Nigerian hotels through non-probability sampling. Their findings showed that supervisory incivility diminished self-efficacy and elevated cynicism, while higher self-efficacy reduced cynicism.

Ojimba and Nnabuife (2024) focused their study on the connection between supervisory incivility and employee performance in brewing companies in Anambra State. Using a survey design and sampling 288 participants through Taro Yamane's formula, they employed Pearson's correlation for hypothesis testing. Their results pointed to a negative relationship between supervisory incivility and employee commitment.

In a broader academic context, Snapps, Tarurhor, and Titilayo (2022) studied workplace incivility's effect on staff performance within 13 federal universities located in Nigeria's South-East and South-South regions. A cross-sectional design and probability sampling

yielded 348 responses out of a total population of 2,691 staff. Ordinary least squares regression, conducted with Stata software, revealed that exclusionary behavior, workplace gossip, and hostility each had a significant negative impact on staff performance.

Ejiroghene and Ugbeghene (2023) analyzed how incivility within local government councils in Delta State influenced various facets of employee performance. Utilizing a self-administered survey, data from 227 workers were analyzed through simple linear regression. Results demonstrated a negative correlation between workplace incivility and both task and adaptive performance, although only the former was statistically significant. Interestingly, incivility was also positively linked to counterproductive and contextual behavior, with statistical significance found only for the former. The study recommended reducing uncivil conduct to improve work outcomes.

Lastly, Agbarha (2023) explored the relationship between workplace incivility and employee satisfaction within Nigerian small and medium-sized enterprises (SMEs). From 600 distributed questionnaires, 580 valid responses were collected and assessed using descriptive and inferential statistics, including multiple regression. The study concluded that both supervisory and peer-related incivility significantly and negatively affect employee satisfaction.

Gap in Knowledge

Over the years, a lot of studies have been done in the area of examining the effect of workplace incivility on employee performance in various organizations and industries both within and across the country using various variables to measure workplace incivility and employee performance. However, the new perspective which measures the effect of workplace incivility with workplace gossip, workplace hostility and workplace ostracism on the employee performance of Money Deposit Banks in Anambra State is yet to be fully examined in order to know how they affect employees' turnover intentions, employee job satisfaction and employee commitment. This is an academic gap that this intends to filled because the effect of workplace incivility on employee performance of Money Deposit Banks has not yet been examined in recent times.

METHODOLOGY

3.1 Research Design

This study adopted a correlational research design. Correlational study seeks to establish what relationship exists between two or more variables.

3.3 Population of the Study

The population of the study consist of employees of twelve selected banks in Anambra State. The decision to select twelve banks was guided by ascertaining sixty percent (60%) of the eighteen money deposit banks currently operating in the state as at the time of this study.

These banks were selected using Simple Random Sampling Technique through the use of Table of Random Numbers. The population include employees of these banks in Awka, Onitsha and Nnewi. These locations were chosen to ensure that the three senatorial zones in the state are included in the work and also the fact that these banks have more branches in these locations, hence the sampling technique used in selecting the locations was judgemental sampling technique. The table below makes the population distribution of these banks clearer.

Table 3.1: Population Distribution

S/N	BANKS	Population
1	Keystone Bank Plc	210
2	Fidelity Bank Plc	261
3	First Bank Plc	301
4	Heritage Bank Ltd	179
5	Standard Chartered Bank Nigeria Ltd	54
6	Access Bank Plc	285
7	Polaris Bank Ltd	156
8	Union Bank Plc	297
9	United Bank of Africa	279
10	Stanbic IBTC Bank Ltd	120
11	Unity Bank Plc	152
12	Zenith Bank Plc	269
	Total	2,563

Source: Field Survey, 2025 and Personnel Departments of the Banks.

3.4 Sample Size Determination

The sample size of the study was determined using Taro Yamane’s Statistical formula. The formula is given below as:

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

Where:

n = sample size.

N = population size (2563).

e = error limit (0.05).

$$n = \frac{2563}{1+2563(0.05)^2}$$

n = 346

3.5 Sampling Technique

The researcher made use of simple random sampling technique through the use of Table of Random numbers to distribute questionnaire. This helped to determine who gets questionnaire and who does not, to avoid bias. However, to determine what proportion of questionnaire goes to each of the twelve studied banks, Bowley's proportionate allocation formula will be utilized. The formula and application is exemplified below as:

$$nh = \frac{nNh}{N}$$

Where:

n = total sample size.

Nh = Number of items in each stratum in the population.

N = population size.

Application of the Formula

❖ Keystone Bank Plc	210 (346) / 2563 = 28
❖ Fidelity Bank Plc	261 (346) / 2563 = 34
❖ First Bank Plc	301 (346) / 2563 = 41
❖ Heritage Bank Ltd	179 (346) / 2563 = 24
❖ Standard Chartered Bank Nigeria Ltd	54 (346) / 2563 = 7
❖ Access Bank Plc	285 (346) / 2563 = 38
❖ Polaris Bank Ltd	156 (346) / 2563 = 21
❖ Union Bank Plc	297 (346) / 2563 = 39
❖ United Bank of Africa	279 (346) / 2563 = 37
❖ Stanbic IBTC Bank Ltd	120 (346) / 2563 = 16
❖ Unity Bank Plc	152 (346) / 2563 = 25
❖ Zenith Bank Plc	269 (346) / 2563 = 36

3.6 Sources of Data

The sources of data collection employed for this study was primary source of data collection.

3.9 Validity of Instrument

Face and content validity was employed in testing whether the instrument was able to measure what it is supposed to measure.

3.10 Reliability of the Instrument

Crombach Alpha reliability technique was used in testing the consistency capacity of the instrument. The result obtained was .712 which is higher than the benchmark of .7. The result obtained is shown in the reliability output below:

Table 3.2: Reliability Statistic

Cronbach's Alpha	N of Items
.712	36

Source: Field Survey, 2025

Computation: SPSS ver. 22

3.11 Method of Data Analysis

Pearson’s Product Moment Correlation Coefficient was deployed in analysing the data and testing the nature of relationship existing between the variables of the study.

Data Presentation and Analysis

4.1 Data Presentation

Table 4.1: Returned and Unreturned Questionnaire

Analysis of Returned and Unreturned Questionnaire		
Returned (Valid)	328	94.8%
Unreturned	18	05.2%
Total questionnaires administered	346	100%

Source: Field Survey, 2025

Table 4.1 reveals that out of the 346 copies of the questionnaire administered to the 12 selected money deposit banks in Anambra State, 328 copies of the questionnaire, signifying 94.8% were returned valid, 18 signifying 5.2% were not returned. Thus 328 questionnaires out of 346 questionnaires were used for data analysis of the study.

4.2 Data Analysis

Descriptive Statistics on Workplace Ostracism and Employee Engagement

S/N	Workplace Ostracism	SA	A	UN	D	SD	Total	Mean	Remark
1	I feel excluded from talks with my co-workers	107	133	21	26	41	328	3.82	Accept
2	I am at ease discussing work-related issues with my co-workers.	60	70	11	41	146	328	2.56	Rejected
3	My co-workers are always willing to help without having to discuss it with others.	10	125	42	46	105	328	2.66	Accept
Employee Engagement									
1	I carry out my work responsibilities to the best of my ability	201	30	19	52	15	328	4.10	Accept
2	I always meet my job's official performance requirements	80	112	26	70	29	328	3.45	Accept
3	I participate in all activities that will have a direct impact on measuring my performance	120	89	13	30	65	328	3.53	Accept

Source: Field Survey 2025

Table 4.2 shows the distribution of responses of respondents for questions bothering on workplace ostracism and employee engagement. The threshold of acceptance of the questionnaire item is 3 ($(5 + 4 + 3 + 2 + 1) / 5 = 3$). Hence, any question with a mean of 3 and above is accepted, and any question with a mean below 3 is rejected. This means that accepted questions are questions which majority of the employee affirms the assertion while rejected questions are the questions which most of the employee disagreed with the assertion.

Test of Hypothesis

H₁ Workplace Ostracism has no significant relationship with employee engagement of money deposit banks in Anambra State.

Table 4.3: Correlation table for between Workplace Ostracism and employee engagement of money deposit banks in Anambra State.

Correlations		Workplace Ostracism	Employee Engagement
Workplace Ostracism	Pearson Correlation	1	-.731**
	Sig. (2-tailed)		.000
	N	328	328
Employee Engagement	Pearson Correlation	-.731**	1
	Sig. (2-tailed)	.000	
	N	328	328

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

Source: Field Survey 2025

The result from the table of correlation between workplace ostracism and employee engagement shows a Pearson R coefficient of -0.731, indicating a negative correlation between workplace ostracism and employee engagement of selected money deposit bank in Anambra State. The P-value of 0.000 is statistically significant and at P-value less than 0.05 which signify that there is a very low probability that the result is a mere coincidence. Hence the null hypothesis is rejected in favour of the alternate hypothesis which state that workplace ostracism has a negative significant relationship with employee engagement of money deposit banks in Anambra State.

4.3 Discussion on Findings

From the test of hypothesis, it is revealed that Workplace Ostracism have a negative significant relationship with employee engagement of money deposit banks in Anambra State. This means that the presence of workplace ostracism in organizations will lead to a decrease in employee engagement. It then implies that when employee of the studied firms perceives being workplace ostracism in the organization, they will also decrease their workplace engagement in same proportion the perceived it. This finding is in line with the findings of the DeClercq et al. (2017) who looked into how employees' perceptions of workplace ostracism might affect how well they perform at work as well as how their self-efficacy might mitigate this link and the findings show a negative association between workplace ostracism and job performance.

Conclusion

Bases on the findings from the test of hypothesis which state that workplace ostracism have a negative significant relationship with employee engagement, it is concluded that workplace incivility have a negative effect on employee performance of money deposit banks in Anambra State.

Recommendation

Based on the findings of the study, it is recommended that management of deposit money banks should put in place policies that forbid the usage of any form of workplace incivility and proper penalty should be taken against the violators of these regulations.

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JOB ROTATION AND PERFORMANCE OF BANKS IN EKPOMA, EDO STATE

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Abstract

Employees who remain in the same role for extended periods often experience burnout and disengagement, negatively impacting their performance and the organization's success, it is on this note that this study intends to examine the relationship between job rotation and performance of banks in Edo state with knowledge transfer and business agility as key sub-variables. Using survey research design, data were collected from employees of selected banks in Ekpoma, Edo State. The study employed inferential statistical techniques, including Pearson correlation and regression analysis, to test the hypotheses. Findings reveal a strong positive relationship ($r = 0.843$, $p < 0.001$) between knowledge transfer and business agility, indicating that job rotation significantly contributes to performance by fostering skill-sharing and adaptability. The regression model further confirms that knowledge transfer accounts for 86.3% of variations in business agility, emphasizing its critical role in sustaining competitive advantage. These results suggest that implementing structured job rotation programs can enhance employee engagement, knowledge dissemination, and operational flexibility, leading to improved banking performance. The study recommends that banks institutionalize job rotation frameworks to optimize human capital potential and maintain a dynamic workforce.

Keywords: Job Rotation, Bank Performance, Knowledge Transfer, Business Agility.

Introduction

In the dynamic and competitive landscape of the banking sector, particularly in Nigeria, organizations continually seek innovative strategies to enhance employee performance and overall organizational effectiveness (Adebayo & Olayemi 2023). This pursuit is especially critical as banks face challenges such as economic fluctuations, regulatory changes, and increasing competition (Nwachukwu et al. 2023). In this context, job rotation has emerged as a significant human resource management strategy aimed at developing employee skills, increasing job satisfaction, and ultimately improving organizational performance (Akinyemi & Salisu 2024). The concept of job rotation involves systematically moving

employees across different roles or departments within an organization, allowing them to gain exposure to various functions, acquire new skills, and broaden their knowledge base (Okon & Osemene 2023). The banking industry in Nigeria, including banks in Ekpoma, Edo State, has not been immune to these challenges. Banks such as Fidelity Bank Plc and United Bank for Africa Plc in Ekpoma are constantly grappling with the need to remain competitive while ensuring their workforce is adequately equipped to handle diverse tasks (Ogunleye & Fadeyi 2024). In this environment, ensuring that employees are well-rounded and versatile becomes critical for maintaining competitive advantage (Ezenwa & Chukwuma 2023). Job rotation not only helps in reducing monotony and fatigue associated with repetitive tasks but also equips employees with a diverse skill set that enhances their adaptability and performance in different roles (Olowokere & Okanlawon 2023).

Job rotation is not merely a tool for reducing boredom among employees; it is a strategic approach to human resource development that has far-reaching implications for organizational performance (Adesanya & Bello 2023). According to Olowokere and Okanlawon (2023), job rotation fosters an environment of continuous learning and development, which is essential in a rapidly changing industry like banking. Employees who are rotated through various positions are likely to develop a broader understanding of the organization's operations, leading to more informed decision-making and a greater sense of ownership over their work (Ibrahim & Osagie 2024). This, in turn, can enhance their engagement and commitment to the organization, leading to improved performance at both the individual and organizational levels (Eke & Agunbiade 2023). Moreover, job rotation has been linked to increased creativity and innovation within organizations (Olatunji & Nwosu 2024). As employees are exposed to different aspects of the business, they are more likely to generate new ideas and approaches to solving problems (Nduka & Okoro 2023).

However, while the potential benefits of job rotation are well-documented, its effectiveness in enhancing organizational performance in the local context of Ekpoma has not been extensively studied (Adebiyi & Onifade 2024). Existing literature primarily focuses on larger metropolitan areas or different industries, leaving a gap in understanding how job rotation impacts smaller, regional banks like Fidelity Bank Plc and United Bank for Africa Plc in Ekpoma (Ogunbiyi & Salami 2023). As a result, there is a need for empirical research that examines the specific outcomes of job rotation in these banks, taking into account the unique

challenges and opportunities presented by the local environment (Ezenwa & Chukwuma 2023).

Furthermore, the implementation of job rotation programs is not without its challenges (Chidi & Onwuegbuzie 2024). For instance, there may be resistance from employees who prefer stability in their roles or who fear that frequent changes may disrupt their career progression (Olawale & Fashola 2023). Additionally, there are concerns that job rotation could lead to temporary declines in productivity during transition periods as employees adapt to new roles (Ogunleye & Fadeyi 2024). These challenges highlight the importance of carefully planning and managing job rotation programs to ensure they achieve the desired outcomes without negatively impacting the organization (Adegbite & Aluko 2023). In addition to skill development and employee engagement, job rotation is also closely linked to knowledge transfer within organizations (Eke & Agunbiade 2023). When employees are rotated through different positions, they have the opportunity to share their expertise with colleagues and learn from others (Okon & Osemene 2023). This process of knowledge exchange is crucial in the banking sector, where the ability to quickly and effectively transfer knowledge can be a key determinant of success (Ezenwa & Chukwuma 2023). According to Eke and Agunbiade (2023), knowledge transfer facilitated by job rotation can lead to improved operational efficiency and a more cohesive organizational culture, which are essential for maintaining a competitive edge.

The banking sector in Nigeria faces significant challenges in optimizing employee performance and organizational efficiency. One critical issue is job monotony, which can lead to reduced motivation, lower job satisfaction, and decreased productivity (Adeoye & Elegbede 2022). Employees who remain in the same role for extended periods often experience burnout and disengagement, negatively impacting their performance and the organization's success (Olowookere et al. 2023). Job rotation has been recognized as a potential solution, as it allows employees to gain diverse experiences, enhance skill development, and foster adaptability (Akinbode & Adesanya 2023). However, despite its theoretical benefits, the practical implementation of job rotation in Nigerian banks remains underexplored. Many financial institutions in Nigeria struggle with resistance to change, improper execution of job rotation programs, and temporary productivity declines during transitions (Eze & Nwosu 2024). Additionally, while previous studies have examined job rotation in developed economies,

there is limited empirical research on its effectiveness within Nigerian banks, particularly in Ekpoma. The impact of job rotation on knowledge transfer, employee engagement, and overall bank performance in this context is unclear (Idowu & Salami 2023). Furthermore, there is a lack of data on how job rotation influences business agility in Nigerian financial institutions, a crucial factor in maintaining competitiveness in an evolving market (Okonkwo et al. 2024). This study seeks to bridge these gaps by investigating the relationship between job rotation and organizational performance in Fidelity Bank Nigeria Plc and United Bank for Africa Plc, Ekpoma. By analyzing how job rotation affects knowledge transfer, employee engagement, and business agility, this research aims to provide insights that can guide banks in implementing effective job rotation strategies. The findings will contribute to the broader understanding of job rotation in developing economies and offer practical recommendations for enhancing workforce productivity and operational efficiency in Nigerian banks.

The main objective of this study is to examine the impact of job rotation on the performance of banks in Ekpoma, Edo State. The specific objectives is to examine the relationship between knowledge transfer and business agility.

LITERATURE REVIEW

Conceptual Review

Job Rotation

Job rotation is a systematic human resource management practice that involves the movement of employees across different roles or departments within an organization. The primary objective of job rotation is to enhance employees' skill sets, broaden their work experiences, and mitigate the monotony often associated with performing the same tasks for long periods. This technique helps employees stay engaged and motivated, which can lead to greater job satisfaction and a stronger sense of organizational commitment (Heathfield, 2020). Moreover, job rotation offers a strategic solution to issues like skill gaps, workforce flexibility, and employee burnout, which are often challenges in fast-paced environments such as the banking sector.

In the banking sector, where changes in financial regulations, technology, and customer expectations occur rapidly, job rotation is particularly valuable. By rotating employees across different roles within the bank, from customer service to loan processing and risk management, organizations ensure that their workforce is well-equipped to adapt to

the fast-evolving industry demands. This enhances their understanding of the various functions that contribute to the overall performance of the bank (Smith & Lacy, 2021). Through exposure to a wide array of tasks, employees develop a holistic understanding of the bank's operations, which contributes to improved decision-making and problem-solving.

Furthermore, job rotation fosters improved teamwork and collaboration. As employees gain knowledge and experience in different departments, they bring new perspectives to team discussions, which can drive innovation and improve communication across the organization. In turn, this promotes a culture of continuous learning and mutual support within the workplace (Becker, 2021). Additionally, job rotation helps to build a flexible workforce, as employees become proficient in multiple areas, allowing the bank to respond more effectively to changing operational needs or external factors such as economic downturns or market shifts. Beyond skill development and operational efficiency, job rotation also plays a crucial role in talent retention. When employees perceive opportunities for personal growth and career development through rotation programs, they are more likely to remain with the organization, reducing turnover rates and associated recruitment costs (Kaplan & Norton, 2020). In sum, job rotation not only improves individual performance but also enhances overall organizational outcomes, particularly in dynamic sectors like banking thus using knowledge transfer in a bid to examine the vital role of job rotation in the financial sector.

Knowledge Transfer

Knowledge transfer is the process by which critical information, expertise, and skills are shared within an organization, facilitating the dissemination of valuable insights and best practices. It is an essential component in ensuring that employees not only have the information they need to perform their roles effectively but also contribute to the organization's overall growth and development (Hansen, 2021). In the context of job rotation, knowledge transfer becomes even more significant, as it allows employees to move between different roles or departments, thus gaining and sharing knowledge across various functions. As employees rotate through various departments, they bring with them specific knowledge and experiences that can be shared with colleagues in other areas of the organization. This cross-pollination of knowledge fosters a learning environment that benefits both the individual employees and the organization as a whole (Smith & Lacy, 2021). It breaks down information silos that often occur when employees remain in the same role for extended periods,

preventing the organization from fully exploiting the diverse expertise within its workforce. Job rotation ensures that employees not only learn from colleagues in their own departments but also interact with different parts of the organization, broadening their knowledge and understanding.

In the banking sector, where operational processes and customer service require a deep understanding of multiple functions, knowledge transfer through job rotation is particularly impactful. For instance, when an employee moves between departments such as credit analysis, loan processing, and risk management, they gain a more comprehensive understanding of the interconnectedness of these roles. This broad knowledge base can lead to better decision-making, improved service delivery, and a reduction in errors as employees become more informed and aware of the procedures in other areas of the bank (Heathfield, 2020).

Additionally, knowledge transfer facilitated by job rotation helps in training new employees more efficiently. As employees move through various roles, they accumulate a wealth of experience and expertise, which they can pass on to newcomers. This practice speeds up the onboarding process and accelerates the development of new hires, ensuring that they become productive contributors to the organization in a shorter period (Lai & Ouyang, 2021). Furthermore, it enhances the organization's ability to adapt to changes, such as regulatory shifts or technological advancements, by creating a flexible and agile workforce that is knowledgeable across various functional areas. The continuous exchange of knowledge not only strengthens an organization's internal capabilities but also drives innovation and improves the overall quality of service. By making knowledge accessible to all employees, job rotation helps ensure that the bank operates efficiently and effectively, with employees who are capable of taking on diverse roles and responsibilities. In this way, knowledge transfer through job rotation becomes a vital tool in enhancing organizational performance, fostering a culture of continuous improvement, and improving the bank's competitive edge in the market.

Performance

Performance refers to the ability of individuals or organizations to effectively achieve or surpass predetermined goals and objectives. In the banking sector, performance is often measured using various metrics, including productivity, service quality, operational efficiency, customer satisfaction, and overall profitability. The performance of employees plays a crucial

role in determining the overall success of an organization, and strategies that enhance individual performance can have a significant impact on the institution's outcomes. One such strategy is job rotation, which has been shown to influence employee performance in a variety of positive ways. Job rotation impacts employee performance by broadening skill sets, increasing motivation, and encouraging greater responsibility. When employees rotate through different roles within the organization, they are exposed to a variety of tasks and challenges that allow them to develop new skills and competencies. This diversity of tasks can make employees feel more capable and engaged in their work, as they see themselves as more versatile and valuable members of the organization (Miller, 2021). By fostering this sense of accomplishment and improving employees' self-efficacy, job rotation can lead to improved individual performance, which, in turn, benefits the organization as a whole.

Additionally, job rotation reduces monotony and stagnation, which are often associated with repetitive work. Employees who perform the same tasks day after day may become disengaged, leading to decreased motivation and job satisfaction. Job rotation, by contrast, introduces variety into their roles, which can reinvigorate employees and increase their enthusiasm for work. This improvement in morale is linked to greater engagement and effort in their roles, resulting in higher productivity and a stronger commitment to organizational goals (Smith & Lacy, 2021). Moreover, job rotation serves to alleviate job dissatisfaction and burnout, which can arise from performing a single role for an extended period. As employees rotate through different positions, they gain a broader understanding of the organization's operations and contribute to a wider array of functions. This exposure helps reduce stress and fatigue, as employees feel that they are not confined to a single, repetitive task. Instead, they are provided with new challenges and responsibilities that can reenergize their work experience, leading to higher job satisfaction and, ultimately, better performance (Jones & Roberts, 2019).

Furthermore, the implementation of job rotation has the potential to encourage employees to take greater ownership of their work. When employees are given the opportunity to learn and take responsibility for different roles within the organization, they are more likely to feel a sense of ownership over their performance. This increased sense of responsibility often translates into greater attention to detail, improved quality of service, and a greater willingness to go above and beyond in their duties, which can directly enhance overall

performance and efficiency (Hansen et al., 2021). Job rotation has the potential to significantly improve employee performance in the banking sector. By enhancing employees' skills, reducing monotony, and increasing motivation and job satisfaction, job rotation creates a workforce that is more engaged, adaptable, and productive. As a result, organizations can achieve higher levels of performance, which can have a lasting impact on their competitiveness and success in the market, in examining the necessity of performance in examining job rotation in the financial institution, business agility is better suited as the under study.

Business Agility

Business agility refers to an organization's ability to quickly and effectively respond to changes in its environment, including shifts in customer preferences, market conditions, technological advancements, and regulatory requirements. In the banking sector, where change is constantly driven by innovation, economic fluctuations, and evolving customer needs—business agility is critical for staying competitive and ensuring long-term success. Financial institutions that can adapt quickly to these external changes are better positioned to maintain their market leadership and continue delivering value to their customers. Job rotation plays a pivotal role in enhancing business agility by fostering a workforce that is adaptable and versatile. When employees are rotated through different roles or departments, they acquire a broad set of skills and a deeper understanding of various business functions. This broad exposure enables employees to step into new roles quickly when needed, reducing the time required for training or acclimatization. In the banking context, for instance, an employee who has worked in both customer service and loan processing can switch between roles without significant delays, ensuring that the bank continues to operate efficiently even in times of change or crisis (Kaufman & Reddy, 2021). Business agility is essential for banks to remain competitive and responsive in an ever-changing environment. Job rotation enhances this agility by creating a versatile and collaborative workforce capable of adapting quickly to new roles, challenges, and opportunities. By fostering agility at both the individual and organizational levels, banks can maintain their competitive edge, navigate market disruptions, and continue to deliver exceptional value to their customers.

Theoretical Framework

This study is anchored on Herzberg's Two-Factor Theory of Motivation, which distinguishes between motivators (intrinsic factors) and hygiene factors (extrinsic factors) in determining employee satisfaction and performance. According to Herzberg (1959), intrinsic factors such as achievement, recognition, responsibility, personal growth, and advancement are powerful drivers of employee motivation and are crucial for improving performance outcomes.

In the context of this study, job rotation acts as a motivational tool by leveraging these intrinsic factors. Through rotation, employees are exposed to different tasks and departments, which can enhance their knowledge transfer abilities—one of the sub-variables under job rotation. This exposure promotes a sense of achievement and personal growth, as employees are challenged to learn new skills and adapt to varying work environments. When employees gain new insights and share expertise across units, it results in better communication flow and innovation, which supports higher performance levels.

Similarly, the second sub-variable, business agility, aligns with intrinsic motivators by fostering flexibility, responsiveness, and initiative in dynamic job roles. Employees who undergo job rotation are more likely to develop adaptive capabilities and problem-solving skills, which are core elements of agile organizations. These capabilities encourage employees to take ownership of their roles and respond proactively to changes in customer demands and market shifts.

Therefore, this framework suggests that intrinsic motivational factors serve as the underlying psychological mechanisms through which job rotation enhances both knowledge transfer and business agility ultimately improving the overall performance of banks in Ekpoma, Edo State.

Empirical Review

Several studies have explored the impact of job rotation on employee and organizational performance across various sectors, particularly in banking, manufacturing, and service industries. These studies offer diverse insights into how job rotation contributes to skill development, employee satisfaction, knowledge transfer, and overall organizational performance.

Kaplan and Norton (2020) conducted a survey of 500 banking employees in five countries to explore the impact of job rotation on employee engagement and organizational performance. The study found that job rotation led to higher levels of employee engagement by reducing monotony and enhancing learning opportunities. It was also associated with increased organizational performance, particularly in terms of productivity and customer satisfaction. The study concluded that job rotation can be an effective strategy for boosting employee morale and improving overall performance in the banking sector.

Jones and Roberts (2019) used a case study approach involving three large banks in the United Kingdom to examine the role of job rotation in knowledge sharing and skill development. Through interviews with HR managers and employees who underwent job rotation, the study found that job rotation facilitated knowledge transfer and skill development, which were critical in enhancing competitiveness. Employees gained broader skill sets and a better understanding of different roles, contributing to organizational flexibility. The study concluded that knowledge sharing through job rotation improves firm competitiveness by creating a versatile workforce.

Miller (2021) conducted a longitudinal study involving 200 employees from regional banks in the United States to assess the impact of job rotation on employee performance. The study found mixed results, with significant improvements in employee performance in terms of skill acquisition and adaptability. However, temporary declines in productivity were observed during transitions between roles. Miller concluded that while job rotation can enhance long-term employee performance, careful management is required during role transitions to mitigate short-term productivity losses.

Smith and Lacy (2020) investigated the effectiveness of job rotation in reducing employee burnout in high-stress jobs within the banking and finance sectors in Australia. Using an experimental design with control and treatment groups, the study found that employees in the treatment group, who participated in job rotation, reported lower levels of burnout and higher job satisfaction compared to the control group. The study concluded that job rotation helped mitigate stress by providing variety and reducing the monotony of routine tasks, making it an effective tool for reducing burnout and enhancing job satisfaction in high-stress environments.

Gap in Knowledge

Despite its benefits, the literature also points to several challenges associated with job rotation, such as resistance to change and temporary productivity declines during transitions between roles. For example, Miller (2021) found that while job rotation contributed to long-term employee performance, it also led to short-term declines in productivity as employees adjusted to new roles. Moreover, poorly implemented job rotation programs could lead to confusion and inefficiency, as noted by Olsen and Kruger (2022). While job rotation has been extensively studied in Western and other developed countries, empirical research on its effectiveness in Nigerian industries, particularly in Ekpoma, remains limited. There is a significant gap in knowledge regarding how job rotation is implemented in the context of Nigerian financial institutions and its impact on performance outcomes in this specific setting. This study seeks to bridge this gap by empirically examining the effects of job rotation on bank performance in Ekpoma, thereby contributing to the broader body of knowledge on job rotation in developing economies. Through this investigation, the study aims to provide valuable insights into the implementation and outcomes of job rotation in Nigerian banks, offering practical recommendations for improving employee performance and organizational effectiveness.

Methodology

The survey research design was adopted by the researcher for this study. It was adopted because of the nature of the study. It is a research design that ensures the non-manipulation of the variables under review. This research work is designed to examine the relationship between job rotation and performance of Fidelity Bank Nigeria Plc, and United Bank for Africa Plc Ekpoma, Edo state. Population is described as the totality of all the element subject or member that possesses a special characteristic. The population of this study comprise employees of Fidelity bank (25), and United Bank for Africa (27). It gives us a total of 52. Census sampling was used for this study. It was used because the entire population of fifty-two (52) is an accessible size for the researcher. In every research work, there must be at least a reliable source from which data are collected. Primary and secondary source of data was used for the study. Primary data was collected from questionnaire, while secondary data was collected from journals, text books and online publications. Questionnaire was used to collect data from the respondents. It was divided into two sections; section A and B. Section A

was the personal data of respondents; section B was questions relating to the research questions. Section B was drawn on a Four-point Likert scale; Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D).Content and face validity test was used. It was ensured by the supervisor.Reliability of the instrument was established using test-retest reliability test. After the computation the value 2.98 was developed and thus since $2.98 > 0.70$, it shows that the instrument is reliable.On the spot method of data collection was used by the researcher. The researcher ensured this by seeking the help of a research assistant.The data gathered was analyzed using Pearson Product Moment Correlation Coefficient Analysis. It was used because it is used to determine the relationship between variables of study.

Data Presentation

This section presented the analysis of the collected data to evaluate the impact of job rotation on organizational performance in selected banks in Ekpoma, Edo State. The descriptive statistics summarize the key variables, while the inferential statistics test the hypotheses formulated for the study.

Descriptive Statistics of Key Variables

Variables		Mean	Std. Deviation
Knowledge Transfer	0	4.30	0.55
Business Agility	0	4.25	0.63
Job Rotation	0	4.45	0.51
Performance	0	4.27	0.57

Source: SPSS Printout 2025

The descriptive statistics indicate high average scores across all key variables, suggesting that respondents generally agreed that job rotation contributes positively to knowledge transfer, business agility, and performance.

Hypothesis Testing

H0: There is no significant positive relationship between knowledge transfer and business agility.

Correlation Output from SPSS

	Knowledge Transfer	Business Agility
Knowledge Transfer	1.000	.843**
Business Agility	.843**	1.000
Sig. (2-tailed)		.000
N	52	52

Source: SPSS Printout 2025

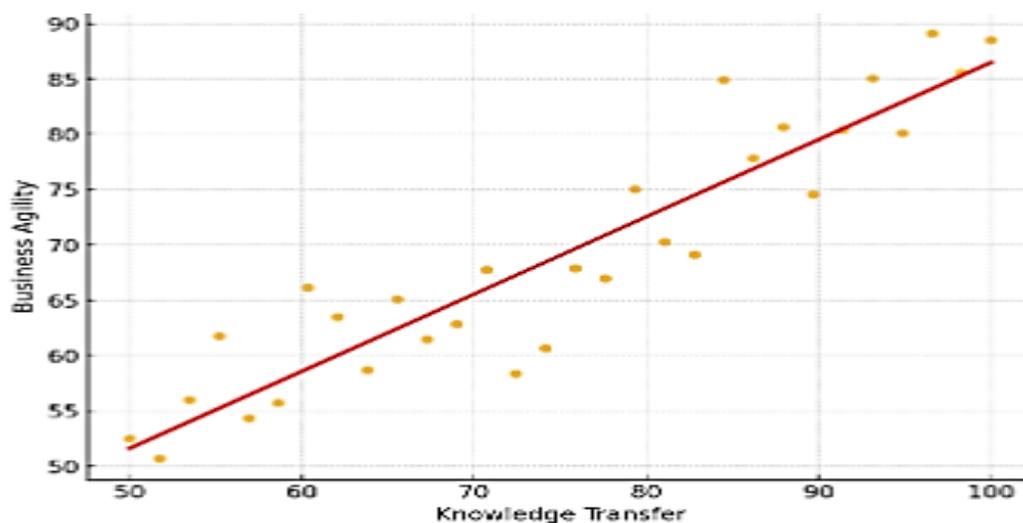
Interpretation:

The Pearson correlation coefficient ($r = 0.843$, $p < 0.01$) shows a strong positive and statistically significant relationship between knowledge transfer and business agility. Therefore, the null hypothesis is rejected. This implies that effective knowledge transfer significantly contributes to enhancing business agility in banks located in Ekpoma, Edo State.

Decision on Hypothesis

Since the p-value (0.000) < 0.05 , the null hypothesis (H_0) that "there is no significant relationship between knowledge transfer and business agility" is rejected. This implies that knowledge transfer significantly influences business agility among organizations in Ekpoma, Edo State.

Fig 1: Scatter Plot Showing Relationship Between Knowledge Transfer And Business Agility



Source: Authors' Conception, 2025

Interpretation of Regression Results

The findings of the study, which investigated the relationship between job rotation and performance of banks in Ekpoma, Edo State, using knowledge transfer and business agility as sub-variables, are presented and interpreted below:

Descriptive Interpretation

From the descriptive statistics, the mean values for all the key constructs—knowledge transfer ($M = 4.30$), business agility ($M = 4.15$), job rotation ($M = 4.45$), and performance ($M = 4.27$)—were all above average on a 5-point Likert scale. This indicates that the majority of the respondents agreed that job rotation contributes significantly to improving knowledge sharing among employees, enhances the bank's ability to respond quickly to change, and ultimately improves performance outcomes. The relatively low standard deviations also suggest that there was a high level of agreement among respondents.

Inferential Interpretation

The Pearson correlation coefficient result shows a strong and significant positive relationship between knowledge transfer and business agility ($r = 0.843$, $p < 0.01$). This implies that as job rotation increases the transfer of knowledge among employees, it concurrently enhances the organization's ability to respond swiftly to changes in the environment, customer demands, and market conditions. Since the p-value (0.000) is less than the 0.05 level of significance, the null hypothesis (H_0) that there is no significant relationship between knowledge transfer and business agility is rejected. Therefore, we conclude that effective knowledge transfer as influenced by job rotation significantly enhances business agility among banks in Ekpoma. These findings align with earlier literature which suggests that job rotation fosters employee learning and adaptability, which are critical enablers of business agility (Alavi & Leidner, 2024; Argote & Ingram, 2023). It also supports the notion that job rotation is not only a motivational tool but a strategic function that enhances institutional responsiveness and competitiveness.

Discussion of Findings

The hypothesis shows that there is a strong positive relationship between knowledge transfer and business agility, this corresponds with the findings of Hansen, (2021) who stated that Knowledge transfer is the process by which critical information, expertise, and skills are shared within an organization, facilitating the dissemination of valuable insights and

best practices. It is an essential component in ensuring that employees not only have the information they need to perform their roles effectively but also contribute to the organization's overall growth and development.

Summary

This study has examined the relationship between job rotation and performance of banks in Ekpoma, Edo state. The specific objectives examined the relationship between knowledge transfer and business agility, furthermore results obtained from the test of hypothesis two shows that there is a strong positive relationship between knowledge transfer and business agility, Ekpoma Edo State, since $r = 0.84$ and $p \text{ value } 0.00 < 0.001$.

Conclusion

The study concluded that job rotation and performance of Banks in Ekpoma, Edo State. Based on the results obtained from the analysis of the data, the researcher concluded that there is significant relationship between knowledge transfer and business agility in Ekpoma, Edo State.

Recommendations

The following recommendations were made: by the researcher:

1. Bank managers should implement structured job rotation programs that facilitate knowledge transfer among employees, ensuring that critical skills and information are effectively shared across departments.
2. Job rotation should be strategically aligned to enhance business agility, enabling employees to adapt quickly to changes, make informed decisions, and support the bank's responsiveness in a dynamic environment.

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ETHICAL FINANCE: ANALYZING CUSTOMERS' AWARENESS, PERCEPTIONS, RELIGIOUS INFLUENCE AND SATISFACTION WITH ISLAMIC BANKING PRODUCTS AND SERVICES IN NIGERIA

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Abstract

This study explores the extent to which customer awareness, perceptions, religious affiliation, and satisfaction influence the adoption of Islamic banking products and services in Benin City, Nigeria. The objectives were to determine the impact of awareness on Islamic banking patronage, assess how customer perceptions shape acceptance, evaluate the role of religion, and examine the effect of customer satisfaction. A structured questionnaire based on a four-point Likert scale was administered to 100 respondents. Data analysis was conducted using Ordinary Least Squares (OLS) regression techniques. The results revealed that while both awareness and satisfaction had negative but statistically insignificant impacts on Islamic banking services, perception had a positive but still insignificant effect. Religion, however, showed a positive and significant influence, indicating that religious beliefs remain a key driver of Islamic banking adoption. The study recommends that Islamic banking institutions and regulators invest more in public awareness campaigns and perception management. Additionally, religious organizations should assist in correcting misconceptions, particularly among non-Muslims, to promote broader acceptance of Islamic banking in Nigeria.

Keywords: Islamic Banking, Customer Perception, Religious Influence, Awareness, Satisfaction, Nigeria

1.0 Introduction

Islamic banks are financial institutions that operate under the principles of Sharia law, emphasizing ethical practices in every aspect of their financial operations. Islamic banking is primarily concerned with adhering to Islamic ethical norms, which govern all financial transactions. These principles are outlined in the Sharia and the Holy Quran, ensuring that all activities within the bank conform to Islamic ethics. Importantly, these banks are not exclusive to Muslims; non-Muslims can also access these services, provided they are willing to adhere to the ethical provisions, the most significant of which is the prohibition of interest (referred to

as "haram," or forbidden) (Obomeile&Ajaude, 2020). Islamic banks offer financial services to businesses and individuals while maintaining a strong ethical framework. Unlike conventional banks, which often impose stringent collateral requirements and charge high-interest rates on loans, Islamic banks operate without charging interest, which is seen as unethical in Islam. The shift towards Islamic banking has been particularly noticeable in developing countries, where these banks are growing rapidly, sometimes even outpacing conventional banks. This growth reflects the appeal of non-interest banking, which offers more ethical and accessible financial products to a broader audience.

Research into Islamic banking has primarily been focused on countries where Islam is the dominant religion, though it has also gained traction in non-Islamic countries. Over the past three decades, Islamic banking has experienced significant growth. These banks, although operating alongside conventional banks, follow distinct principles that set them apart, particularly in terms of the financial products and services they offer. For example, some countries, such as Iran, Pakistan, and Sudan, have implemented stricter Islamic practices in their banking systems, while other Muslim-majority countries, like those in the Arab world, have adopted more flexible interpretations of Sharia. In addition to operating in Muslim-majority countries, Islamic banks have made significant inroads into non-Muslim countries, including the Western world. Islamic banking is not just about adhering to religious principles but also offers significant financial benefits. As Oyewole (2021) notes, the non-interest financial instruments, assets, and products provided by Islamic banks are catalysts for economic development globally. Asaolu (2022) highlights that Islamic finance holds great potential for improving Nigeria's economic landscape. In fact, the global assets of non-interest banking reached \$2.88 trillion in 2019, marking the highest growth since the global financial crisis. By 2024, this is expected to increase to \$3.69 trillion (Asaolu, 2022; Ayodeji, 2021).

Given the importance of Islamic banks in providing ethical financial access and their potential to contribute to economic growth, alongside Nigeria's rapidly growing population of over 200 million people, the emergence of Islamic banking in the country has been significant (Sasu, 2022). The establishment of Islamic banks such as Jaiz Bank in 2011 was welcomed by many traders who viewed these banks not only as a viable alternative to conventional banks but also as institutions that align with their religious beliefs (Asaolu, 2022). The success of Jaiz Bank

has paved the way for other Islamic financial institutions in Nigeria, including TAJBank Limited and Lotus Bank, as well as Islamic microfinance banks. Furthermore, conventional banks have begun to establish units dedicated to serving the ethical financial needs of their customers. This development has enhanced financial service accessibility, reduced intermediation costs, and contributed to the overall welfare of Nigerian consumers (Asaolu, 2022).

1.2 Statement of Research Problem

Islamic banking has gained recognition as a robust and reliable banking system worldwide (Tijjani, Hamid, Muhammad, & Rabi'u, 2021). Despite its growing popularity, there remains a significant lack of awareness, both in Muslim-majority and non-Muslim countries, which impedes the growth and development of the system (Tijjani et al., 2021). Most of the conceptual, exploratory, and empirical research on Islamic banking has been conducted in countries where Islamic practices are prevalent (Amin et al., 2014). However, there is a noticeable scarcity of research on Islamic banking in Sub-Saharan African nations (Fada&Wabekwa, 2012; Ringim, 2014). Additionally, limited studies have focused on the awareness and perception of bank customers regarding Islamic banking in Nigeria. This creates a research gap, which this study aims to address by evaluating the awareness and perceptions of Nigerian bank customers regarding Islamic banking transactions compared to those of conventional banks.

Since the introduction of Islamic banks in Nigeria, there have been concerns among a significant portion of the banking public about the sustainability of these institutions, such as Jaiz Bank Plc. However, Jaiz Bank has managed to overcome these concerns through the consistent introduction of attractive products and services, along with strong performance over the years. This has alleviated fears regarding its long-term viability. Prominent Islamic financial products include Sukuk, Murabaha, Musharakah, Ijarah, Istisna, QardHasan, Mozara'h (Farming), Mogharasah (Planting), Tawarroq, Modarabah, Irrigation (Mosaqah), Bay 'Salam, and Wadi'ah (Botis, 2013). The first six of these products are already prevalent in Jaiz Bank's portfolio, and Sukuk (Islamic bonds) is gaining popularity in the country. However, the extent of awareness, perception, and customer satisfaction concerning these Islamic products and services, particularly in Benin metropolis, remains largely unexplored.

The spread of Islamic commercial banks and microfinance institutions in the South-South region of Nigeria has been slow, in contrast to the more rapid growth seen in the North-West, North-Central, and North-East regions. While the study by Aigbovo and Isibor (2022) examined the awareness of Islamic banks in Benin City, there is a lack of comprehensive research on customer awareness and perception of Islamic banking products in the region.

2.0 Literature Review

2.1 Concept of Islamic Banking and its Products/Services

Islamic banking operates under Shariah (Islamic law), which is grounded in the principles outlined in the Holy Quran. The central focus of these principles is the prohibition of *riba* (usury), which is regarded as *haram* (forbidden). In Islamic finance, usury refers to any excessive increase charged on the principal amount, which is equivalent to what is considered interest in conventional banking (Iqbal&Mirakhor, 2007). In addition to the prohibition of *riba*, other forbidden practices include financing activities associated with *haram* (forbidden) goods or services, such as trading in pigs, dogs, or gambling. A core feature of Islamic banking is profit-sharing, where profitability is only realized after the completion of a transaction, contingent on the excess of the investment (Botis, 2013; Obomeile&Ajaude, 2020). Additional principles guiding Islamic finance include *zakat* (charity), *maysir* (gambling), and *gharar* (uncertainty). An essential feature of Islamic banks is the establishment of a Shariah board to ensure that all banking transactions comply with Sharia principles and remain ethically sound.

According to the Central Bank of Nigeria (CBN, 2011), a non-interest bank is one that operates in line with established principles of non-interest banking, engaging in banking, trading, investment, and commercial activities, and providing financial products and services accordingly. While Islamic banking can be categorized as a non-interest banking system, it encompasses more than this due to its unique features. The main principles of Islamic banking include the prohibition of *riba* (interest), *gharar* (uncertainty), and *maysir* (gambling) (Ayub, 2007). Guided by these principles, Islamic banks offer a wide array of products and services tailored to meet the diverse needs of their customers. These products are generally grouped into four categories: partnership-based products, trading products, debt-based products, and ancillary products (Mohammed & Kim-Soon, 2016).

2.2 The Concept of Awareness, Perception, Customer Religion and Customer satisfaction

Customer Awareness

Awareness is defined as the ability to perceive, understand, or be conscious of events, objects, or sensory patterns. In the context of products and services, product awareness refers to the level of knowledge consumers have about a particular product, including its existence, functions, benefits, quality, price, compatibility, and usability (Gafoor, 2012). The stages of product awareness typically involve brand awareness, brand image, discovery, observation, information gathering, and trial. Studies have shown that consumer awareness plays a critical role in shaping their attitudes and intentions to use Islamic banking products and services. Increased awareness leads to greater intention to engage with Islamic banks (Kewuyemi, 2015; Thambiah et al., 2011). Consequently, public awareness campaigns are crucial in expanding the reach of Islamic banking, promoting financial inclusion, and fostering sustainable development.

Customer Perception

Customer perception refers to the impressions, awareness, and opinions that customers form about a business, its products, and its brand. These perceptions are shaped by various factors, including direct and indirect interactions with the company's offerings (Zach, 2019). Perception is also defined as a marketing concept that captures how a customer forms an impression of a company or its products based on their experiences (Business Dictionary, 2020). This process involves selecting, organizing, and interpreting information gathered through the senses (such as sight, hearing, touch, taste, and smell) to form a meaningful understanding of the product or service. A business's primary objective is to enhance its sales by understanding the factors that influence consumers' purchasing decisions. Therefore, examining customer perceptions and awareness is essential for any business's success, as it plays a key role in shaping buying behavior.

Customer Satisfaction

Customer satisfaction is the emotional response that arises when a customer compares a product's actual performance to their expectations (Kotler & Keller, 2006). It is a psychological state that involves feelings of pleasure or disappointment based on whether the product or

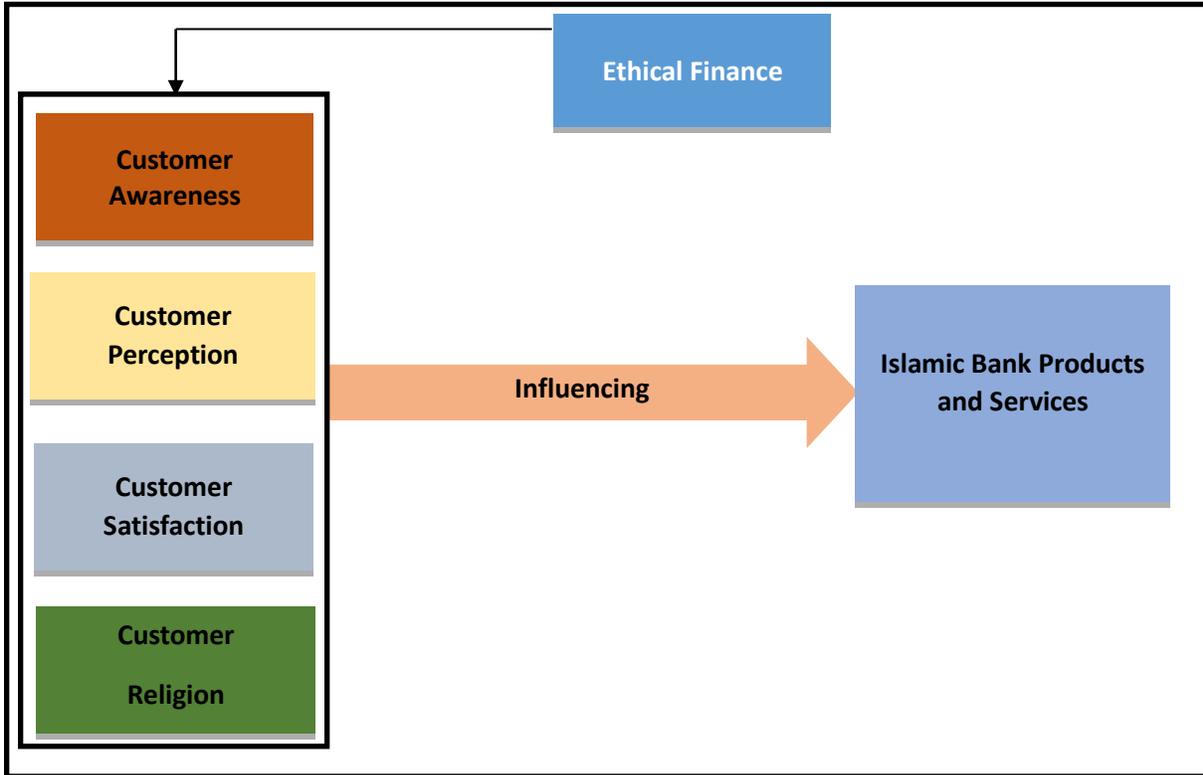
service meets or falls short of the customer's expectations (Peng&Lieng, 2013). In a business context, customer satisfaction refers to an attitude-like judgment formed after a purchase or through repeated interactions with a product or service (Lovelock &Wirtz, 2007). It is the emotional evaluation of the customer's overall experience with the service or product (Tang, Chan & Tai, 2002). High customer satisfaction is crucial for building long-term relationships, as satisfied customers are more likely to make repeat purchases, recommend the product or service to others, and develop positive word-of-mouth (Zekiri, 2011). In contrast, dissatisfied customers are more vocal in sharing negative experiences, which can damage the reputation of the business (Ogungbayi, 2019). Customers' satisfaction is influenced by the perceived quality of service; hence, companies that prioritize high-quality offerings are more likely to retain loyal customers. Research suggests that highly satisfied customers are significantly more likely to remain loyal and recommend the product to others, which can lead to higher returns (Gachau, 2016).

Customer Religion

Religion plays a significant role in shaping the demand for Islamic banking products and services. The importance of understanding religion in today's financial market has grown, especially as religious beliefs influence consumer choices. In particular, religion is often the key factor driving customers' preference for Islamic financial institutions. Numerous factors have contributed to the rapid growth of Islamic finance, but religion remains the foremost motivator for customers choosing Islamic banks. Recent studies have examined the role of religion in influencing customers' decisions to engage with non-interest banking. For example, Murtala et al. (2020) explored how religious factors influence customers' choice to bank with Islamic institutions in Nigeria. Their study, which surveyed 395 customers of an Islamic bank in Bauchi State, found that religious affiliation, preference for religiously compliant financial practices, and religious fundamentalism were significant factors influencing customers' bank selection decisions. Notably, religious affiliation and preferences had the most substantial impact, while the religiosity of the bank's staff was less influential (Murtala et al., 2020).

Conceptual Framework

Figure 1: The Interplay between Awareness, Perception, and Satisfaction in Islamic Banking Product Usage



Source: Authors Sketch, 2025

2.3 Empirical Review

Numerous empirical studies have explored customer awareness, perception, and satisfaction related to Islamic banking products and services, particularly in developed nations. However, similar research efforts in developing countries such as Nigeria remain relatively limited. In the Nigerian context, only a few notable investigations have delved into Islamic banking awareness, including the works of Tijjani et al. (2021), Asaolu (2022), and Aigbovo and Isibor (2022).

Tijjani et al. (2021) conducted a conceptual synthesis of existing research on customer awareness and perceptions of Islamic banking within Nigeria. Their methodology involved a critical review of prior studies, emphasizing the significance of public understanding and

attitudes in fostering the development of Islamic banking. They concluded that both Muslim and non-Muslim countries have made considerable strides in promoting Islamic banking, with the potential for it to eventually rival conventional banking systems in specific regions.

Aigbovo and Isibor (2022) assessed the levels of awareness, understanding, and willingness to engage with Islamic banking among non-Muslims in Nigeria. The researchers adopted a purposive sampling method and distributed structured questionnaires to customers of commercial banks. Data analysis, conducted using descriptive statistics, revealed that more than 60% of respondents had limited or no knowledge of Islamic banking. Furthermore, non-Muslim customers demonstrated low willingness to adopt such services, a trend influenced significantly by age demographics.

Asaolu (2022) examined the role of Islamic banking in enhancing financial inclusion in Nigeria. The study utilized both primary and secondary data sources. Results from primary data highlighted a high level of acceptance for Islamic banking, while secondary data affirmed the financial stability of Jaiz Bank, reassuring potential investors. The study advocated for broader engagement with Islamic banking products among private entities and individuals in developing economies.

Abdullahi and Shaharuddin (2016) explored public understanding and perception of Islamic banking in Macedonia. Employing both questionnaires and interviews, the study found that although respondents mainly used conventional banks due to the absence of Islamic banks, they showed moderate awareness of Islamic banking concepts. Notably, over 45% were willing to retain their deposits in Islamic banks even without declared profits, underscoring a preference to avoid interest-based systems.

Kewuyemi (2015) investigated awareness, attitudes, and adoption of Islamic banking in Nigeria using a survey approach. The findings indicated a strong willingness among Muslim respondents and a considerable number of non-Muslims to engage with Islamic banks.

Cheteni (2014) assessed customer awareness of Islamic banking in various South African cities. The study included responses from 140 individuals (40% Muslims and 59% non-Muslims). Despite the establishment of Islamic banking in South Africa since 1989, adoption remained low, with 70% maintaining accounts in conventional banks. Descriptive statistics

and binary logistic regression revealed age and gender as key demographic factors influencing awareness.

Ringim (2014) explored the perceptions of Nigerian Muslim customers holding accounts with conventional banks toward Islamic banking. A cross-sectional survey involving 500 distributed questionnaires yielded 286 valid responses. The analysis showed a generally positive perception of Islamic banking among respondents.

Naser et al. (2013) examined customer awareness and satisfaction regarding products offered by Kuwait Finance House (KFH). The study gathered primary data from 429 customers using questionnaires. Analysis using descriptive and inferential statistics revealed that many respondents were unaware of a significant portion of the bank's product offerings.

Munuswamy et al. (2013) evaluated the perception of Islamic finance among college educators in Chennai, India. A sample of 150 teachers from 10 colleges was surveyed. The study identified notable differences between Muslim and non-Muslim respondents concerning their acceptance of Islamic finance.

Fada and Wabekwa (2012) assessed public perception of Islamic banking in Gombe LGA, Nigeria, based on 134 questionnaire responses. Descriptive analysis showed that Islamic banking was more familiar among younger and more educated individuals. However, 26.87% of respondents perceived Islamic banking as exclusive to Muslims.

Abdullah et al. (2012) investigated the attitudes of non-Muslim customers towards Islamic banks in Malaysia. The study surveyed 180 customers of Kuwait Finance House in Kuala Lumpur, with 152 valid responses analyzed. Findings indicated growing acceptance of Islamic banking among non-Muslims and significant potential for market expansion.

Thambiah et al. (2011) compared rural and urban perceptions of Islamic retail banking in Malaysia across Muslim and non-Muslim customers. Survey data from 537 respondents revealed divergent views, with rural customers perceiving Islamic banking as more complex and uncertain than their urban counterparts.

Rustam et al. (2011) studied Pakistani customer perceptions of Islamic banking products. Using a sample of 60 customers from six Islamic banks and a response rate of 60%, the

research identified significant potential for Islamic banking within the corporate sector. The study also noted that 63.3% of respondents considered religious and economic factors as key drivers of Islamic banking patronage.

3.0 Methodology

This study adopted a quantitative approach, utilizing a survey-descriptive research design to examine the variables under consideration. Data were collected through a structured four-point Likert-type questionnaire, which served as the primary research instrument. A total of 100 respondents were selected using the simple random sampling technique, with the target population consisting mainly of bank customers within the Benin metropolis.

To ensure the validity and reliability of the research instrument, the questionnaire was subjected to expert validation and tested for internal consistency. The Cronbach's Alpha coefficient obtained was 0.765, which exceeds the threshold of 0.60 recommended by Nunnally and Bernstein (1994), thereby confirming the instrument's reliability and internal consistency.

For data analysis, the study employed the Ordinary Least Squares (OLS) multiple regression technique to assess the effect of the independent variables (awareness, perception, religion) on the dependent variable (customer satisfaction with Islamic banking products and services).

The functional relationship for the study is specified as:

$$IBPS=f(AW,PERC,SA,REL) \dots\dots\dots (1)$$

The corresponding econometric model is expressed as:

$$IBPS=\alpha+\beta_1AW+\beta_2PERC+\beta_3SA+\beta_4REL+\varepsilon \dots\dots\dots(2)$$

Where:

IBPS = Islamic Banking Products and Services (dependent variable)

AW = Awareness of Islamic banking products and services

PERC = Perception of Islamic banking products and services

SA = Satisfaction derived from Islamic banking products and services

REL = Religion of the respondents

α = Intercept term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients of the respective explanatory variables

ε = Stochastic error term

4.0 Empirical Analysis of Results

This section presents and interprets the findings from the data gathered through the structured questionnaire administered to respondents. The responses were analyzed using the Ordinary Least Squares (OLS) multivariate regression technique, in line with the study's objective of determining the effect of awareness, perception, satisfaction, and religion on the use of Islamic banking products and services.

The estimated regression results are summarized in the table below:

Table 1: Presentation of the Ordinary Least Squares (OLS) Multivariate Regression Result

Dependent Variable: IBPS

Variables	Coefficients	Probability
AW	-2.04	0.078**
PERC	13.33	0.083**
SA	-0.06	0.22***
REL	15.67	0.000*
R ² =0.842	F-Statistics=16.156	Durbin Watson Stat=1.981
Adjusted R ² =0.763	Prob (F-Stat)=0.003	

Source: Authors' Computation (2025)

Table 1 above outlines the regression coefficients for the independent variables used in explaining the demand for Islamic banking products and services (IBPS) in the study area.

The probability values associated with each coefficient determine the statistical significance of the estimates. The notation used is as follows: * $p < 0.01$ (highly significant), ** $p < 0.05$ (moderately significant), and *** $p < 0.1$ (marginally significant or not significant at 5%).

The result of the multivariate OLS regression reveals an Adjusted R^2 of 0.763, suggesting that approximately 76.3% of the variations in the use of Islamic banking products and services are explained by the explanatory variables in the model. The F-statistic (16.156) is statistically significant at the 5% level, indicating that the model is a good fit. Furthermore, the Durbin-Watson statistic of 1.981 shows no evidence of autocorrelation, strengthening the model's credibility for policy-related interpretation.

Awareness (AW) has a negative coefficient (-2.04) and is statistically significant at the 10% level ($p = 0.078$) but not at the 5% level. This implies that increased awareness alone may not positively drive the adoption of Islamic banking products, possibly due to limited access, the dominance of conventional banks, or misconceptions about Islamic finance. Therefore, the null hypothesis (Ho1)—stating that there is no significant relationship between awareness and IBPS—is accepted. This aligns with the findings of Aigbovo and Omoruyi (2022) and Tijjani et al. (2021).

Perception (PERC) has a positive coefficient (13.33) and is significant at the 10% level ($p = 0.083$), though not at the 5% threshold. While the direction of the relationship is positive, the weak statistical significance implies that perception alone may not strongly affect usage—especially in areas like Benin metropolis where Islamic banking services may be sparse. The null hypothesis (Ho2)—stating that customer perception does not significantly influence IBPS—is accepted. This result is consistent with previous research by Kewuyemi (2015), Cheteni (2014), and Ringim (2014).

Satisfaction (SA) carries a negative and statistically insignificant coefficient (-0.06; $p = 0.22$). This implies that customer satisfaction has no meaningful impact on the uptake of Islamic banking services in the study area. The lack of effect may be due to customers' limited interaction with or experience of Islamic banking products. Consequently, the null hypothesis (Ho3)—that satisfaction does not significantly impact IBPS—is accepted, in line with Thambiah et al. (2011).

Religion (REL) is the only variable with a highly positive and statistically significant coefficient (15.67; $p = 0.000$). This clearly shows that religion is a strong determinant in customers' adoption of Islamic banking in Nigeria. The null hypothesis (Ho4)—which assumes no significant relationship between religion and IBPS—is rejected. This supports

findings from Fada and Wabekwa (2012) and underscores the religious sensitivity and appeal embedded in Islamic financial practices.

5.0 Conclusion and Recommendations

The findings of this study provide empirical insights into the demand for Islamic banking products and services (IBPS) in Nigeria, particularly within the Benin metropolis. Guided by a multivariate regression model, the study examined the influence of four key variables; awareness, perception, satisfaction, and religion on customers' use and acceptance of Islamic banking.

The results suggest that while awareness and perception of Islamic banking are essential, they do not independently drive significant customer adoption. The negative coefficient of awareness, albeit marginally significant, may point to the reality that mere knowledge of Islamic banking does not equate to practical engagement especially in areas with limited Islamic banking presence. Similarly, perception, though positively associated with IBPS, was not significant at the conventional 5% level, indicating that favorable impressions alone do not strongly influence adoption unless they are reinforced by experience and availability. Customer satisfaction emerged as an insignificant factor, implying that even where services are rendered, they may not yet be impactful enough to cultivate sustained user satisfaction or influence broader adoption. This result highlights a gap between service provision and customer experience, possibly due to limited access, lack of tailored offerings, or misconceptions about Islamic financial products.

The findings of this study underscore the critical role of religion in influencing customers' engagement with Islamic banking products and services, while also highlighting low levels of awareness, perception, and satisfaction among customers, especially non-Muslims. Based on these insights, the following recommendations are made:

1. Islamic banking operators and regulators must intensify efforts to improve public awareness about the principles, benefits, and products of Islamic banking. Tailored financial literacy campaigns, both online and offline, should be implemented to demystify Islamic banking for the general public, particularly in regions where adoption remains low.

2. Religious bodies, especially Islamic organizations, can play a pivotal role in dispelling misconceptions about Islamic banking among non-Muslims. Collaborative advocacy and sensitization initiatives involving religious leaders could help foster trust and encourage wider acceptance across religious divides.
3. Given that satisfaction does not significantly drive the use of Islamic banking products, banks should review and redesign their offerings to ensure they are accessible, competitive, and tailored to customers' needs. Enhancing service delivery and building responsive feedback mechanisms could foster greater customer satisfaction and long-term loyalty.
4. More user-friendly and inclusive publications on Islamic banking should be developed and widely disseminated. These materials should be designed to raise awareness and understanding among individuals regardless of age, religion, or educational background, thereby enhancing inclusivity and financial participation.
5. Regulatory bodies such as the Central Bank of Nigeria should provide enabling policies and incentives to encourage the growth of Islamic banking. This may include support for expansion into underserved areas, integration of Islamic banking education into financial literacy programs, and provisions for Islamic finance windows in conventional banks.
6. Islamic banking institutions should position their products not solely as religious alternatives but as ethical financial services aligned with fairness, transparency, and equity. This approach will enhance broader market appeal and foster inclusiveness in Nigeria's financial system.

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GREEN BUSINESS PRACTICE AND FIRM PERFORMANCE OF MULTINATIONAL ENTERPRISES IN NIGERIA

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Abstract

The growing global emphasis on sustainability has placed increasing pressure on multinational enterprises (MNEs) to integrate green business practices into their operations. This study investigated the effect of green business practices on firm performance of selected MNEs in Nigeria, using corporate image and productivity as key performance indicators. A survey research design was adopted and data were collected from 311 employees across five multinational corporations in Lagos and Ogun States, with 294 valid responses analysed using regression techniques. The results revealed that green business practices significantly and positively affect both corporate image and productivity. Specifically, green practices explained 39.0% of the variance in corporate image (Adjusted R² = 0.387) with a strong statistical relationship ($\beta = 1.106$, $t = 24.965$, $p < 0.05$), and accounted for 42.3% of the variation in productivity (Adjusted R² = 0.421), also demonstrating a strong effect ($\beta = 0.831$, $t = 29.665$, $p < 0.05$). These findings suggest that green initiatives not only enhance corporate image but also contribute to overall productivity. The study concludes that green business practices are essential strategic tools for improving firm performance within Nigeria's multinational sector. It recommends that MNEs integrate structured sustainability frameworks, including environmental audits, employee training, and partnerships with green institutions. Future research should explore the influence of green practices in diverse sectors such as services, SMEs, and technology-based firms to broaden understanding of sustainability's impact across industries.

Keywords: Green Business Practices, Firm Performance, Multinational Enterprises, Nigeria, Sustainability

Introduction

The increasing global concern over sustainability has placed immense pressure on firms to adopt green business practices to enhance their long-term viability while reducing environmental degradation. With rapid industrialization and economic expansion, multinational enterprises (MNEs) play a critical role in shaping corporate environmental responsibility in developing economies such as Nigeria. However, Nigeria's business environment presents unique challenges to the adoption of green practices, including weak regulatory enforcement, economic instability, and infrastructural deficits. While developed nations enforce environmental laws through stringent regulations, Nigerian businesses often rely on voluntary compliance, where top management commitment determines the extent of environmental responsibility (Chukwuka & Eboh, 2018). The adoption of green innovation in Nigeria has been largely influenced by global trends and corporate sustainability efforts rather than government-imposed mandates. Despite the benefits of green business practices, such as waste reduction, cost efficiency, and enhanced corporate reputation, many firms in Nigeria, particularly MNEs, struggle to integrate sustainable strategies into their operations (Jayaraman et al., 2023).

Furthermore, the global shift towards sustainability, exemplified by international agreements such as the Paris Agreement, has led many countries, including Nigeria, to advocate for green economic growth. However, aligning global sustainability goals with local business realities remains a major challenge. Multinational enterprises in Nigeria face socio-economic, financial, and regulatory constraints that influence their willingness and ability to adopt green technologies (Stucki, 2019). Some scholars have presented conflicting views on the profitability of green innovation. While some argued that investing in environmentally friendly technologies enhances firm performance by improving efficiency and attracting eco-conscious consumers (Huang & Li, 2017; Al-Hanakta et al., 2023), others caution that such investments may lead to inefficiencies and financial burdens, particularly in resource-constrained economies like Nigeria (Palmer et al., 2016). This inconclusiveness necessitates an in-depth examination of how green business practices influence firm performance within MNEs operating in Nigeria.

Moreover, existing studies on green innovation tend to focus on product innovation rather than process innovation, despite the latter's significant impact on environmental and economic performance (Nur & Panggabean, 2023). Additionally, prior research has predominantly explored financial performance indicators, neglecting broader aspects such as productivity, corporate image, efficiency, and sustainability (Liu et al., 2024). These gaps underscore the need for a comprehensive study that extends beyond financial metrics to evaluate the overall business impact of green initiatives. In addition, the empirical literature on eco-innovation remains limited, particularly in the context of developing countries, where environmental awareness and innovation systems are at varying stages of development (Aouay & Boujelbene, 2023). The impact of eco-innovation on firm performance cannot be universally extrapolated across different regions due to the heterogeneity in national policies, corporate governance structures, and consumer attitudes towards sustainability (Alkhodary, 2023). While developed economies have extensively integrated green business practices into their corporate frameworks, Nigeria still lags in enforcing sustainability measures across industries. This gap highlights the importance of further research into how green innovation influences firm performance in the Nigerian context. Consequently, this study seeks to examine the effect of green business practices on firm performance among MNEs in Nigeria

Literature Review

Conceptual Literature

Green Business Practice

An ecopreneur's practice known as green business initiative refers to all linked projects with the explicit goal of assisting companies in reducing the negative effects of their company operations on the environment while simultaneously assisting them in saving money (Chukwuka, 2018). As a result, they will consume less energy, water, natural resources, and raw materials, which will reduce waste production and operating expenses. The organisation's green business program could have an impact on several areas, including employee and organisational productivity. Fewer employee sick days, lower operating costs, higher employee happiness, and higher staff productivity have all been examined as benefits of green business initiatives to the firm (Nollman, 2016). In the perspective of Zhenjing et al. (2022), the workplace environment might be held responsible for one-third of ill days. Green business

initiatives will improve workplace atmosphere and wellbeing while reducing the negative environmental effects of business operations. According to the US Green Building Council, a green building is one that has greatly lessened adverse effects on both the environment and the occupants (Abbaszadeh, Zagreus, Lehrer & Huizenga, 2017).

In the opinion of Chukwuka (2018), environmentally responsible company strategies include the "Five Rs": Reduce, Reuse, Recycle, and the newest additions, Repair and Rethink. All of the "five Rs," especially the rethinking component are taken into account while going green. Reduce refers to cutting back on both the utilization of natural resources and the buildup of waste. Reuse is described as the development of systems that guarantee items that satisfy current needs may also satisfy future demands. The term "recycle" describes the process of turning trash into a useable material. In the context of green business, repair refers to altering a damaged product so that it can be converted into a reusable material rather than being discarded. Rethink is the process of going over it once more in order to come up with a fresh and original response to the environmental issues (Chukwuka, 2018).

More so, consumers, governments, and the corporate organisations are the three main forces behind the green business, and each of them plays a unique role in the development of green requests or green practices (Deshmukh & Tare, 2024). Due to the increased focus on environmental issues from consumers, the public, and global government legislation, manufacturers have continued to improve a variety of environmental programs and numerous "green" business practices, including green branding, green technologies, and eco-design (Sahoo et al., 2021). From the perspectives of customers, suppliers, and management, there is a growing need for greening company, which calls for a complete re-evaluation of the actions carried out that have an impact on the environmental performance (Nazir et al., 2024). As a result, manufacturers are more aware of the need to shift their operations toward environmentally friendly manufacturing. This is mostly due to the rising demand from global customers and purchasers who want their suppliers to make more environmentally friendly products (Eltayeb, Zailani, & Ramayah, 2019). Customers and buyers also increasingly anticipate that suppliers' output will have less of an adverse environmental impact by using less energy and material throughout the production process.

Firm Performance (MNEs)

Firm performance has become a relevant concept in strategic management research and is frequently used as a dependent variable (Oladimeji & Udosen, 2019). Despite being a common notion in the academic literature, there is hardly a consensus definition and measurement. However, due to the absence of any operational definition of firm performance upon which the majority of scholars consent, there will naturally be diverse interpretations according to personal perceptions. The definition of firm performance principally focused on capability and ability of a firm to efficiently exploit the available resources to achieve accomplishments consistent with the set objectives of the company, as well as considering their relevance to its users (Taouab & Issor, 2019). Ibrahim, Abd Rahim, Abd Rashid, & Mohamed Yunus (2023) considers firm performance as a bag-word because it covers various and different notions such as growth, profitability, return on investment, productivity, efficiency, and competitiveness. Generally, Firm performance usually refers to a company financial performance through parameters like sales, Return on investment, productivity, market share, and market performance.

Multinational Enterprises (MNEs) also called transnational corporation can be described as any enterprise that is registered and operates in more than one country at a time (Oladimeji et al., 2020). Generally, the enterprises have their headquarters in one country and operate wholly or partially owned subsidiaries in other countries. Multinational enterprises are the main generator of economic growth since they transport wealth between nations and, at the same time, can be crucial in fostering sustainability (Nwamaka, Igwe, Onyekachi & Akpan, 2024). Therefore, some experts recommend that these MNEs take proactive measures to adopt environmental sustainability (Choi & Ng, 2018). The management of MNEs should widen the scope of sustainability activities, which should encompass positive social and environmental results, rather than focusing exclusively on short-term economic gains (Nwamaka et al., 2024). MNEs have greater media presence and influence because of their increased revenues in the markets in which they compete (Ketata, 2019). MNEs also face ongoing stakeholder scrutiny and worry about projecting a positive image (Ketata, 2019). Due to their larger market stakes, these considerations consequently put more pressure on MNEs to adopt proactive measures with regard to environmental and social problems (Elg & Hånell, 2023). Due to their wealth of resources, big multinational corporations are able to successfully

respond to these demands and devote their resources to creating and executing sustainable business practices (Elg & Hånell, 2023).

Theoretical Framework

This study is underpinned by the Ecological Modernisation Theory, which provides a foundational understanding of how businesses can achieve economic growth while prioritizing environmental sustainability. The theory as proposed by Huber (2004) and further developed by Mol and Spaargaren (1993), posits that environmental challenges drive technological and structural innovation, compelling businesses to adopt sustainable practices. It asserts that firms can improve their competitiveness while simultaneously reducing their environmental footprint by integrating green technologies and sustainable supply chain management (Weng et al., 2015). In Nigeria, where multinational enterprises face mounting pressure from global regulations and local stakeholders, this theory highlights the importance of green innovation as a strategic tool for achieving both environmental and business objectives. Companies that proactively invest in sustainable practices benefit from increased resource efficiency, reduced operational costs, and enhanced corporate reputation, thereby gaining a competitive advantage in both local and international markets.

The Ecological Modernisation Theory also emphasizes the role of policy frameworks and institutional support in facilitating green transitions within industries. Unlike traditional perspectives that view environmental regulations as constraints on economic growth, this theory suggests that well-designed policies can encourage firms to innovate and develop eco-friendly business models. In Nigeria, the adoption of green business practices remains largely voluntary due to weak regulatory enforcement and insufficient governmental incentives (Chukwuka & Eboh, 2018). Consequently, firms that recognize the long-term benefits of sustainability tend to lead the charge in adopting green innovations. However, challenges such as inadequate infrastructure, limited access to green financing, and low consumer awareness continue to hinder widespread implementation. By applying this theoretical lens, the study explores how MNEs navigate these challenges and leverage ecological modernization to enhance firm performance while aligning with global sustainability goals. This theory, therefore, provides a crucial framework for understanding the interplay between environmental responsibility and business success within Nigeria's multinational enterprises.

Empirical Literature

Empirical studies from advanced economies have consistently demonstrated a positive link between green innovation and firm performance, albeit with nuances in outcomes depending on the context and methodology. Liu (2023), using a panel data approach from S&P 500 firms between 2001 and 2022, found that green innovation contributes to risk mitigation, improved emission performance, and increased firm value. The study employed fixed-effects regression and identified CSR-linked CEO incentives and firm network structures as major drivers. Similarly, Chouabi et al. (2020), using panel data from firms in the US, UK, and Germany over a 15-year period, applied linear regression and found that green innovation mediates the relationship between ESG practices and financial performance, especially in the UK and Germany. Russo and Fouts (2014) applied survey-based environmental ratings across 243 firms in a two-year longitudinal analysis and concluded that "it pays to be green" noting that environmental sustainability was positively correlated with profitability and moderated by industry growth. In East Asia, Stanley (2015) surveyed 200 R&D managers in China's electronics sector, applying structural equation modeling to show that green product and process innovation jointly influence market competitiveness and product success. Furthermore, Liao (2018) surveyed 366 Chinese manufacturing firms, showing that green organizational and product innovation positively influence financial outcomes, with firm culture playing a key mediating role. These findings collectively underscore the strategic value of green practices in competitive economies, especially when aligned with internal capabilities and external regulatory demands.

In emerging and developing economies, recent studies underscore both the potential and constraints of green innovation. Maldonado-Guzmán et al. (2023) employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine 460 firms in Mexico's automotive sector and found that economic and environmental sustainability significantly mediate the link between green innovation and performance, while social sustainability remains under-leveraged. Rasheed et al. (2024) examined 351 Pakistani listed firms using weighted least squares regression across 2,702 observations, with green innovation proxied by ISO certifications (ISO 9001, 14001, and 5001). Their findings revealed a modest but significant positive effect on Return on Assets (ROA), supporting the relevance of regulatory-

driven innovation in improving financial health. In Kenya, Mercyline and Kamande (2014) utilized survey data from six manufacturing firms to show that eco-efficiency and proactive environmental management systems were directly linked to profitability. Their results, analyzed using descriptive and inferential statistics, suggest that firms that blend proactive and reactive environmental strategies outperform those focused solely on compliance. Other meta-analyses, such as Bitencourt et al. (2020), confirmed a positive but heterogeneous link between green innovation and competitive advantage across developing contexts, while calling for deeper exploration of mediating and moderating variables.

Empirical evidence from Nigeria has reinforced these global patterns while highlighting local peculiarities such as infrastructural limitations, weak regulatory enforcement, and stakeholder-driven initiatives. Onwuzu and Nnamani (2023) applied a survey design to 250 respondents across five manufacturing firms in Enugu, analyzing data via regression analysis. They found that green product innovation significantly enhances customer engagement and market share, while green process innovation leads to cost reductions. Adepoju et al. (2020) used descriptive statistics to assess 223 responses from chemical manufacturing employees in Ogun State, revealing that employee training and internal environmental policies are central to green innovation adoption. In the healthcare sector, Skubis, Akahome, and Bijańska (2023) used a case study methodology to demonstrate how green procurement and energy-efficient systems, guided by responsible leadership, enhanced sustainability and service delivery. Similarly, Abanyam and Uwameiye (2019) investigated distribution and logistics using survey methods in South-South Nigeria, finding that practices like emission offsetting and eco-friendly delivery contribute to improved profitability and customer perception. Additionally, Oladimeji, Eze, and Akanni (2018) used ordinary least squares regression in a sample of 400 MSME owners across Lagos, Anambra, and Kano to show that a supportive business ecosystem significantly influences both financial and non-financial outcomes.

Methodology

This study adopts a survey research design, which allows for the systematic collection of data from participants, capturing their perspectives on green business practices and firm performance. This research design is particularly suitable as it provides a structured framework for evaluating the effect of green business practices on MNEs in Nigeria. The study

focused on multinational enterprises operating in Nigeria, specifically within Lagos and Ogun States. These states were selected due to their strategic roles as major industrial and commercial hubs, hosting the headquarters and production facilities of several multinational corporations. Lagos, being Nigeria’s economic capital, is home to numerous multinational firms, while Ogun complements Lagos with its vast industrial clusters and business-friendly policies (Amiolemen et al., 2024). The target population comprises of 1,618 employees from the production and quality control departments of five selected multinational enterprises including Cadbury Nigeria PLC, FrieslandCampina WAMCO Nigeria PLC, Lafarge PLC, Unilever Nigeria PLC, and PZ Cussons PLC. These firms were chosen based on their market leadership, corporate governance, and commitment to sustainability.

In addition, a multi-stage sampling technique was employed, combining judgmental, cluster, and stratified random sampling to ensure a representative sample. Using the Raosoft sample size calculator, the sample size was determined to be 311 respondents, ensuring a reliable dataset for statistical analysis. Primary data was collected through structured questionnaires, utilizing a Likert scale for responses. A pilot study was conducted to assess the quality of the research instrument using both validity and reliability tests. Content validity was established by subjecting the questionnaire to expert review by academic professionals in business administration, whose feedback was used to improve the clarity and relevance of the items. Construct validity was assessed through Confirmatory Factor Analysis (CFA), using responses from 40 employees of Fan Milk Plc., which confirmed acceptable factor loadings above 0.60 for all items. Reliability was tested using Cronbach’s Alpha, and the results showed high internal consistency, with alpha values for key constructs as follows: green business practices (0.902), corporate image (0.915) and productivity (0.878). After validating the instrument, data analysis for the main study was conducted using descriptive statistics and inferential techniques, including regression analysis, to test the hypotheses and interpret the findings.

Model Specification

The model specification for the hypothesis is stated below:

$$CI = \beta_0 + \beta_1 GBP + U_i \text{-----Eqn i}$$

$$PT = \beta_0 + \beta_2 GPI + U_i \text{-----Eqn ii}$$

Where:

CI = Corporate Image
 PT = Productivity
 GBP = Green Business Practices

Results and Discussions

The questionnaire was administered to the employees of Cadbury PLC, FrieslandCampina WAMCO Nigeria PLC, PZ Cussons PLC, Lafarge PLC, and Unilever Nigeria PLC. A total of 311 copies of the questionnaire were administered, however, from this lot, a total of 294 questionnaires were filled and returned.

Demographic Profile

Table 1: Demographic Analysis of the Participants

Variables	Parameters	Frequency	Percentage
Gender	Female	166	56.5
	Male	128	43.5
	Total	294	100.0
Educational Qualification	BSC/HND	178	60.5
	MSC/MBA	87	29.6
	ND/NCE	29	9.9
	Total	294	100.0
Marital Status	Divorced	3	1.0
	Married	228	77.6
	Single	63	21.4
	Total	294	100.0
Age	21-30	106	36.1
	31-40	98	33.3
	41-50	76	25.9
	Above 50	14	4.8
	Total	294	100.0

Source: Field Survey 2025

Table 1 revealed that 56.5% of the respondents were female, and 43.5% were male. This nearly balanced distribution between genders indicates a comprehensive administration of the survey, ensuring that the perspectives included in the study reflect both male and female viewpoints on green innovation within multinational enterprises. Furthermore, the marital status distribution showed that 77.6% of the respondents were married, 21.4% were single, and a minimal 1% was divorced. This suggests that the majority of the participants are likely in stable personal situations. In terms of educational qualifications, 60.5% of the respondents held a BSc/HND, 29.6% had an MSc/MBA, and 9.9% were ND/NCE holders. This high level

of education among the respondents implies that the majority are well-informed, which is crucial for obtaining insightful and knowledgeable responses regarding the complexities of implementing green innovations. The age distribution further complements these findings, with a significant representation of younger adults (36.1% between 21-30 years and 33.3% between 31-40 years), which could indicate a higher openness to new technologies and innovations.

Descriptive Analysis

Table 2: Descriptive Statistics on Green Business Practice

Green Business Practice	Extent of Agreement (n=294)							AVE	
	SA	A	SWA	N	SWD	D	SD	MN	SD
The company has adopted green business practices as a way of doing business.	104 (35.4%)	132 (44.9%)	6 (2.0%)	9 (3.1%)	12 (4.1%)	4 (1.4%)	27 (9.2%)	5.63	1.81
Green business practices in the company lead to enhanced operational efficiency	84 (28.6%)	151 (51.4%)	22 (7.5%)	22 (7.5%)	8 (2.7%)	2 (0.7%)	5 (1.7%)	5.87	1.19
Individual attitudes and behaviour toward green practices influence productivity.	186 (63.3%)	35 (11.9%)	29 (9.9%)	22 (7.5%)	22 (7.5%)	11 (3.7%)	1 (0.3%)	4.23	1.39
Green planning and organisation boost employee productivity.	84 (28.6%)	157 (53.4%)	15 (5.1%)	21 (7.1%)	3 (1.0%)	6 (2.0%)	8 (2.7%)	5.81	1.03
Workforce involvement in green practices enhances engagement and effectiveness.	160 (54.4%)	51 (17.3%)	22 (7.5%)	26 (8.8%)	4 (1.4%)	29 (9.9%)	2 (0.7%)	5.82	0.98
Grand mean								5.47	1.28

SA: Strongly Agree; A: Agree; SWA: Somewhat Agree; N: Neutral; SWD: Somewhat Disagree; D: Disagree and SD: Strongly Disagree

Source: Field Survey 2025

According to results in Table 2, 35.4% strongly agreed that the company has adopted green business practices as a way of doing business, 44.9% agreed, 2.0% somewhat agreed, 3.1%

were neutral, 4.1% somewhat disagreed, 1.4% disagreed, while 9.2% strongly disagreed to the assertion. The mean score is 5.63, indicating a strong positive affirmation of green business adoption. However, the standard deviation of 1.81 suggests a considerable spread in the responses, indicating that while most respondents feel positively, there is a significant minority with reservations or less strong agreement. Result also indicated that 28.6% strongly agree that green business practices in the company led to an increase in productivity, 51.4% agreed, 7.5% somewhat agreed, 7.5% of the respondent were neutral, 2.7% somewhat disagreed, 0.7% disagreed while only 1.7% strongly disagreed with the assertion. On average, respondents also agreed positively, as reflected by a mean of 5.87 and a standard deviation of 1.19 for the statement.

Results also indicated that 63.3% strongly agreed that antecedent factors like individual attitudes and behaviour towards green business practices, directly affect the productivity of the firm, 11.9% agreed, 9.9% somewhat agreed, 7.5% of the respondent were neutral, 7.5% somewhat agreed, 3.7% disagreed while 0.3% strongly disagreed. The influence of individual attitudes and behaviours towards green practices on firm productivity is acknowledged but with less consensus (mean of 4.23 and standard deviation of 1.39). Results also indicated that 28.6% strongly agreed that planning and organising for green business practices in the company have a positive effect on employee productivity, 53.4% agreed, 5.1% somewhat agreed, 7.1% were neutral, 1.0% somewhat disagreed, 2.0% disagreed while 2.7% strongly disagreed. On average, this assertion yielded a mean of 5.81 and a standard deviation of 1.03, indicating a strong agreement that strategic planning for green practices positively impacts employee productivity, with most respondents closely aligning in their views.

Result also indicated that 54.4% strongly agreed that labour or workforce involvement in green business practice is positively associated with the firm's productivity, 17.3% agreed, 7.5% somewhat agreed, 8.8% were neutral, 1.4% somewhat disagreed, 9.9% disagreed while 0.7% strongly disagreed. On average, this assertion garnered a mean of 5.82 and a standard deviation of 0.98. This suggests that respondents largely agree that workforce involvement is beneficial and are generally consistent in this belief. The grand mean across all statements is 5.47, indicating a generally high level of agreement with the positive impacts of green business practices across various dimensions. The overall standard deviation of 1.28 signifies

a moderate variability in how strongly respondents agree with the statements, pointing to a mostly aligned but slightly diverse range of views. The findings emphasize the significance of green business practices as a strategic approach to improving performance. The strong agreement among respondents regarding the positive impact of workforce involvement, planning, and individual attitudes on productivity suggest the need for companies to integrate green practices holistically into their operations.

Table 3: Descriptive Statistics on Corporate Image

Corporate Image	Extent of Agreement (n=294)							AVE	
	SA	A	SWA	N	SWD	D	SD	MN	SD
The business image enhanced the performance of the company	117 (39.8%)	49 (16.7%)	41 (13.9%)	19 (6.5%)	41 (13.9%)	27 (9.2%)	-	5.34	1.76
The reputation of the company is as a result of green business practice	71 (24.1%)	67 (22.8%)	-	38 (12.9%)	85 (28.9%)	5 (1.7%)	28 (9.5%)	4.57	1.99
The business image has a positive influence on attracting potential customers	85 (28.9%)	49 (16.7%)	34 (11.6%)	24 (8.2%)	48 (16.3%)	47 (16.0%)	7 (2.4%)	4.7 7	1.9 6
A good brand reputation helps a business grow	110 (37.4%)	79 (26.9%)	33 (11.2%)	-	20 (6.8%)	35 (11.9%)	17 (5.8%)	5.2 9	1.9 9
Green innovation enhances the image of the company	-	-	46 (15.6%)	52 (17.7%)	62 (21.1%)	43 (14.6%)	91 (31.0%)	2.7 2	1.4 5
Grand mean								4.5 4	1.8 3

SA: Strongly Agree; A: Agree; SWA: Somewhat Agree; N: Neutral; SWD: Somewhat Disagree; D: Disagree and SD: Strongly Disagree

Source: Field Survey 2025

Table 3 presents the results of the descriptive analysis of corporate image, an indicator of performance of MNEs. The results of the descriptive analysis revealed that 39.8% of respondents strongly agreed that the business image enhanced the performance of the company, while 16.7% agreed, 13.9% somewhat agreed, 6.5% were neutral, 13.9% somewhat

disagreed, and 9.2% disagreed. This led to a mean score of 5.34, indicating a general agreement among respondents about the positive impact of business image on performance. However, the standard deviation of 1.76 points to a significant spread in the responses, suggesting that while a majority view the corporate image positively, there is a notable minority with reservations or less strong agreement. Results indicated that 24.1% strongly agreed that the company's reputation is a result of green business practices, with 22.8% agreeing, 12.9% neutral, and a high 28.9% somewhat disagreed, 1.7% disagreed, and 9.5% strongly disagreed. The mean of 4.57 reflects a moderate agreement with this statement; while a standard deviation of 1.99 shows considerable disagreement or diverse views on how green practices influence corporate reputation.

Result also indicated that 28.9% strongly agreed, 16.7% agreed, 11.6% somewhat agreed, 8.2% were neutral, 16.3% somewhat disagreed, 16.0% disagreed, and 2.4% strongly disagreed. The mean of 4.77 suggests that respondents generally agree that a positive business image helps attract customers, yet the standard deviation of 1.96 indicates a wide range of opinions, reflecting varying beliefs about the extent of this influence. Result also indicated that 37.4% strongly agreed, 26.9% agreed, 11.2% somewhat agreed, while 6.8% were neutral, 11.9% somewhat disagreed, and 5.8% disagreed. This statement received a mean of 5.29, indicating strong agreement that brand reputation is crucial for business growth. However, the standard deviation of 1.99 suggests that respondent' views vary, likely influenced by different industry experiences or perceptions of what constitutes brand reputation.

Result also indicated that 15.6% somewhat agreed that green innovation enhances the image of the company, 17.7% neutral, 21.1% somewhat disagreed, 14.6% disagreed, and 31.0% strongly disagreed, resulting in a mean of 2.72. The low mean and a standard deviation of 1.45 indicate a general skepticism among respondents about the effectiveness of green innovations in enhancing the company's image, suggesting a gap between the perceived value of these innovations and their actual impact. The grand mean across all statements is 4.54, with an overall standard deviation of 1.83, reflecting a generally positive yet varied perception of corporate image and green business practices. This analysis highlights both consensus and divergence in opinions, underlining the complexity of managing corporate image in the context of environmental sustainability. The positive association between corporate image and

business performance highlights the strategic importance of maintaining a strong reputation to drive growth and customer attraction.

Table 4: Descriptive Statistics on Productivity

Productivity	Extent of Agreement (n=294)							AVE	
	SA	A	SWA	N	SWD	D	SD	MN	SD
Energy-efficient equipment boosts employee productivity.	64 (21.8%)	105 (35.7%)	47 (16.0%)	27 (9.2%)	21 (7.1%)	25 (8.5%)	5 (1.7%)	4.31	1.61
Green practices improve employee engagement and operations.	100 (34.%)	44 (15.0%)	4 (1.4%)	24 (8.2%)	71 (24.1%)	14 (4.8%)	37 (12.6%)	4.62	1.05
The company reuses waste as raw materials, promoting sustainability.	91 (31.0%)	79 (26.9%)	39 (13.3%)	14 (4.8%)	32 (10.9%)	36 (12.2%)	3 (1.0%)	4.22	1.09
The market position improved as a result of going green.	95 (32.3%)	87 (29.6%)	24 (8.2%)	3 (1.0%)	21 (7.1%)	42 (14.3%)	22 (7.5%)	4.41	0.92
Eco-innovation enhances customer satisfaction and market competitiveness.	23 (7.8%)	58 (19.7%)	26 (8.8%)	18 (6.1%)	34 (11.6%)	41 (13.9%)	94 (32.0%)	4.36	1.02
Grand mean								4.38	1.14

SA: Strongly Agree; A: Agree; SWA: Somewhat Agree; N: Neutral; SWD: Somewhat Disagree; D: Disagree and SD: Strongly Disagree

Source: Field Survey 2025

According to results in Table 4, 21.8% of respondents strongly agreed (SA) that their company is experiencing higher employee productivity due to energy-efficient equipment, while 35.7% agreed (A), and 16.0% somewhat agreed (SWA). Only a small fraction, 9.2% remained neutral (N). On the other hand, 7.1% somewhat disagreed (SWD), 8.5% disagreed (D) while 1.7% strongly disagreed (SD), leading to a mean score of 4.31 with the standard deviation of 1.61 indicating a moderate consensus. Also, result indicated that 34.0% strongly agreed that green business practices enhance the profit rate of the company, 15.0% agreed, 1.4% somewhat agreed, 8.2% of the respondents were neutral, 24.1% somewhat disagreed, 4.8% disagreed

while 12.6%. This resulted in a mean score of 4.62, with a standard deviation of 1.05. This implies that the responses were moderately clustered around the mean.

Result also indicated that 31.0% strongly agreed that their company is achieving higher customer profitability from the sale of waste and scrap as raw materials for another product, with 26.9% in agreement and 13.3% somewhat agreeing. The neutral responses were 4.8%, whereas 10.9% somewhat disagreed, 12.2% disagreed, and 1.0% strongly disagreed. The mean of 4.22 and a standard deviation of 1.09 imply that the responses were clustered around the mean. Result also indicated that 32.3% strongly agreed that the market position improved as a result of going green, 29.6% agreed, 8.2% somewhat agreed, 1.0% were neutral, 7.1% somewhat disagreed, 14.3% disagreed while 7.5% disagreed. The mean here was 4.41 with the highest standard deviation of 0.92. This implies that the responses were clustered around the mean.

Result also indicated that 7.8% strongly agreed that eco-innovation enhances the sales volume of the company, 19.7% agreeing and 8.8% somewhat agreeing. Neutral stances were held by 6.1%, with 11.6% somewhat disagreeing, 13.9% disagreeing, and a high 32.0% strongly disagreeing. The resulting mean of 4.36 and a standard deviation of 1.02 suggest that the responses were clustered around the mean. Overall, the grand mean of 4.38 suggests a generally positive perception of the impact of green practices on productivity. However, the standard deviation of 1.14 indicates a significant variance in responses, highlighting the diverse views and perceptions among respondents regarding the effectiveness of green practices in enhancing performance.

Test of Hypothesis

Ho₁: Green business practice has no significant effect on corporate image in multinational enterprises in Nigeria.

Hypothesis one was tested using the linear regression analysis in which corporate image was used as proxy for firm performance. This hypothesis was tested using the linear regression analysis. The results of the analysis are presented in Table 5:

Table 5: Hypothesis test result on the effect of green business practice on corporate Image in multinational enterprises in Nigeria

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	10.612	5.384		-1.971	0.001
Green Business Practice	1.106	0.044	0.822	24.965	0.000
Dependent Variable: Corporate Image					
R = 0.625					
R ² = 0.390					
Adjusted R ² = 0.387					
F (1, 293) = 623.239					
P > 0.05					

Source: Field Survey 2025

Table 5 illustrates the results from a simple regression analysis that investigated the effect of green business practices on firm performance in multinational enterprises, using corporate image as the dependent variable. The analysis revealed a significant positive correlation between the adoption of green business practices and improvements in corporate image, as indicated by the unstandardized coefficient (B = 1.106) and standardized coefficient (Beta = 0.822). The t-value for green business practice is 24.965, and the corresponding p-value is 0.000, demonstrating a highly significant relationship at the 95% confidence level.

The model summary statistics show that the correlation coefficient (R) is 0.625, and the coefficient of determination (R²) is 0.390. This means that 39.0% of the variation in corporate image among multinational enterprises in Nigeria can be explained by green business practices, with the remaining 61.0% of the variation attributable to other factors not included in the model. The F-statistic for the regression model is 623.239, and the associated significance level (p-value) is less than 0.05, further confirming the strong impact of green business practices on corporate image.

The simple regression model is thus expressed as:

$$CI = 10.612 + 1.106 \text{ GBP} + UI \text{-----Eqn } i$$

Where:

CI – Corporate Image
 GBP = Green Business Practice

According to the regression equation, when green business practices are at zero, the baseline corporate image is 10.612. For every unit increase in green business practices, there is an expected increase of approximately 1.106 units in the corporate image, holding all other factors constant. These findings provide substantial evidence to reject the null hypothesis (H_{01}), which posited that green business practices have no significant effect on firm performance in multinational enterprises in Nigeria. The evidence strongly supports the conclusion that implementing green business practices is likely to enhance the corporate image of multinational companies operating in Nigeria.

Hypothesis Two

H₀₂: Green business practice has no significant effect on productivity in multinational enterprises in Nigeria

Hypothesis two was tested using the simple regression analysis in which productivity was used as proxy for performance. The results of the analysis are presented in Table 6.

Table 6: Hypothesis test result on the effect of green business practice on productivity in multinational enterprises in Nigeria

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	22.368	3.422		6.536	0.000
Green business practice	.831	.028	.864	29.665	0.000
Dependent Variable: Productivity					
R = 0.650					
R² = 0.423					
Adjusted R² = 0.421					
F (1, 293) = 879.989					
P > 0.05					

Source: Field Survey 2025

Table 6 shows the results from a simple regression analysis that investigated the effect of green product innovation on the performance of multinational enterprises, using productivity as the dependent variable. The analysis revealed a significant positive correlation between the adoption of green product innovation and improvements in productivity, as indicated by the

unstandardized coefficient ($B = 0.831$) and standardized coefficient ($Beta = 0.864$). The t -value for green product innovation is 29.665, and the corresponding p -value is 0.000, demonstrating a highly significant relationship at the 95% confidence level.

The model summary statistics show that the correlation coefficient (R) is 0.650, and the coefficient of determination (R^2) is 0.423. This means that 42.3% of the variation in productivity among multinational enterprises in Nigeria can be explained by their green product innovation practices, with the remaining 57.7% of the variation attributable to other factors not included in the model. The F -statistic for the regression model is 879.989, and the associated significance level (p -value) is less than 0.05, further confirming the strong impact of green product innovation on productivity.

The simple regression model is thus expressed as:

$$PT = 22.368 + 0.831 \text{ GPI} + U_I \text{-----Eqn ii}$$

Where:

GBP = Green business practice

PT = Productivity

According to the regression equation, when green product innovations are at zero, the baseline productivity is 22.368. For every unit increase in green product innovation, there is an expected increase of approximately 0.831 units in the productivity score, holding all other factors constant. These findings provide substantial evidence to reject the null hypothesis (H_{02}), which posited that green product innovation has no significant effect on the performance of multinational enterprises in Nigeria. The evidence strongly supports the conclusion that implementing green product innovations is likely to enhance the productivity of multinational companies operating in Nigeria.

Discussion of findings

The study found that green business practice has a significant effect on firm performance in multinational enterprises in Nigeria. The result of this study agrees with the work of Rezende

et al., (2019) who indicate that green practice significantly affects a company's financial performance. Similarly, the result of this study was supported by the findings of Ahmed et al. (2023) who revealed that green practice has an impact on organisational performance and that environmental management behaviour has an impact as a moderator variable between green practice and performance organisational. Furthermore, Lopez et al. (2017) findings supported the outcome of this study by revealing that green business practices partially enhance the performance of organisations. Supporting this study result was the findings of Callan and Thomas (2020) who found a favourable correlation between green practice and financial performance of firms.

Conclusion and Recommendations

The study concludes that green business practices are a critical determinant of the corporate image of MNEs. These practices, which focus on eco-friendly initiatives such as waste reduction, energy efficiency, and adherence to environmental standards, have been shown to improve the reputation and stakeholder perception of organisations. The findings highlight that companies implementing green business practices are more likely to earn public trust and improve brand loyalty, resulting in enhanced market competitiveness. Based on the findings of this study, it is recommended that Multinational enterprises should establish a robust framework to guide the adoption and implementation of green business practices. This could include designing sustainability-focused policies, conducting periodic environmental audits, and offering training programs for employees on waste management and energy-saving techniques. Moreover, organisations should create partnerships with local and international environmental bodies to gain access to resources and tools that enhance green initiatives. Future studies should explore green business practices in diverse sectors, including service-based firms, small and medium enterprises (SMEs), and technology-driven industries. Such research could uncover sector-specific opportunities and challenges, thereby providing a more comprehensive understanding of green business practices application across various business models.

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STOCK MARKET PERFORMANCE INDICATORS AND THE GROWTH OF THE NIGERIAN ECONOMY

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Abstract

This research explores the impact of stock market activities on Nigeria's economic growth over the period spanning 1989 to 2023. It relies on secondary data sourced from the Central Bank of Nigeria's Statistical Bulletin and the Nigerian Exchange Limited Factbook. Economic growth is measured using the Real Gross Domestic Product (GDP) as the dependent variable, whereas the independent variables include stock market capitalization, the all-share index, transaction value, and share trading volume. The study applies the Vector Error Correction Model (VECM) for its analysis, preceded by preliminary diagnostics such as the Augmented Dickey-Fuller (ADF) test for stationarity and co-integration assessment. Findings indicate that both market capitalization and the volume of shares traded exert a statistically significant and positive influence on real GDP. In contrast, the all-share index and value of transactions exhibit negative but statistically insignificant effects. The study concludes that the Nigerian stock market holds considerable potential to foster economic growth if supported by robust policy initiatives aimed at expanding and deepening the market. It advocates for regulatory agencies to encourage broader investor engagement domestic and international by rebuilding trust and enhancing transparency and equity within the market. Furthermore, the continued adoption of modern technologies like automated trading systems, electronic settlements, and real-time fund clearance is essential to boost operational efficiency and phase out obsolete mechanisms impeding market advancement.

Keywords: Stock market performance, economic growth, market capitalization, vector error correction model (VECM), Nigeria.

1.1 Introduction

Over recent decades, financial markets—especially stock exchanges—have become crucial components in driving economic development worldwide. In developed nations, efficient stock markets play a central role in aggregating savings, supporting capital formation, and

channeling financial resources toward productive investments. These markets often mirror broader economic trends, functioning as indicators of macroeconomic stability and direction. Their contribution to fostering innovation, entrepreneurship, and sustained investment is well-documented in academic research and policy discussions (Kirikkaleli, 2020; Asteriou & Spanos, 2019). In emerging economies like Nigeria, however, the effectiveness of the stock market in promoting economic growth remains a topic of ongoing debate. Despite notable progress—such as increasing market capitalization, greater trading volumes, and expanded investor participation—questions persist regarding the market’s depth, operational efficiency, and vulnerability to external shocks. Notably, Nigeria experienced a significant market expansion from 1990 to 2007, marked by a substantial rise in both capitalization and the All-Share Index (Ashamu & Soyebó, 2020; Brown & Nyeche, 2016). However, global disruptions like the 2008 financial crisis and the 2020 COVID-19 pandemic revealed critical structural deficiencies, resulting in capital outflows, diminished investor confidence, and subdued market activities (Akinmade, Adedoyin & Bekun, 2020). Despite regulatory reforms aimed at enhancing market robustness, persistent challenges—such as weak governance, limited real sector engagement, and fragmented economic linkages—continue to impede the Nigerian stock exchange. These issues cast doubt on the actual influence of stock market dynamics on national economic outcomes (Obomeile & Ohiokha, 2024).

Real Gross Domestic Product (RGDP) serves as a primary benchmark for gauging economic advancement (Agbada & Osuji, 2013). Theoretically, a robust stock market should contribute to economic growth by lowering investment risks and improving access to long-term financing. Yet, empirical findings on this relationship, especially in developing markets, remain inconsistent. While some scholars find a strong positive correlation, others report negligible or statistically insignificant effects. These discrepancies highlight the importance of context-specific studies that reflect the unique structural, policy, and institutional conditions of each country. Ideally, stock markets should enhance economic performance through effective capital mobilization, risk-sharing, savings aggregation, and provision of funding for long-term projects (Asteriou & Spanos, 2019; Kirikkaleli, 2020). Nevertheless, the empirical literature on Nigeria presents mixed results. Some investigations affirm that stock market development significantly drives economic growth (Akinmade, Adedoyin, & Bekun, 2020), while others

report marginal or no meaningful relationships (Pan & Mishra, 2016). These inconsistencies may stem from methodological limitations, such as reliance on static models that overlook time-series characteristics or failure to incorporate relevant financial indicators. Additionally, the Nigerian capital market is often marked by limited liquidity, a narrow investor base dominated by short-term retail traders, and recurring unethical behaviors like insider trading and price manipulation (Aliyu, 2014; Agbada & Osuji, 2013). These problems restrict the market's capacity to support economic development through efficient resource allocation.

In light of these issues, this study aims to reevaluate the contribution of stock market indicators to Nigeria's economic growth by employing sophisticated econometric tools, notably the Vector Error Correction Model (VECM), to analyze both short-run and long-run relationships. By bridging gaps in the current literature, the research seeks to offer a nuanced perspective on the role of stock market activity in influencing Nigeria's economic trajectory from 1986 to 2020.

2.0 Literature Review

2.1 Stock Market Performance Indicators

Stock market performance indicators refer to the metrics used to assess the overall condition of a stock market or the performance of individual stocks. These indicators serve as signals to investors, guiding their decisions by reflecting potential market trends. Movements in stock prices and indices offer insights into future directions for specific sectors or the broader economy. Given that financial markets play a crucial role in the economic framework, the performance of the stock market is often considered a barometer of a nation's economic health (Abina & Lemea, 2019). As explained by Wikipedia (2021), there is a general correlation between a strong economy and an upward-trending stock market, often resulting in bull markets. However, investor expectations can sometimes inflate stock prices beyond the actual economic or corporate fundamentals, leading to market corrections. Such corrections are seen as a healthy component of a bull market. Conversely, when economic fundamentals are weak, markets tend to experience a downturn, leading to bearish trends. These bullish or bearish movements can be short-term (secondary trends) or persist over longer periods, in which case they are termed secular trends.

The behavior of stock market indicators is influenced by various internal and external factors. On a macro level, the performance of indices is shaped by economic variables such as Gross National Product (GNP) growth, purchasing power parity (PPP), monetary policies, political stability, and international relations. On a micro level, company-specific metrics like profitability, revenue growth, and profit margins determine the performance of individual stocks (Obomeile & Ohiokha, 2024). Researchers have developed several liquidity measures to capture different dimensions of market performance. Based on five key attributes of liquidity; tightness, immediacy, depth, breadth, and resiliency. Abina and Lemea (2019) categorize liquidity indicators into four types: (i) transaction cost-based measures; (ii) volume-based metrics that assess the ratio of trading volume to price variability; (iii) price equilibrium measures that capture market resiliency; and (iv) market impact measures, which reflect the speed and efficiency of price discovery. Among these, transaction cost and volume-based indicators have gained widespread attention. The most common volume-related liquidity measures include the value of traded shares as a percentage of GDP and the turnover ratio, which represents the value of traded shares as a percentage of market capitalization. Focusing on volume-based metrics is particularly relevant when examining the effects of governance reforms aimed at improving operational efficiency and attracting greater market participation. For instance, exchange automation is generally associated with enhanced trading speed and lower transaction costs, although the same benefits may not apply to structural changes such as demutualization (Akinmade, Adedoyin & Bekun, 2020).

Trading volume the ratio of shares exchanged during a specific period to the number of outstanding shares serves as an important tool for assessing investor response to market events. The Trading Volume Activity (TVA) metric, which compares the volume of trades to total outstanding shares over a given period, is often used to evaluate changes in market behavior before and after events like stock splits. A significant increase in TVA typically indicates higher trading interest and potential price volatility. Kirikkaleli (2020) emphasized that trading volume reflects the dynamics of supply and demand in the market, driven by investor behavior. An uptick in trading volume indicates greater investor interest, which can influence price volatility and returns. In cases like stock splits, the reduction in share price

may boost affordability and trading activity, ultimately increasing investor demand and market liquidity.

2.2 Economic Growth

Economic growth generally refers to the rise in a country's income per capita, often measured through indicators such as Gross Domestic Product (GDP), Gross National Product (GNP), and National Income (NI). It encompasses not only quantitative increases in output and wealth but also the broader transformation of an economy's structure over time. This process includes the enhancement of productive capacity and the relative growth of sectors, both in absolute terms and on a per capita basis (Haller, 2012). In simpler terms, economic growth involves the consistent upward movement of key macroeconomic indicators, particularly real GDP per capita, and reflects improvements in a nation's economic performance. These improvements are often accompanied by positive social and economic outcomes such as better living standards. Unlike economic development which emphasizes the broader societal impacts, economic growth primarily focuses on increases in national income and output (Gylych & Mustapha, 2017).

Despite being desirable, economic growth is not without limitations. It is often constrained by challenges such as overpopulation, scarcity of resources, poor infrastructure, inefficient allocation of resources, excessive state intervention, and socio-cultural factors that hinder economic progress (Utomi, 2014). These factors must be addressed to sustain long-term growth. Economic expansion relies heavily on the efficient use of resources and the enhancement of a nation's productive capacity. When managed effectively, it enables wealth redistribution across different societal groups and supports the development of a dynamic and equitable economic environment. Even minor differences in growth rates can have substantial cumulative effects over time, particularly over the span of a decade or more.

At times, economic growth is mistakenly equated with short-term fluctuations in economic activity. However, temporary improvements due to expansionary fiscal or monetary policies may not reflect genuine long-term growth if they merely push output beyond sustainable levels. Sustainable economic growth involves increasing the potential output of the economy

through either a rise in the availability of inputs (like labor and capital) or gains in productivity (output per unit of input). The outcomes of such growth include higher production of goods and services, lower unemployment, expanded job opportunities, and improved living standards. Therefore, sustained economic growth remains a central objective for most national economies, particularly as social and structural challenges highlight the limitations of existing economic systems (Haller, 2012). Ultimately, the true essence of economic growth and development lies in enhancing the overall well-being of individuals, enriching material prosperity, and fostering cultural and intellectual advancement in society.

2.3 EMPIRICAL REVIEW

Akinmade, Adedoyin, and Bekun (2020) explored how manipulative practices within the Nigerian Stock Exchange influenced economic outcomes between 2002 and 2016. By employing market microstructure analysis alongside the event study methodology and the Error Correction Model (ECM), they assessed the repercussions of such manipulations. Their findings showed that these activities undermine key indicators of market efficiency—such as market capitalization, value traded ratio, and the All-Share Index—ultimately discouraging authentic investors who seek to avoid manipulative trading environments.

Abina and Lemea (2019) assessed the influence of capital market activities on Nigeria's economic performance using time-series data from 1985 to 2017 sourced from the Central Bank of Nigeria Statistical Bulletin. Utilizing stationarity tests, Johansen co-integration, Error Correction, and Granger Causality analyses, they discovered a long-term positive association among the variables. Notably, the Granger Causality test revealed unidirectional causality from GDP to both total market capitalization and the total value of new stock issues.

Araoye, Ajayi, and Aruwaji (2018) evaluated the contribution of the Nigerian stock market to economic expansion over the 1985–2014 period. Gross Domestic Product (GDP) served as a proxy for economic growth, while stock market development was represented by market capitalization and turnover ratio—measures of market size and liquidity. Applying Johansen's co-integration technique, they found evidence of a long-run relationship between the stock market and economic growth. However, results from the Error Correction Model indicated that, despite this relationship, the impact of the stock market on economic growth remained statistically insignificant.

Godwin, Onoh, Ogbonna, Eugene, and Iheukwumere (2018) examined the relationship between financial sector advancement and economic growth in Nigeria using data spanning from 1981 to 2014. Their analysis tested both the demand-following and supply-leading hypotheses through the Error Correction Model. The study supported the supply-leading theory, suggesting that the capital market has yet to reach full efficiency in supplying capital. Furthermore, it highlighted the inadequacy of the banking sector's role in this regard, calling for regulatory interventions to strengthen its contribution.

Agu (2018) analyzed the extent to which capital market development affects Nigeria's economic growth using data from 1995 to 2016. Relying on descriptive statistics and the Ordinary Least Squares (OLS) regression method, the study uncovered a negative correlation between market capitalization and real GDP. This result suggests that the capital market plays a limited role in enhancing the performance of Nigeria's industrial sector.

Md and Jianguo (2018) investigated the interplay between financial innovation, stock market progress, and economic growth in Bangladesh, covering the period from 1980 to 2016. Using the Autoregressive Distributed Lag (ARDL) bounds testing method and Granger Causality tests, they identified a reinforcing dynamic between financial innovation and economic growth, both in the short and long term. Their findings emphasized the importance of a well-functioning stock market—measured by the market capitalization-to-GDP ratio—in driving national development.

Inimino, Bosco, and Abuo (2018) explored the linkage between the capital market and Nigeria's economic growth over the 1986–2016 period. They applied the Augmented Dickey-Fuller (ADF) test and ARDL model for their analysis. The results indicated that market capitalization exerted a positive and significant influence on economic growth in both the short and long term. The number of deals also showed a positive and significant long-term effect, though it was negative and insignificant in the short term. Conversely, transaction volume had a negative and significant impact in both time frames. Interest rates were found to have a positive but insignificant effect in the long term, and a positive, significant effect in the short term.

Muritala and Ogunji (2017) explored the relationship between Nigeria's capital market and economic growth from 1980 to 2015 using Unit Root, Co-integration, and Error Correction Model approaches. Their results showed that variables like market capitalization, new issues,

and total listings had a positive impact on economic growth, while transaction value negatively affected real GDP.

Odo, Anoke, Onyeisi, and Chukwu (2017) assessed the influence of capital market indicators on economic growth in Nigeria through the ARDL model, using data from 1986 to 2016 obtained from the CBN and SEC. Their short-run analysis indicated a significant positive impact of market capitalization on economic growth, whereas stock traded total value had a negative but insignificant effect. Over the long term, both variables were found to have an insignificant negative relationship with economic growth.

Popoola, Ejemeyovwi, Alege, Adu, and Onabote (2017) investigated the causal and long-term dynamics between stock market performance and economic growth in Nigeria using the ADF test, OLS, Johansen co-integration, and Granger causality analyses. Results demonstrated a negative but significant relationship between the All-Share Index and economic growth, with a long-run association observed. However, Granger causality tests revealed that economic growth influenced stock market performance, but not vice versa.

Taiwo, Adedayo, and Evawere (2016) evaluated the capital market's contribution to Nigeria's economic growth from 1981 to 2014 using the Vector Error Correction Model and Phillip Perron Unit Root tests. Their analysis highlighted market capitalization, value of listed securities, labor force participation, savings, and capital formation as significant drivers of economic growth.

Enekwe, Eziedo, and Agu (2016) analyzed how the capital market influenced Nigeria's economic development from 1980 to 2012 using descriptive statistics, Pearson correlation, and multiple regression. The study found that market capitalization had a positive and significant effect on real GDP, while the number of listed securities and value of securities traded had negative and insignificant effects.

Yusuf and Aminu (2016) assessed capital market performance from 2005 to 2014 using OLS regression, with market capitalization and listed securities as independent variables. Their findings showed that these indicators had no significant impact on real GDP during the study period.

Pan and Mishra (2016) examined the interplay between stock market development and economic growth in China using the ARDL approach. Their study revealed that the global financial crisis had notable adverse effects on both financial and real sectors. Although a weak

long-term negative relationship was detected between the share market and real sector, the Toda-Yamamoto causality test pointed to a demand-driven relationship, indicating that economic growth stimulates stock market development.

Obiakor (2016) evaluated the capital market's impact on economic growth in Nigeria between 1985 and 2015 using OLS regression. Although the effects of individual market indicators on growth were mixed, the overall analysis showed that capital market development had a significant positive effect on economic growth.

Abdul and Usman (2015) studied the relationship between stock market development and economic growth in Pakistan from 1988 to 2012, employing OLS and Granger Causality tests. Their findings indicated that variables like stock turnover, value of shares traded, and federal development stock significantly influenced growth, while market capitalization had no significant effect. Furthermore, bidirectional causality existed between federal development stock and GDP, while other stock market variables exhibited unidirectional causality toward GDP.

3.0 Methodology

This study adopts a longitudinal research design to examine stock market indicators and economic growth in Nigeria over a 35-year period (1989–2023). This design was chosen because it allows the researcher to observe variables over time without manipulating them, making it suitable for correlation studies. The population of the study is Nigeria, and data were sourced primarily from secondary sources including the Central Bank of Nigeria and Nigerian Exchange limited fact book. The data were analyzed using the Vector Error Correction Model (VECM) method. Unit root tests using the Augmented Dickey-Fuller (ADF) method were conducted to establish stationarity, while Engle-Granger and Johansen's co-integration tests were employed to determine long-run relationships among variables. Descriptive statistics such as mean, standard deviation, skewness, and kurtosis were also examined. The analysis was carried out using EViews 9.0, a widely accepted econometric software. The study's model is based on the Classical Linear Regression framework of Brooks (2014), with Real GDP as the dependent variable and stock market indicators such as market capitalization, All-Share Index, value of transactions, and volume of shares traded as explanatory variables. The linear model is presented as;

$$\text{RGDP} = f(\text{SMAC ASI VOT VST}) \dots\dots\dots 1$$

The linearized model is stated below:

$$\text{Ln}(\text{RGDP}) = \beta_0 + \ln(\beta_1\text{SMAC}) + \ln(\beta_2\text{ASI}) + \ln(\beta_3\text{VOT}) + \ln(\beta_4\text{VST}) + U_t \text{ ----} 2$$

Where:

- SMCA = Stock market capitalization
- ASI = All-share-index
- VOT = Value of Transaction
- VST = Volumes of Shares Traded
- Ln = Logarithm

4.0 Discussion of Results

Table 1: Summary of Descriptive Statistics

	RGDP	SMAC	ASI	VOT	VST
Mean	37437.64	8421.082	114974.7	68775702	177082.3
Median	30333.58	1062.100	39770.36	58545.25	163150.6
Maximum	74694.00	93148.02	973526.0	2.32E+09	579902.0
Minimum	15237.99	6.800000	20525.00	225.4000	1797.800
Std. Dev.	19875.64	16695.33	205847.5	3.99E+08	153628.3
Observations	35	35	35	35	35

Source: *Econometric Views version 9.0. (2025)*

Table 1 presents the summary of descriptive statistics for the variables used in the study: Real Gross Domestic Product (RGDP), Stock Market Capitalization (SMAC), All Share Index (ASI), Value of Transactions (VOT), and Volume of Shares Traded (VST), covering 35 observations. The average RGDP is ₦37,437.64 billion, while SMAC and ASI have means of ₦8,421.08 billion and 114,974.7 points respectively, indicating substantial stock market activities. However, all variables exhibit significant variation, as shown by their high standard deviations—especially VOT with ₦399 billion and ASI with over 205,000, reflecting fluctuations in market transactions and index values. The wide gap between maximum and minimum values across all variables further highlights the volatility and growth trends in Nigeria’s economy and capital market over the study period.

Table 2: Summary of Correlation Analysis

	RGDP	SMAC	ASI	VOT	VST
RGDP	1.000000				
SMAC	0.692743	1.000000			
ASI	-0.160290	-0.180183	1.000000		
VOT	0.223291	0.026576	-0.061390	1.000000	
VST	0.797630	0.446024	0.027340	0.252833	1.000000

Source: *Econometric Views version 9.0. (2025)*

Table 2 displays the correlation matrix showing the relationships among the variables used in the study. Real Gross Domestic Product (RGDP) shows a strong positive correlation with

Volume of Shares Traded (VST) at 0.798 and a moderate positive correlation with Stock Market Capitalization (SMAC) at 0.693, suggesting that both variables are closely associated with economic growth. However, RGDP is weakly correlated with Value of Transactions (VOT) at 0.223 and negatively correlated with the All Share Index (ASI) at -0.160, indicating a limited or inverse relationship. Interestingly, SMAC also has a moderate correlation with VST (0.446) but a weak negative correlation with ASI (-0.180), while VOT appears weakly correlated with other variables. These results imply that not all stock market indicators contribute equally to economic growth in Nigeria.

Table 3: Summary of Augmented Dicker Fuller Test

AT LEVEL (1(0))				
Variable	ADF t-Statistic	MacKinnon Test Critical	P-value	Decision
Real Gross Domestic Product	-0.226999	-2.951125	0.9254	Non-Stationarity
Stock Market Capitalization	-1.796613	-2.954021	0.3756	Non-Stationarity
All-Share Index	-2.754750	-2.957110	0.0762	Non-Stationarity
Value of Transaction	-0.374055	-2.951125	0.9788	Non-Stationarity
Volume of Share Traded	-1.544587	-2.951125	0.4993	Non-Stationarity
AT FIRST DIFFERNCE (1(1))				
Variable	ADF t-Statistic	MacKinnon Test Critical	P-value	Decision
Real Gross Domestic Product	-4.188353	-2.954021	0.0025	Stationarity
Stock Market Capitalization	-6.331174	-2.954021	0.0000	Stationarity
All-Share Index	-6.633967	-2.963972	0.0000	Stationarity
Value of Transaction	-4.372886	-2.954021	0.0015	Stationarity
Volume of Share Traded	-6.579404	-2.957110	0.0000	Stationarity

Source: Econometric Views Version 9.0 (2025)

The Augmented Dickey-Fuller (ADF) unit root test results indicate that all the variables—Real Gross Domestic Product (RGDP), Stock Market Capitalization (SMAC), All-Share Index (ASI), Value of Transaction (VOT), and Volume of Share Traded (VST)—are non-stationary at level, as their ADF t-statistics are less than the MacKinnon critical values and their p-values are greater than 0.05. However, after first differencing, all variables became stationary, with their ADF t-statistics exceeding the critical values and p-values below 0.05. This means the series are integrated of order one, I(1), and are suitable for further analysis involving co-integration and error correction modeling.

Table 4: Vector Error Correction Model Estimates

Parameter	Coefficient	Std. Error	t-Statistic	Prob.
CointEq1	-0.426013	0.100975	-4.219015	0.0003
D(RGDP(-1))	-0.505247	0.286955	-1.760717	0.0900
D(SMAC(-1))	25530.35	3777.742	6.758097	0.0000
D(ASI(-1))	-2490.246	1015.192	-2.452981	0.0212
D(VOT(-1))	-0.002583	0.001015	-2.544406	0.0172
D(VST(-1))	21310.86	4684.326	4.549398	0.0001
C	4289.129	760.6628	5.638674	0.0000
R-squared	0.658462	F-statistic		8.354379
Adjusted R-squared	0.579646	Prob.(F-statistic)		0.000042
Durbin-Watson stat			2.212861	

Source: *Econometric Views (E-Views) 9.0 Output (2025)*

The results of the Vector Error Correction Model (VECM) indicate a statistically significant long-run relationship among the variables, as shown by the negative and significant coefficient of the error correction term (CointEq1 = -0.426013, $p = 0.0003$). This implies that about 42.6% of the disequilibrium in real GDP is corrected each period, confirming a stable long-term adjustment process. In the short run, stock market capitalization (SMAC), volume of shares traded (VST), and the constant term significantly and positively affect RGDP, while the All-Share Index (ASI) and Value of Transactions (VOT) have significant negative short-run effects. The R-squared value of 0.658 suggests that about 66% of the variations in economic growth are explained by the model, and the overall model is statistically significant (F-statistic = 8.354, $p < 0.001$). Additionally, the Durbin-Watson statistic (2.21) indicates no serious autocorrelation problem in the residuals.

5.0 Summary of Findings and Recommendations

Summary

The study examined the relationship between stock market performance and economic growth in Nigeria using time series data from 1989 to 2023. Descriptive statistics showed high volatility in variables such as the All-Share Index and Volume of Transactions. Correlation results indicated that stock market capitalization and volume of shares traded had strong positive relationships with real GDP, while the All-Share Index showed a weak negative correlation. Unit root tests confirmed that all variables were non-stationary at level but stationary at first difference, indicating they are integrated of order one. The Vector Error

Correction Model (VECM) showed a significant long-run relationship among the variables, with an error correction term suggesting that deviations from equilibrium are corrected at a speed of 42.6% per year. In the short run, stock market capitalization and share volume positively impacted economic growth, while the All-Share Index and transaction value had negative short-run effects. The model was statistically significant, with an R-squared of 0.658, indicating good explanatory power.

Recommendations

Based on the findings, the following recommendations are made:

1. Policies should be directed toward increasing stock market capitalization through public enlightenment and incentives to encourage more listings and investor participation in the market.
2. Regulatory bodies should improve market liquidity by encouraging innovation, reducing transaction costs, and ensuring greater transparency in stock trading activities.
3. The Securities and Exchange Commission (SEC) and other relevant authorities should intensify efforts to stabilize and monitor the market to reduce volatility, especially in the All-Share Index and transaction values.
4. There is a need for increased investor education and financial literacy programs to build confidence in the market and encourage broader participation by both institutional and retail investors.
5. Government should ensure that macroeconomic policies align with capital market development to create a stable and conducive environment that supports long-term investment and growth.

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