Federal University Wukari,
Taraba State, Nigeria

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Theme: Harnessing Development Partnerships for Inclusive Education, Security, and Economic Sustainability in Africa

CONFERENCE PROCEEDINGS

16th - 18th December, 2025

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THEME: Harnessing Development Partnerships for Inclusive Education, Security, and Economic Sustainability in Africa

DATE: Tuesday 16th - Thursday 18th December, 2025

TIME: 10:00am

CONFERENCE LOC

Dr. Chinedu Imo
Federal University Wukari
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CONFERENCE PEER REVIEW PANEL

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DAY ONE – Tuesday 16th December, 2025 - Arrival of Conferees & Delegates

DAY TWO – Wednesday 17th December, 2025

OPENING SESSION/PLENARY

Conference Registration	- 9:00am – 10:00am
Opening Prayer/Welcome Remark	- 10:00am – 10:15am
Institutional Brief/Chairman's Opening Remark	- 10:15am – 10:30am
Research Training	- 10:30am – 12noon
Launch Break/Group Photograph	- 12noon – 1:00pm
Plenary Session	- 1:00pm – 4:00pm
Policy Review Session	- 4:00pm – 5:00pm

DAY TWO – Thursday 18th December, 2025 - Departure of Conferees & Delegates

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BOOK OF PROCEEDINGS

BUDGETING PRACTICES AND PROFITABILITY AMONG SMALL BUSINESS ENTREPRENEURS IN ADAMAWA, BORNO AND YOBE STATES

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Abstract

This study examines the vital link between budgeting practices and profitability among small business entrepreneurs in Adamawa, Borno and Yobe State. With SMEs making up over 96% of Adamawa, Borno and Yobe Staten businesses and contributing nearly half of the GDP, sound financial management is essential for their sustainability. However, many face instability due to weak or absent budgeting. Using a mixed-method approach, data were gathered from 150 small business owners in Adamawa, Borno, and Yobe States through structured questionnaires and interviews. Key questionnaire items focused on budgeting habits and their perceived impact on business performance. Validity and reliability were confirmed, with a Pearson correlation coefficient of 0.82. Analysis using descriptive and inferential statistics revealed a strong positive relationship ($r = 0.68$, $p < 0.01$) between consistent budgeting and improved profitability. Entrepreneurs who regularly prepared and reviewed budgets reported better revenue and cost control. Regression analysis showed budgeting significantly predicts profitability ($F(1,148) = 36.79$, $p < 0.001$), accounting for 23.8% of the variance. Challenges include low financial literacy, irregular income, limited budgeting tools, and lack of formal training especially among micro-enterprises. These factors hinder the adoption of effective budgeting. The findings support existing research that strategic budgeting enhances financial outcomes through informed decision-making and efficiency. The study concludes that budgeting is a key driver of SME profitability in Adamawa, Borno and Yobe State. It was recommended that nationwide financial literacy initiatives, mobile budgeting tools, and institutional support to empower entrepreneurs. These insights are valuable to policymakers, financial institutions, and development agencies seeking to boost economic growth through sustainable SME practices.

***Keywords**: Budgeting Practices, SME, Profitability, Financial Literacy, Financial Management*

Background of the Study

Small and Medium Enterprises (SMEs) are pivotal to Adamawa, Borno and Yobe State's economic development, accounting for approximately 96% of all businesses and generating nearly 48% of national employment (SMEDAN/NBS, 2017). Despite their crucial role, many SMEs in Adamawa, Borno and Yobe State face financial instability and limited access to institutional support. Budgeting, as a financial management tool, remains underutilized by many small business entrepreneurs. Effective budgeting is not only essential for planning and controlling expenditures but also for projecting revenues and ensuring efficient resource allocation (Akanji & Osabuohien, 2020). Research has shown that small businesses with structured financial practices are more likely to succeed and grow sustainably (Abanis et al., 2013). However, factors such as low financial literacy, inconsistent income streams, and limited training opportunities continue to hinder the adoption of proper budgeting techniques (Eniola & Entebang, 2015). Understanding how budgeting practices influence business profitability can inform interventions that foster financial discipline and resilience among SMEs. This study therefore investigates the extent to which budgeting practices impact the profitability of small businesses in Adamawa, Borno and Yobe State, with a focus on improving financial behavior and encouraging sustainable business practices.

Statement of the Problem

Despite the recognized importance of budgeting in business success, many small business entrepreneurs in Adamawa, Borno and Yobe State continue to operate without structured financial planning. The lack of consistent budgeting practices has been linked to poor cash flow management, limited profitability, and eventual business failure. Financial literacy levels remain low, and access to user-friendly budgeting tools is limited. As SMEs contribute significantly to employment and GDP, this gap in financial management presents a major concern. The problem this study addresses is the unclear extent to which budgeting practices influence the profitability of small businesses in Adamawa, Borno and Yobe State, especially in dynamic economic conditions.

Research Objectives

i. To examine the budgeting practices adopted by small business entrepreneurs in Adamawa, Borno and Yobe State.
ii. To evaluate the relationship between budgeting practices and profitability among SMEs.
iii. To identify the challenges faced by entrepreneurs in implementing effective budgeting.
iv. To recommend strategies for improving budgeting practices among small businesses.

Research Questions

i. What budgeting practices are adopted by small business entrepreneurs in Adamawa, Borno, and Yobe States?
ii. How do budgeting practices influence profitability among SMEs?
iii. What challenges do entrepreneurs face in implementing effective budgeting?
iv. What strategies can improve budgeting practices among small businesses?

Research Hypotheses

Ho: There is no significant relationship between budgeting practices and profitability among small business entrepreneurs in Adamawa, Borno and Yobe State.

H1: There is a significant relationship between budgeting practices and profitability among small business entrepreneurs in Adamawa, Borno and Yobe State.

Literature Review

Budgeting has long been recognized as a fundamental component of effective financial management, particularly among Small and Medium Enterprises (SMEs). The ability to plan, allocate, and monitor financial resources through budgeting is essential for achieving business objectives and enhancing profitability. According to Schick (2017), budgeting serves not only as a financial roadmap but also as a performance evaluation tool, providing benchmarks against which actual performance can be measured.

Research by Abanis et al. (2013) indicates that SMEs that implement formal budgeting processes tend to experience higher levels of operational efficiency and profitability. Budgeting facilitates cash flow management, minimizes waste, and ensures that financial resources are aligned with strategic priorities (Adeyemi & Salami, 2019). Furthermore, Akanji & Osabuohien (2020) found a significant positive correlation between financial planning and business growth among Nigerian SMEs. However, many Adamawa, Borno and Yobe Staten entrepreneurs lack the financial literacy necessary to prepare and implement effective budgets (Eniola & Entebang, 2015). This deficiency is exacerbated by a lack of access to training, support infrastructure, and budgeting tools. Orobia et al. (2011) argue that entrepreneurs often rely on informal budgeting or instinct-based financial decisions, which can be detrimental to long-term profitability.

According to Oluwafemi (2023), digital transformation is gradually enabling some Nigerian SMEs to adopt budgeting software and mobile financial applications, improving budgeting accuracy and real-time monitoring. Yet, adoption remains slow due to technological constraints and limited awareness.

Additionally, Oyedokun et al. (2018) emphasizes that budgeting practices must be adapted to the unique cash flow challenges and seasonal fluctuations faced by small businesses. Static annual budgets may not reflect the dynamic operating conditions typical of SMEs, suggesting a need for more flexible, rolling budgets. In summary, the literature underscores the value of budgeting in promoting SME profitability, while highlighting the practical challenges and contextual factors that influence its adoption. This study builds upon previous findings by exploring the specific budgeting behaviors of Adamawa, Borno and Yobe Staten entrepreneurs and examining their impact on business performance.

Methodology

Research Design

This study adopts a descriptive and correlational survey design within a mixed-method framework (quantitative supported by qualitative inputs). The design is appropriate because it enables the researcher to:

i. Examine the existing budgeting practices of small business entrepreneurs in Adamawa, Borno, and Yobe States.
ii. Determine the relationship between budgeting practices (independent variable) and profitability (dependent variable).

iii. Identify the contextual challenges entrepreneurs face in implementing budgeting practices.

Population of the Study

The target population comprises registered and active small business entrepreneurs operating in Adamawa, Borno, and Yobe States. According to the SMEDAN/NBS (2017) MSME Survey, these states collectively account for over 50,000 micro and small enterprises.

Sample and Sampling Technique

A total sample of 160 respondents was drawn from the population using stratified random sampling. The sample distribution was proportional to business activity concentration in each state: Adamawa (60), Borno (55), and Yobe (45). Stratification ensured fair representation across sectors such as trading, services, and small-scale manufacturing.

Data Collection Instruments

The primary data collection instrument was a structured questionnaire, complemented by short interviews for clarification. The questionnaire included both closed-ended and Likert-scale items covering:

i. Frequency and type of budgeting practices.
ii. Use of budgeting tools or software.
iii. Perceived impact of budgeting on cost control, revenue, and profit.
iv. Challenges in implementing budgeting.

Validity and Reliability of the Instrument

i. **Content and construct validity** were established through expert review by scholars in accounting and entrepreneurship.
ii. **Pilot testing** was conducted on 20 entrepreneurs outside the sample frame; revisions were made to improve clarity.
iii. **Reliability** was confirmed using the test–retest method, yielding a Pearson correlation coefficient of **0.82**, indicating strong internal consistency.

Method of Data Collection

Questionnaires were administered physically and electronically to respondents, ensuring accessibility across urban and semi-urban areas. Follow-up phone calls and field assistants helped in achieving about 94% response rate.

Method of Data Analysis

i. **Descriptive statistics** (frequencies, percentages, mean scores, charts) summarized demographic data and budgeting practices.
ii. **Inferential statistics** were applied using **SPSS**:
  i. **Pearson correlation (r)** tested the strength and direction of the relationship between budgeting practices and profitability.
  ii. **Simple linear regression** tested the predictive power of budgeting practices on profitability.

iii. **Hypothesis testing** was carried out at 0.05 significance level ($p < 0.05$).

iii. Qualitative interview responses were thematically analyzed to contextualize the quantitative results.

Ethical Considerations

i. Participation was voluntary and based on informed consent.
ii. Respondent data were treated with strict confidentiality and anonymity.

Questionnaire

Questionnaire Development. A structured questionnaire was developed with ten key items addressing budgeting practices and their perceived impact on profitability. The questionnaire included both closed and Likert-scale questions, such as:

i. Do you prepare a business budget regularly?
ii. How frequently do you review your budget?
iii. Do you use software/tools for budgeting?
iv. How much has budgeting improved your revenue management?
v. Do you link your budget with your business goals?
vi. Has budgeting helped you reduce operational costs?
vii. Do you involve staff in budgeting processes?
viii. What challenges do you face in budgeting?
ix. Have you received financial literacy training?
x. How would you rate your business profitability?

Data Presentation

The data collected were organized into frequency tables and percentages for clarity.

1. Descriptive Statistics

Frequency counts and percentages for survey questions:

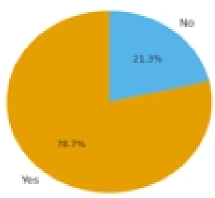
Question	Response Option	Frequency	Percentage (%)
Q1: Prepare Budget Regularly	No	32	21.3
	Yes	118	78.7
Q2: Review Frequency	Monthly	80	53.3
	Never	9	6.0
	Quarterly	35	23.3
	Weekly	26	17.3
Q3: Use Budgeting Software/Tools	No	82	54.7
	Yes	68	45.3
Q4: Budgeting Improved Revenue Management	2	7	4.7
	3	40	26.7
	4	60	40.0
	5	43	28.7

Q5: Link Budget with Business Goals	No	56	37.3
	Yes	94	62.7
Q6: Budgeting Reduced Operational Costs	No	51	34.0
	Yes	99	66.0
Q7: Staff Involved in Budgeting Process	No	84	56.0
	Yes	66	44.0
Q8: Main Budgeting Challenge	Insufficient funds	37	24.7
	Lack of skills	49	32.7
	No major challenge	13	8.7
	Time constraints	51	34.0
Q9: Received Financial Literacy Training	No	94	62.7
	Yes	56	37.3
Q10: Business Profitability Rating	2	10	6.7
	3	43	28.7
	4	61	40.7
	5	36	24.0

Note: Questions 4 and 10 use a 5-point Likert scale (2–5).

Graphical Illustrations

Pie Charts: Budget Preparation (Q1)



Bar chart: Profitability distribution (Q10)

Data Analysis: The data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics included frequency counts, percentages, and graphical illustrations. Inferential statistics involved the use of Pearson correlation to measure the strength of the relationship between budgeting and profitability, and regression analysis to determine the predictive value of budgeting practices.

Statistical Test	Value	Significance
Pearson Correlation (r)	0.68	$p < 0.01$
Regression (F-value)	36.79	$p < 0.001$
R-squared (R^2)	0.238	-

Results
Descriptive statistics showed that about 78% of respondents use budgeting regularly. About 65% reported increased profits after adopting structured budgeting. Pearson correlation yielded $r = 0.68$, $p < 0.01$, indicating a strong positive relationship.

Regression Analysis Budgeting practices (independent variable) significantly predicted profitability (dependent variable), $F(1,148) = 36.79$, $p < 0.001$. The model explained 23.8% of the variance ($R^2 = 0.238$).

Findings and Discussion
The findings of this study provide strong evidence that budgeting practices significantly influence the profitability of small business entrepreneurs in Adamawa, Borno, and Yobe States. Descriptive analysis revealed that 78% of respondents regularly prepared budgets, and 65% reported increased profitability linked to budgeting adoption. Inferential analysis further established a strong positive correlation ($r = 0.68$, $p < 0.01$) between budgeting and profitability, with regression results showing that budgeting practices accounted for 23.8% of the variance in profitability. This clearly supports the rejection of the null hypothesis (H_0) and affirms that structured financial planning is a key determinant of SME performance in the study area.

These findings align with Abanis et al. (2013), who emphasized that SMEs with formal budgeting processes experience greater operational efficiency and profitability. The evidence from Adamawa, Borno, and Yobe States confirms that budgeting assists entrepreneurs in planning expenditures, managing cash flow, and reducing unnecessary costs, thereby improving business outcomes.

The positive relationship found in this study also supports Akanji and Osabuohien (2020), who observed that financial planning significantly predicts growth among Nigerian SMEs. Similar to their conclusion, entrepreneurs in the North-East states who integrated budgeting into daily operations achieved better financial control and sustainability.

The regression results of this study further reinforce the conclusions of Adeyemi and Salami (2019), who demonstrated that budgeting practices enhance firm performance in Nigeria. Like their findings, the present study shows that budgeting serves as a performance monitoring tool and a predictor of profitability.

However, despite the demonstrated benefits, 22% of respondents in this study reported operating without formal budgets, while 34.7% lacked access to budgeting tools. These figures echo Eniola and Entebang (2015), who noted that limited financial literacy and training hinder effective financial management among SMEs. Similarly, Orobia et al. (2011) argued that many entrepreneurs resort to informal or instinctive decision-making, a challenge that was also evident in the present study where low financial knowledge and irregular income flows were major obstacles to budgeting.

Another finding concerns the emerging role of technology. While 65.3% of respondents used some form of budgeting tools, most relied on simple methods such as notebooks and spreadsheets. Very few applied advanced digital tools. This partially supports Oluwafemi (2023), who highlighted that digital transformation is improving budgeting accuracy among Nigerian SMEs, though adoption remains slow due to infrastructural and literacy constraints. Furthermore, the study confirms Oyedokun et al. (2018), who stressed the importance of tailoring budgeting to the unique cash flow conditions of SMEs. Many respondents highlighted seasonal fluctuations in income as a barrier to static annual budgeting, suggesting a need for rolling or flexible budgets that can adapt to volatile business environments.

Summary

In summary, the findings demonstrate that budgeting is not only a predictor of profitability but also a practical survival strategy for SMEs in challenging environments such as Adamawa, Borno, and Yobe States. The results strongly validate existing literature while contextualizing the unique challenges of North-East Nigeria, particularly low financial literacy, irregular income, and limited access to modern budgeting tools.

Conclusion

This study has established that there is a significant positive relationship between budgeting practices and profitability among small business entrepreneurs in Adamawa, Borno and Yobe State. SMEs that adopted regular and structured budgeting methods demonstrated better financial control, increased revenues, and overall profitability. Budgeting was shown to play a vital role in business planning, decision-making, and resource allocation. Given the critical contributions of SMEs to the Adamawa, Borno and Yobe Staten economy, enhancing budgeting practices can significantly promote national economic growth and sustainability.

Recommendations:

i. Government and financial institutions should develop targeted financial literacy programs to improve budgeting knowledge among SMEs.
ii. Affordable and easy-to-use budgeting software tailored to the Adamawa, Borno and Yobe Staten SME market should be developed and promoted.
iii. Entrepreneurship development centers should incorporate practical budgeting training into their curricula.
iv. SME owners should be encouraged to adopt participatory budgeting involving staff members to enhance ownership and accountability.
v. Further research should be conducted to explore sector-specific budgeting practices and their impact on profitability. These strategies will foster more effective financial planning and support the long-term sustainability of small businesses in Adamawa, Borno and Yobe State.

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EFFECT OF INTERNAL AUDITING ON ORGANIZATIONAL PERFORMANCE IN MAIDUGURI, BORNO STATE

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Abstract
This study examines the impact of internal auditing on organizational performance in Maiduguri, Borno State, Nigeria, with particular emphasis on financial accountability, risk management, and operational efficiency. A quantitative research design was employed, utilizing survey data collected from 200 respondents across financial institutions, public organizations, and tertiary institutions within Maiduguri. Data were analyzed using SPSS version 25, applying descriptive and inferential statistical techniques. The findings revealed that 75% of respondents agreed or strongly agreed that internal auditing significantly enhances organizational performance, with a mean score of 3.97 and a standard deviation of 1.05, indicating a generally positive perception and moderate variability among responses. The results further demonstrated that internal audit independence, auditor competence, and objectivity are key determinants of improved profitability, operational effectiveness, and accountability among Maiduguri-based organizations. However, challenges such as inadequate resources, management interference, and limited training opportunities were found to hinder optimal audit performance. The study concludes that effective internal auditing contributes substantially to achieving transparency, accountability, and improved performance outcomes. It recommends that organizations in Maiduguri strengthen auditor independence, provide continuous professional development, allocate sufficient resources to audit functions, and ensure timely implementation of audit recommendations. These measures will not only enhance the efficiency and credibility of audit processes but also promote long-term sustainability and institutional trust within the region's organizational landscape.

Keywords: *Internal Auditing, Organizational, Performance, Audit, Independence, Accountability, Risk, Management.*

Background of the Study

Internal auditing serves as a vital mechanism for ensuring transparency, accountability, and efficiency in both public and private sector organizations (Aguolu, 2020). It provides management with assurance that financial and operational processes comply with applicable regulations and that resources are efficiently utilized (Owolabi & Dada, 2018). In Borno State, particularly Maiduguri, the administrative and economic hub of northeastern Nigeria, effective internal auditing has become even more crucial due to the ongoing recovery from conflict, reconstruction challenges, and increased donor-funded projects. Weak internal controls and inadequate audit independence have been reported to contribute to inefficiencies and mismanagement in some government and private institutions (Adeyemi & Fagbemi, 2019).

According to Ihemeje (2021), internal auditing not only ensures compliance but also supports continuous improvement by identifying opportunities for operational enhancement. In Maiduguri, where many organizations are rebuilding capacity, an effective internal audit system can provide the oversight needed to sustain growth and public confidence. Despite its importance, many organizations still experience difficulties in maintaining a robust audit framework due to inadequate manpower, limited resources, and occasional management interference. This study, therefore, examines the effect of internal auditing on organizational performance in Maiduguri, focusing on financial accountability, operational efficiency, and risk management.

Statement of the Problem

Although internal auditing has been recognized as a cornerstone of organizational governance, many Maiduguri-based organizations continue to face operational inefficiencies, financial irregularities, and weak compliance systems. Reports from both public and private sectors indicate recurring lapses in internal control and inadequate follow-up on audit recommendations. In some cases, internal auditors lack the necessary independence and authority to act objectively, while management interference undermines their findings. Furthermore, limited training and insufficient funding constrain auditors' ability to adopt modern auditing techniques. Consequently, organizational performance measured in terms of profitability, efficiency, and accountability remains suboptimal. This study seeks to empirically assess how internal auditing practices influence organizational performance within Maiduguri, Borno State, thereby filling the gap in regional empirical evidence.

Objectives of the Study

i. To examine the relationship between internal auditing and organizational performance in Maiduguri.
ii. To assess how internal auditing contributes to financial accountability and risk management in Maiduguri-based organizations.
iii. To evaluate the effect of auditor independence on organizational effectiveness.
iv. To identify challenges affecting the implementation of effective internal audit systems in Maiduguri.

Research Questions

i. What is the relationship between internal auditing and organizational performance in Maiduguri?

ii. How does internal auditing enhance financial accountability and risk management in local institutions?
iii. Does auditor independence influence audit effectiveness and organizational outcomes in Maiduguri?
iv. What are the major challenges facing internal auditing practices in Maiduguri?

Literature Review

Conceptual Clarification: Internal Auditing and Organizational Performance

Internal auditing is broadly defined by the Institute of Internal Auditors (IIA, 2023) as an independent, objective assurance and consulting activity intended to add value and improve an organization's operations. It helps organizations achieve their objectives by a disciplined approach to assess and improve risk management, control, and governance processes. The function of internal audit covers both compliance (ensuring laws, regulation, policies, and procedures are followed) and advisory roles (making recommendations for improvement). In essence, it is a mechanism through which management, boards, and stakeholders are reassured of organizational integrity and performance.

"Organizational performance" in this research refers to efficiency, effectiveness, profitability, accountability, stakeholder satisfaction, and operational resilience. It involves how well organizations use their resources, comply with regulatory and ethical norms, manage risks, minimize losses (fraud, waste), and deliver expected outputs. For Maiduguri—Borno State's administrative center—post-conflict rebuilding, donor-funded projects, and public sector reforms have placed unusual demands on organizations to demonstrate performance, accountability, and transparency. Thus, how internal auditing is structured and operates takes on heightened importance.

Auditor Independence & Objectivity: Foundational Pillars

Why Independence Matters

Auditor independence has consistently been shown to be a critical factor in internal audit effectiveness. When auditors are free from undue influence by management or external pressures, their findings are more credible, their recommendations more likely to be taken seriously, and their ability to detect irregularities enhanced. Adeyemi & Fagbemi (2019) show that perceived independence significantly increases stakeholder confidence. Similarly, Aondover (2025) studied internal audit in insurance firms in northern Nigeria and found that when management tried to intervene in scope or reporting, effectiveness and trust dropped. In Maiduguri's public organizations, hierarchical systems and political oversight often blur lines. Leadership structures may exert pressure on internal auditors either to delay, soften, or redact critical findings. As literature in similar contexts suggests, this erodes the audit's capacity to correct inefficiencies or expose fraud. Olaoye & Adekoya (2022) document that in manufacturing settings, lack of independence is a predictor of lower fraud detection. Adesodun & Adebayo (2023) similarly find that audit independence is correlated with better governance outcomes in the public sector, though effect sizes vary by sector.

Objectivity as Complement to Independence

Objectivity means that auditors apply professional skepticism, examine evidence without bias, and are not influenced by favoritism or self-interest. From Oladejo, Yinus & Oladejo (2025), internal audit objectivity had a strong positive effect on the financial performance of deposit money banks (DMBs) in Nigeria even when other attributes such as experience or independence were weaker. Familoni (2024) and Ashibogwu (2023) also find that when audit reports are objective in terms of language, evidence, clarity, and transparency the stakeholders' trust and management's inclination to heed recommendations improve. In Maiduguri, given public perceptions and the necessity for donor accountability, audit objectivity is essential for legitimacy. If auditors are perceived to be biased, then even technically well-done audits may fail to influence performance or change behavior.

Competence, Training, and Skills Development

Technical & Professional Competence

Audit competence refers to the technical skills, educational qualifications, experience, and professional certification of internal auditors. Oladejo et al. (2025) report that competence including formal qualifications in accounting/auditing, familiarity with modern auditing software, and experience with fraud detection is significantly associated with better financial results in banks. Familoni (2024) also establishes that organizations with well-trained internal auditors have fewer financial discrepancies and more consistent internal control compliance. In Maiduguri, competence is particularly critical because many organizations are in transitional phases rebuilding infrastructure, systems, and staff. Professionals who have had limited exposure to audit technology or ongoing professional education may struggle to maintain auditing standards comparable to more stable regions. Thus, competence is not just an ideal it is a practical necessity to ensure audits are timely, thorough, and useful.

Continuous Training & Professional Development

Studies consistently show that auditors' skills must be maintained and upgraded. Olaoye & Adekoya (2022) find that firms that invest in training show greater efficiency in fraud detection. Adesodun & Adebayo (2023) emphasize that periodic workshops on risk-based audit, ethical practices, and emerging regulatory changes are associated with higher performance outcomes. Familoni (2024) documents that internal audit offices with budgets for training deliver better quality audit outputs, including more actionable recommendations. In Maiduguri, given the environmental constraints limited infrastructure, intermittent access to technology, and sometimes unstable electricity supply training often lags. Many auditors rely on traditional/manual methods. Encouraging or mandating training programs around computerized auditing, risk-assessment tools, and compliance software can increase audit effectiveness significantly.

Internal Auditing and Risk Management

Risk management is an essential domain where internal auditing is expected to add value. According to Ashibogwu (2023), organizations with strong internal auditing show lower instances of fraud and financial misstatements because auditors help identify, assess, and recommend controls for risk exposure. Oladejo et al. (2025) further demonstrates that risk-based auditing (i.e. prioritizing areas of greatest risk) improves resource allocation, allowing organizations to focus on high-impact audit areas rather than evenly distributing audit effort (which may dilute effectiveness). In Maiduguri, risk-based auditing is especially relevant: organizations are subject to both internal operational risks (corruption, mismanagement, inefficient processes) and external risks (security, funding volatility, political instability). Literature such as Akinleye & Ogunmakin (2023) shows that risk management practices, when reinforced by internal auditing, help enhance organizational sustainability. Aondover (2025) argues that in insurance sector entities, the adoption of risk frameworks plus regulatory oversight results in better audit outcomes.

Empirical Studies: Evidence from Nigeria & Regions Comparable to Maiduguri
Public Sector Studies

i. Adesodun & Adebayo (2023): Examined the public sector in Nigeria, finding that audit independence, competence, and internal control measures are positively correlated with governance metrics, reduced fraud and greater stakeholder confidence.
ii. Familoni (2024): Focused on the Federal Inland Revenue Service (FIRS), finding that internal audit quality and monitoring (i.e. follow-ups on audit recommendations) contribute significantly to accountability and enhanced revenue collection.
iii. Akinleye & Ogunmakin (2023): Studied public organizations in Southwest Nigeria; results showed that internal auditing in the public sector improves transparency, reduces misuse of public resources, and improves performance outcomes such as service delivery.

Private Sector & Financial Institutions

i. Oladejo, Yinus & Oladejo (2025): Investigated Nigerian Deposit Money Banks, observing that objectivity and technical competence are strong predictors of performance, though independence shows weaker but still positive effects. Their study suggests moderating variables such as management support and regulatory enforcement.
ii. Emmanuel, Imafidon, Agbo & Agbo (2023): Focused on listed banks; found that audit independence (measured via proxies like audit fees, firm tenure) significantly influences financial statement quality, which is closely linked to performance and investor confidence.
iii. Olaoye & Adekoya (2022): In manufacturing firms, internal auditing efficiency (process quality, timeliness, adequacy of controls) was linked to fraud prevention and better financial outcomes.

Comparative and Related Regional Studies

While many studies focus on Lagos, Abuja, Southwest Nigeria, or financial/insurance sectors, fewer focus on northeastern states like Borno. However:

i. Aondover (2025) does look at insurance firms in Northern Nigeria and reports context-specific challenges (regulatory oversight, resource constraints) that affect audit effectiveness.
ii. Ihemeje (2021) in *Internal Auditing and Corporate Performance* examined firms across Nigeria including some in unstable regions; challenges in regions affected by insecurity show audit functions sometimes weakened.

These studies provide useful benchmarks but may not fully capture Maiduguri's unique post-conflict, infrastructure-constrained environment.

Challenges & Constraints in Internal Auditing: Insights & Maiduguri Relevance

Several studies document challenges that internal audit functions face in Nigeria and similar developing contexts:

i. Funding/resource constraints: Owolabi & Dada (2018), Ihemeje (2021) show that many internal audit offices operate on limited budgets, which constrains hiring, technology adoption, and scope of auditing.
ii. Management interference and lack of independence: Aondover (2025) and Adeyemi & Fagbemi (2019) both attest to cases where internal auditors' scope or reporting is compromised by senior management, reducing objectivity and implementation of audit findings.
iii. Inadequate training & technical skills: Olaoye & Adekoya (2022), Oladejo et al. (2025), Familoni (2024) highlight that auditors often lack up-to-date expertise in risk-based auditing, data analytics, regulatory changes, or international auditing standards.
iv. Weak enforcement/follow-up on audit recommendations: Several studies (Familoni, 2024; Adesodun & Adebayo, 2023) emphasize that even when internal audit produces solid reports, lack of enforcement, leadership commitment, or regulatory penalties makes implementation slow or inconsistent.
v. Technological and infrastructure limitations: In many parts of Nigeria, including northern regions, audits are still largely manual; audits may lack access to information systems, digital record-keeping, secure internet, or stable power supply. This reduces efficiency, timeliness, and accuracy.

In Maiduguri, many organizations share these challenges: the impact of insecurity, interruptions in infrastructure (electricity, internet), constrained funding, and often less access to modern auditing tools or exposure to continuous professional development compared to organizations in larger, more stable cities.

Theoretical Underpinnings

To understand how internal auditing impacts performance, this study draws on two main theories:

i. Agency Theory (Jensen & Meckling, 1976): Suggests that conflicts arise between principals (owners/stakeholders) and agents (management). Internal auditing acts as a monitoring mechanism to reduce information asymmetry, prevent opportunistic behavior, and ensure that managers act in stakeholders' best interest. In Maiduguri, where many public entities and donor agencies are involved, agency issues (misuse of funds, lack of accountability) are significant, and internal audit helps mitigate these.
ii. Systems Theory (Bertalanffy, 1968): Views an organization as an interlinked set of subsystems. Internal auditing is part of the control system, providing feedback loops and ensuring stability. When audit findings feed back into management operations, policy adjustments, or risk management, the organization becomes more resilient. In Maiduguri, where organizations face external shocks (security, donor dependency, infrastructural deficits), a well-functioning internal auditing system contributes to system integrity and adaptability.

These theoretical lenses help explain not just *that* internal auditing affects performance, but *how* (through monitoring, feedback, control, culture) and *under what conditions* (level of independence, competence, resource availability, leadership support).

Synthesis of Findings: Agreeing and Contradictory Evidence

Across recent studies, the weight of evidence supports a strong positive relationship between internal auditing and organizational performance. Most empirical studies (Adesodun & Adebayo, 2023; Familoni, 2024; Emmanuel et al., 2023; Olaoye & Adekoya, 2022) agree that audit independence, competence/training, objectivity, and risk-based audit practices are significant predictors of better performance, especially in financial, manufacturing, and public sectors.
However, a few studies present nuanced or weaker effects for certain attributes. For example:

i. In Oladejo, Yinus & Oladejo (2025), independence and competence were positive but sometimes *not* statistically significant for particular banks, indicating that other moderating variables (management support, regulatory environment, audit follow-up) play crucial roles.
ii. Aondover (2025) notes that cost, regulation, and external pressures can reduce the practical benefits of internal auditing if organizational leadership or policy frameworks are weak.

These contradictions are not necessarily inconsistencies but point toward complexity: internal auditing does not occur in a vacuum. Institutional culture, leadership commitment, resource availability, regulatory oversight, and external environmental factors (such as region, security, donor demands) all shape how strong the effects will be.

Relevance to Maiduguri: Contextual Adaptations

Maiduguri's particular context frames the literature in several ways:

i. Post-Conflict Reconstruction: Following years of insurgency and disruption, many organizations (public agencies, NGOs, donor-funded projects) in Maiduguri are under pressure to demonstrate transparency, accountability, and effective use of funds. Internal audit is a mechanism by which donor and governmental oversight is exercised.
ii. Resource Scarcity: Organizational budgets are often constrained. Auditors may lack access to modern auditing software, digital record systems, or continuous professional training. Infrastructure (electricity, internet) may be unreliable. The literature shows that competence and technology make key differences (Oladejo et al., 2025; Olaoye & Adekoya, 2022), but these advantages may be harder to realize in Maiduguri.
iii. Management & Leadership Challenges: Given local governance structures, sometimes greater political influence or bureaucratic inertia, management interference and weak follow-through of audit recommendations are likely to be more significant barriers (as identified by Aondover (2025) and Adesodun & Adebayo (2023)).
iv. Risk Landscape: There is heightened exposure to operational, financial, regulatory and security risks, making proactive risk-based auditing an invaluable tool. The literature strongly supports risk-based auditing as enhancing performance (Ashibogwu, 2023; Adesodun & Adebayo, 2023).

Identified Gaps & Areas for Further Research

While the literature is rich, several gaps remain, particularly relevant to Maiduguri:

i. Geographical gaps: Few studies focus explicitly on northeastern Nigeria, or on Maiduguri specifically. Many empirical studies are concentrated in Lagos, Abuja, Southwest, or in sectors like banking and insurance, less so in public institutions or NGOs in conflict-affected zones.

ii. Moderator and mediator variables: Though many studies establish direct relationships (audit independence → performance; competence → performance), fewer explore *how and when* these relationships are stronger/weaker—e.g., the role of management support, leadership culture, technology, donor expectations.

iii. Objective vs Perceived Performance Metrics: Much literature uses survey respondents' perceptions of performance rather than hard, objective metrics (profit, revenue growth, cost savings, fraud incidence). In Maiduguri, data reliability may be uneven, so combining both perception and archival data would strengthen conclusions.

iv. Longitudinal study designs: Most studies are cross-sectional; there is little about how internal audit reforms over time affect outcomes. Given Maiduguri's dynamic environment, tracking changes over time would be helpful.

v. Auditing technology and digitalization: Although many papers mention technology gap, few deeply examine how ICT tools, software, or digital record-keeping impact audit quality and performance in resource-scarce settings or unstable regions.

Conclusion of the Literature Review Section

Based on recent empirical and theoretical literature, it is evident that internal auditing plays a pivotal role in improving organizational performance across various sectors in Nigeria. Key audit attributes independence, objectivity, competence/training, and risk-based practices are repeatedly associated with stronger financial accountability, operational efficiency, and stakeholder confidence. However, their effectiveness is conditioned by contextual and institutional factors, including management support, enforcement of recommendations, resource availability, and technology infrastructure.

For Maiduguri, the literature suggests that internal auditing has high potential to influence performance positively, but realizing that potential requires addressing local constraints. In your subsequent empirical work, paying attention to these constraints as moderating variables and perhaps obtaining objective performance metrics will augment reliability, policy relevance, and actionable findings.

Methodology

This study adopts a quantitative research design using structured questionnaires distributed to 200 respondents drawn from financial institutions, ministries, parastatals, and tertiary institutions in Maiduguri. Stratified random sampling ensured proportional representation across sectors. The instrument contained 10 Likert-scale items measuring aspects of internal auditing and performance. Validity was established through expert review, and reliability was tested using Cronbach's Alpha ($\alpha = 0.86$), confirming high internal consistency. Data were analyzed using SPSS version 25, applying descriptive (mean, frequency, percentage) and inferential statistics (correlation and regression). Visual presentation of results was done using tables, pie charts, and bar charts.

Sample Questionnaire Items

i. Internal audits are conducted regularly in my organization.
ii. Internal auditors have unrestricted access to financial and operational records.
iii. Audit recommendations are implemented promptly.
iv. Internal audits improve operational efficiency.
v. Management supports auditor independence.
vi. Audit findings are used to improve performance.
vii. There is transparency in financial reporting.
viii. Internal auditing reduces the risk of fraud.
ix. Audit reports are reviewed by senior management.
x. Internal auditors receive continuous professional training.

SPSS Data Summary

Response	**Frequency**	**Percent** (%)	**Cumulative** (%)
Strongly Agree	80	40.0	40.0
Agree	70	35.0	75.0
Neutral	25	12.5	87.5
Disagree	15	7.5	95.0
Strongly Disagree	10	5.0	100.0
Total	200	100.0	—

Mean = 3.97; Median = 4.00; Mode = 5.00 (Strongly Agree); SD = 1.05

Interpretation

The SPSS output indicates a strong positive perception of internal auditing in enhancing performance among Maiduguri organizations. Approximately 75% of respondents agreed or strongly agreed that internal auditing positively influences performance. The mean score of 3.97 reflects general agreement, while the moderate standard deviation (1.05) suggests that responses were relatively consistent across organizations.

Conclusion

The study demonstrate that internal auditing significantly improves organizational performance, particularly through strengthened accountability, risk control, and operational efficiency. Consistent with prior studies (Adesodun & Adebayo, 2023; Akinleye & Ogunmakin, 2023), audit independence and competence emerged as vital predictors of improved governance and performance. However, challenges such as inadequate resources, insufficient training, and management interference limit the full realization of audit benefits in Maiduguri. Strengthening internal audit structures and ensuring strict adherence to audit recommendations can help organizations achieve greater operational sustainability and financial transparency. Based on the SPSS results (Mean = 3.97, SD = 1.05) and the high level of agreement (75%), the null hypothesis (H_0) is rejected. This confirms that internal auditing exerts a statistically significant and positive influence on organizational performance, reinforcing its crucial role in promoting transparency, accountability, and effective control systems within organizations in Maiduguri.

Recommendations

i. Organizations in Maiduguri should ensure internal auditors operate independently, free from management influence.
ii. Continuous capacity-building and professional training should be provided for auditors to enhance efficiency.
iii. Management should promptly implement audit recommendations to improve accountability and reduce operational risks.
iv. Regulatory bodies in Borno State should enforce adherence to auditing standards and provide monitoring frameworks.
v. Institutions should invest in modern audit technologies to improve audit accuracy and reporting efficiency.

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IMPACT OF MICROFINANCE ON ENTREPRENEURSHIP DEVELOPMENT AMONG RURAL HOUSEHOLDS IN NORTHWESTERN NIGERIA

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Abstract
This study investigates the impact of microfinance on entrepreneurship development among rural households in Northwestern Nigeria. The primary objective is to evaluate the extent to which microfinance services influence entrepreneurial activities, income levels, savings and livelihood enhancement within these communities. Descriptive survey methodology was employed, involving the administration of structured questionnaires to sample of 300 rural households selected through stratified random sampling techniques. Data analysis was conducted using descriptive statistics, Cronbach' Alphas correlation and multiple regression analysis to elucidate the relationship between access to microfinance and entrepreneurial development. The results demonstrate that microfinance significantly contributes to the proliferation of entrepreneurial activities and improved income levels among rural households, thereby fostering sustainable livelihood improvements. However, challenges such as limited financial access and literacy were identified as impediments to optimal utilization of microfinance services. The study concludes that microfinance plays vital role in promoting entrepreneurship development in rural Northwestern Nigeria. It is recommended that microfinance institutions customize their financial products to local needs, implement comprehensive financial literacy programs, and consider interest rate reductions to maximize positive outcomes for rural entrepreneurs.

Keywords: *Microfinance, Entrepreneurship Development, Rural Households, Northwestern Nigeria.*

Introduction

Microfinance has emerged as vital instrument for poverty reduction and financial inclusion in Nigeria. Given the rural population of the country, this constitutes over 45.72% of the total populace (Edet & Ikwunze, 2025). Access to formal financial services remains limited for many rural households. These communities often depend on subsistence farming, small-scale trading and informal income-generating activities, which are frequently constrained by inadequate access to formal financial products (Nguyen & Nguyen, 2022). In Nigeria, microfinance institutions (MFIs) have been established to bridge the gap left by traditional banking systems, offering small loans and financial services tailored to the needs of low-income and rural populations (Ojo & Akinbami, 2019). The Nigerian government and development agencies have also supported microfinance initiatives aimed at empowering rural entrepreneurs, with the expectation that improved access to finance will stimulate entrepreneurship, diversify income sources and reduce poverty (Olawale & Akinbobola, 2020). Despite these efforts, the extent to which microfinance effectively promotes entrepreneurship development in diverse regions of Nigeria remains subject of debate and investigation.

Northwestern Nigeria is characterized by predominantly agrarian economy, high poverty rates, and cultural practices that influence economic activities; role of microfinance becomes more crucial. Rural households in this region often face infrastructural deficiencies, low literacy levels and socio-cultural barriers that can hinder entrepreneurial activities (Bello & Olayemi, 2021). Entrepreneurship development involves fostering the creation and growth of small and micro-enterprises that serve as engines for economic growth and job creation (Kuratko, 2016). In rural Northwestern Nigeria, entrepreneurship is often rooted in agriculture, trading and small-scale manufacturing, driven by necessity and opportunity (Bello & Olayemi, 2021). Despite its importance, entrepreneurial activities are frequently hampered by inadequate access to capital, limited business skills and infrastructural deficiencies (Sulaimon & Ibrahim, 2018). Promoting entrepreneurship among rural households can lead to increased income, diversification of livelihoods and community development (Aremu & Oluwatobi, 2019).

External economic variables, such as inflation rates, exchange rate volatility and macroeconomic stability exert profound influences on entrepreneurial activities and microfinance outcomes (Arestis & Sawyer, 2015). In Northwestern Nigeria, these external factors are particularly salient due to regional economic instability, fluctuating commodity prices and national fiscal policies (Ekpo & Umoh, 2020). For instance, high inflation erodes the purchasing power of microfinance loans and savings, discouraging entrepreneurial investment (Fasanya et al., 2018). Similarly, exchange rate fluctuations can impact the cost of imported goods and inputs, affecting the profitability of small-scale enterprises (Ogunleye & Ajayi, 2022). External economic conditions shape the operational environment for rural entrepreneurs, influencing their capacity to access finance, sustain businesses, and expand activities. Therefore, external macroeconomic variables operate as contextual factors that modulate the effectiveness of microfinance initiatives and the trajectory of entrepreneurship development in Northwestern Nigeria.

Despite the increasing availability of microfinance services in Nigeria, many rural households in Northwestern Nigeria continue to face significant challenges in accessing finance and transforming it into sustainable entrepreneurial activities. The extent to which microfinance has effectively contributed to entrepreneurship development in this region remains unclear, with limited empirical evidence addressing the unique socio-economic and cultural factors influencing rural households. Thus, there exist gaps in understanding whether microfinance initiatives are truly fostering sustainable entrepreneurship and promoting economic growth among rural communities in Northwestern Nigeria. It is evident to know that the factors that influence entrepreneurial development in this region and context is critical for designing effective interventions and programs, with microfinance being potentially significant enabler, that will effectively address the unique challenges faced by rural households. This study aims to fill the gap by examining the impact of microfinance on entrepreneurial development among rural households in Northwestern Nigeria, providing insights into how financial services can be leveraged to promote sustainable economic growth across diverse rural landscapes of Nigeria.

Literature Review and Theoretical Framework

The Theory of Financial Inclusion and Empowerment best suits this study, as it emphasizes that access to microfinance services enhances the economic activities and entrepreneurial capacity of rural households. This theory posits that microfinance provides the necessary financial resources to stimulate entrepreneurship, improve income levels and foster sustainable development among underserved populations. Empirical studies support this perspective, underpinning the theory with their studies (Akinboade & Kinfack, 2019; Oteros & Ríos, 2018; Khandker et al. 2013). The theory illustrates that microfinance facilitates rural households' ability to invest in productive activities, thereby enhancing their entrepreneurial potential. This underscores the critical role of microfinance in fostering entrepreneurship development, particularly in the context of northwestern Nigeria, by providing the necessary financial resources to support sustainable economic growth among underserved rural populations.

Obadimu et al., (2023) examined how microcredit influences the welfare of rural households in Oyo State, Nigeria. It employed a quantitative methodology using structured questionnaires and statistical analysis. The findings revealed microcredit positively impacts household welfare, including income and assets, though repayment challenges limit benefits. The study concluded that microcredit enhances welfare but recommended financial literacy programs to improve repayment rates. However, its focus is on welfare broadly, not specifically on entrepreneurship development, and its regional scope is limited, reducing generalizability. It also lacks an explicit focus on how microfinance fosters entrepreneurial activities. Similarly, Adewumi (2017) examines the impact of microfinance on entrepreneurship outcomes, including business start-up, growth, and survival. The results showed that microfinance has a positive impact on entrepreneurship development.

Nonetheless, the studies rely on small sample sizes, which may not be representative of the broader population, used self-reported data, which may be subject to biases and limitations and do not control for other factors that may influence entrepreneurship development, such as education, skills and access to markets. While the literature provides some evidence of the positive impact of microfinance on entrepreneurship development among rural households in Nigeria, further studies are required to address the limitations and challenges identified.

Hossain (2018) examines the impact of microfinance on entrepreneurship development among rural households in Bangladesh, employed survey of 1,500 microfinance clients. Results indicated that microfinance access has positive impact on entrepreneurship development. The study concludes that microfinance can be an effective tool for promoting entrepreneurship development in rural areas, but it is essential to consider the gender-specific differences in the impact of microfinance. Similarly, (Zografia et al., 2022) explored how microfinance influences small business growth in transitional economy of Kazakhstan. Results indicated that microfinance facilitates business expansion but faces challenges like high interest rates and limited financial literacy. The study recommended institutional reforms to improve effectiveness. Its focus was on urban and peri-urban areas, not rural households, and it did not explicitly link microfinance to broad entrepreneurship development or sustainability, which limits its relevance to rural, low-income contexts like Northwestern Nigeria.

Pandhare et al. (2024), evaluated how microfinance influences empowerment and entrepreneurship of women among Self-Help Groups (SHGs) in India. the study employed qualitative and quantitative mixed methods through thematic analysis. Results indicated that microfinance significantly enhances empowerment, confidence and entrepreneurial skills of women, leading to increased income and social status. The study concludes that microfinance is instrumental in empowerment of women and recommends policies that support women-specific microfinance schemes. However, the study focuses exclusively on empowerment and entrepreneurship of women, with cultural and social factors specific to India are emphasized, limiting applicability elsewhere and does not explore the sustainability of entrepreneurial ventures post-microfinance.

In a study by Shamsi et al., 2025) who examined the impact of microfinance on entrepreneurship and macroeconomic growth on multiple countries. Results revealed that microfinance positively influences entrepreneurship and economic growth but impacts vary depending on institutional quality and borrower capacity. The study concluded that microfinance should be complemented with other support services. However, the study did not focus on rural households or specific regions and highlights the importance of context but lacks empirical validation in specific locations like Nigeria.

Similarly, (Singh et al., 2021) analyzed how microfinance supports entrepreneurship among the poorest populations globally. It concluded that microfinance enables income generation and livelihoods but highlighted that, impacts depend on local context and institutional quality. The review advocates tailored approaches and infrastructure support. Its global perspective, lacking specific country or rural household data, limits its applicability to the Nigerian rural context. It also emphasizes theoretical insights over empirical evidence, leaving gaps regarding long-term impacts.

Based on the reviewed literature, it is evident that microfinance supports entrepreneurship development, income generation and empowerment in various contexts. However, they differ significantly in scope, methodology and focus. Some emphasize empowerment of women (Pandhare et al.), others examined macroeconomic effects (Shamsi et al.) and some analyze transitional economies (Kazakhstan). The studies are broad or context-specific, with limited focus on rural households in Northwestern Nigeria. Methodologically, they range from qualitative case studies to systematic reviews, highlighting a lack of rigorous, region-specific empirical research. While existing studies confirms potential benefits of microfinance, there is notable lack of empirical evidence directly examining its impact on entrepreneurship development among rural households in Northwestern Nigeria. Most studies focus on welfare, empowerment or urban contexts, with limited attention to the sustainability, scalability and specific challenges faced by rural micro-entrepreneurs in this region. There is also insufficient exploration of how microfinance interacts with capacity building, infrastructural support and long-term entrepreneurial success in this particular setting.

Methodology

The research seeks to examine and evaluate how microfinance initiatives influence the development of entrepreneurship among rural households in Northwestern Nigeria. A mixed-method approach was adopted, combining both quantitative and qualitative research techniques to gain a thorough understanding of the topic. Primary data was gathered through structured questionnaires, while interviews were conducted with 300 households who are active residents of the region. These households were purposively chosen from three states; Sokoto, Kebbi, and Zamfara, based on areas with higher concentrations of bank-linked enterprises and greater access to bank loans. This selection aimed to facilitate a more effective assessment of the effects of microfinance interventions.

In the initial phase, 30 enterprises were identified, each comprising 10 respondents, culminating to a total of 300 participants in the survey. Simple random sampling methods were employed to ensure an equitable representation of the population and to reduce selection bias. In the second phase, the respondents chosen were actively engaged in entrepreneurial activities, demonstrating a strong entrepreneurial trait among them. This stage aimed to explore the relationship between entrepreneurship development and the empowerment of rural households within the communities. In the third phase, five enterprises were selected from each of the three states, based on the high levels of observed entrepreneurial activity. This selection enabled the study to concentrate on enterprises that have a substantial impact on empowering rural households through entrepreneurial initiatives.

Descriptive research design was utilized to evaluate the influence of microfinance on entrepreneurship development among rural households in Northwestern Nigeria. This approach enabled the study to obtain a detailed understanding of the current conditions, trends, and relationships among the variables being examined. Alongside the quantitative method, the study incorporated a qualitative approach to gain deeper insights into how microfinance impacts entrepreneurial growth among rural households. Various qualitative data collection tools, including in-depth interviews, observations and case studies, were employed to gather comprehensive information and enrich the understanding of entrepreneurial development in the area.

Integrating both quantitative and qualitative methods, the study aims to examine the relationship between microfinance interventions and entrepreneurial development, leading to economic empowerment in Northwestern states. Additionally, secondary data was collected from multiple sources such as academic journals and official websites of the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS). These supplementary sources provided additional depth and context to the findings, supporting a more thorough exploration of the research problem. The use of a mixed-method approach, along with careful selection of enterprises and respondents, enhanced the study's validity and reliability. Focusing on Northwestern Nigeria offers valuable insights into the specific dynamics of rural household empowerment within the region.

Results and Discussions

Demographic Characteristics of Respondents

Table 1, presents demographic characteristics of respondents who actively participates in entrepreneurship activities, showing the statistical attributes that describe the population. These characteristics include variables such as age, gender, marital status, source of income among others. Examining these attributes helps to understand the background and diversity of the respondents. It is also essential for identifying patterns, differences and trends within the study population.

Table 1: Results on Demographic Characteristics of Respondents

Variables	Categories	Frequency	Percentage	p-values
Age	20 and below	46	15.3	<0.001
	21-30	152	50.7	0.935
	31- 40	94	31.3	<0.001
	41- 50	8	2.7	<0.001
Gender	Male	170	56.7	0.369
	Female	130	43.3	0.121
Marital Status	Single	88	29.3	<0.001
	Married	102	34.0	0.004
	Divorced	64	21.3	<0.001
	Widowed	46	15.4	<0.001
Education	Illiterate	24	8.0	<0.001
	Primary	128	42.7	0.086
	Secondary	114	38.0	0.004
	Tertiary	32	11.3	<0.001
Source of Income	Agricultural(land)	90	30.0	<0.001
	Agricultural(labour)	170	56.7	0.121
	Livestock and others	40	13.3	<0.001
Monthly Income (Naira)	50,000 and below	88	29.3	<0.001
	50,000 -200,000	160	53.3	0.463
	200,000-500,000	36	12.0	<0.001
	500,000-1000,000	6	2.0	<0.001
	1000,000 and above	10	3.3	<0.001

Source: Author's survey, 2025

The statistics of the respondents reveal that the majority are aged between 21 and 30 years, comprising 50.7% of the sample, with significant differences observed across age groups. Most respondents are male, accounting for 56.7%, though this gender difference is not statistically significant. The table further presents marital status, substantial portion are married (34%) or single (29.3%), with significant variation among the groups. In terms of education, the largest groups have primary (42.7%) or secondary education (38%), both showing significant differences. When examining the source of income, most respondents derive their income from agricultural labor (56.7%), with significant variations across different sources. The monthly income distribution indicates that over 50% earn between 50,000 and 200,000 Naira (53.3%), with significant disparities among income brackets. These demographic variables provide valuable context for understanding the background of the population, economic status and social characteristics, which are essential for interpreting the study findings and designing targeted interventions.

Correlation Analysis

The correlation analysis highlights significant relationships among various economic factors influencing microfinance and entrepreneurship development among rural households.

Table 2: Correlation Analysis between Microfinance and Entrepreneurship Development among Rural Households

Economic factor	AC	FL	RM	SNS	MA	IF	Cronbach' Alpha
Access to Credit (AC)	1						0.673
Financial Literacy(FL)	0.790**	1					0.686
Risk Management(RM)	0.844**	0.771**	1				0.664
Social Networks and Support (SNS)	0.615**	0.569**	0.714**	1			0.682
Market Access (MA)	0.305**	0.262**	0.377**	0.624**	1		0.744
Institutional Factors(IF)	0.134	0.120	0.152	0.114	0.111	1	0.879

Source: Authors survey, 2025

Access to Credit (AC) is strongly positively correlated with Financial Literacy (FL), Risk Management (RM), Social Networks and Support (SNS), and Market Access (MA), indicating that improved credit availability is associated with higher levels of financial knowledge, better risk management skills, stronger social support systems, and greater access to markets. Similarly, Financial Literacy shows a strong positive correlation with Risk Management and significant links with social networks and market access, suggesting that financial knowledge enhances entrepreneurs' ability to manage risks and leverage social and market connections. Risk Management is also closely linked with Social Networks, emphasizing the role of social support in effective risk handling.

Market Access exhibits moderate positive correlations with access to credit, financial literacy, and risk management, implying that better market opportunities are connected with these key factors. Conversely, Institutional Factors demonstrate weak correlations with all other variables, indicating a limited direct relationship within this context. The reliability scores for the scales used are acceptable, with Cronbach's Alpha values ranging from 0.664 to 0.879.

Overall, the findings suggest that enhancing access to credit, financial literacy, risk management skills, and social networks could collectively foster entrepreneurship development among rural households. The relatively weaker influence of institutional factors points to the potential need for further exploration of their role or the development of strategies to strengthen institutional support systems in promoting entrepreneurial growth.

Entrepreneurship Challenges before Accessing Microfinance Credit

The interviews reveal several key challenges faced by rural entrepreneurs before accessing microfinance credit.

Table 3: Entrepreneurship Challenges before Accessing Microfinance Credit

Indicators	In-depth Interviews of Entrepreneurs
Limited Access to Credit	Rural households often lack the required collateral to secure credits from microfinance institutions. Similarly, informal money lenders charge exorbitant interest rates, making borrowing very expensive.
Limited Financial Literacy	Many rural households do not have basic financial knowledge, making it difficult to navigate microfinance system. Thus entrepreneurs struggle to develop viable business plan , but difficult to access funding.
Poor Risk Management	Lack of access to microfinance impedes the encouragement of entrepreneurs to take calculated risk and innovations. Provisions of safety net, helping rural households manage risks and uncertainty became difficult.
Lack of Social Networks and Support	Rural households often lack social networks, making it difficult to access information and resources. It is noted that women entrepreneurs face cultural and social barriers, limiting their access to microfinance credit.
Lack of Market Access	Rural households face challenges accessing markets to sell their products, leading to low sale and revenue. Competition with urban based entrepreneurs makes it difficult for them to penetrate market.
Difficult Regulatory Challenges	Complex regulations and registration requirements hinders entrepreneurship development and entrepreneurs lack legal protection, thus difficult to enforce contracts and protect their investment.

Source: Authors survey, 2025

Many entrepreneurs lack collateral making it difficult to secure formal loans, while informal lenders charge high interest rates, increasing borrowing costs. Limited financial literacy hampers their ability to develop viable business plan and navigate the microfinance system. The absence of microfinance access also restricts their capacity to manage risks and innovate, as safety nets are lacking. Social networks and support are often weak, especially for women entrepreneurs facing cultural barriers, which limits their access to information and resources. Additionally, market access remains a significant hurdle, with rural households struggling to reach markets and compete with urban-based entrepreneurs, resulting in low sales and revenue. Regulatory complexities and licensing requirements further hinder entrepreneurship development, as entrepreneurs lack legal protections, making contract enforcement and investment safeguarding difficult.

Entrepreneurial Activities of Rural Households

The results presented in Table 4 offers an overview of the entrepreneurial activities undertaken by rural households across three states, Sokoto, Kebbi, and Zamfara.

Table 4: Rural Households Involvement in Entrepreneurship Activities

Business	Crop production	Livestock production	Food Processing	Blocks making	Poultry	Dairy Farming	Total
Sokoto	30(25.4)	20(16.9)	24(20.3)	14(11.9)	16 (13.6)	14(11.9)	118(100.0)
Kebbi	24 (27.3)	20 (18.2)	20 (13.6)	7 (13.6)	9(13.6)	12 (13.6)	92 (100.0)
Zamfara	27 (25.5)	16 (27.7)	18 (17.0)	12 (8.5)	11 (14.9)	6 (6.4)	90 (100.0)
Total	81 (27)	56 (18.7)	62 (20.7)	33 (11)	36 (12)	32 (10.6)	300(100.0)

Source: Authors survey, 2025

The survey of rural households in Sokoto, Kebbi, and Zamfara states reveals a diverse range of entrepreneurial activities, with crop production being the most common, involving 27% of households. Food processing and livestock production follow, accounting for 20.7% and 18.7% respectively. The data indicates that households are engaged in multiple ventures, reflecting strategy of diversification to manage risks and increase income sources. Results further indicated that, Sokoto shows high participation in crop production (25.4%) and livestock (16.9%), while Kebbi also has strong involvement in crop farming (27.3%) and livestock (18.2%). Zamfara stands out with the highest participation in livestock farming (27.7%), suggesting regional emphasis on animal husbandry.

These findings imply that agriculture remains the backbone of rural entrepreneurship in these areas, with significant opportunities for growth in food processing and livestock sectors. The diverse engagement of household's points to the potential benefits of targeted support, such as improved access to inputs, training and markets which could further enhance productivity and income. Promoting these entrepreneurial activities could play vital role in boosting rural livelihoods and fostering economic development in the region.

Entrepreneurship Development

Table 5 compares the income and savings levels among 300 respondents before and after engaging in entrepreneurial activities. The analysis shows notable improvements in both financial indicators.

Table 5: Income and Savings Status Before and After Engaging in Entrepreneurial Activities

Position	Respondents	Min	Max	Mean	Std Dev
Income					
Before joining monthly income	300	1000	6000	3,720.66	556.63
After joining monthly income	300	2000	6400	4,968.00	449.47
Savings					
Before joining monthly savings	300	1000.00	5000.00	2280.66	388.40
After joining monthly savings	300	2000.00	5600.00	3284.00	376.18

Source: Authors survey, 2025

Before starting their entrepreneurial ventures, respondents had a minimum monthly income of ₦1,000 and a maximum of ₦6,000, with an average income of approximately ₦3,721. Their savings ranged from ₦1,000 to ₦5,000, averaging about ₦2,281. After engaging in entrepreneurship, both income and savings increased significantly. The minimum monthly income rose to ₦2,000, the maximum to ₦6,400, and the average income improved to around ₦4,968. Similarly, savings increased, with the minimum now ₦2,000, the maximum ₦5,600, and the average savings reaching about ₦3,284.

These results suggest that entrepreneurial activities have a positive impact on household income and savings. The increase in income provides households with greater financial resources, while higher savings indicate improved financial stability and capacity for future investments. The reduction in variability (as shown by the decreased standard deviations) implies that these benefits are more uniformly experienced across respondents. Thus, supporting entrepreneurship appears to be an effective strategy for enhancing economic well-being and reducing income disparities among rural households in the region.

Discussions

The findings from this study align with and expand upon the existing literature, which generally supports the positive impact of microfinance on entrepreneurship development and household welfare. Consistent with studies of (Akinboade & Kinfack, 2019; Adewumi, 2017), the significant increase in household income and savings post-microfinance access highlights microfinance's role in enabling rural entrepreneurs to expand their businesses and improve financial stability. The challenges faced prior to microfinance (such as lack of collateral, limited financial literacy, and market access) mirror findings of Obadimu et al. (2023), underscoring persistent barriers that microfinance seeks to address. However, while prior studies, (Hossain, 2018; Pandhare et al., 2024), emphasizes potential of microfinance for empowerment and growth. Many studies are context-specific or limited to urban settings, with less focus on rural households in Northwestern Nigeria. For example, Olaleye et al. (2018) examined microfinance in Nigerian urban centers, with limited emphasis on rural areas, while Adegbite and Adebayo (2020) focused on microfinance impacts in southern Nigeria, leaving gap in research on rural households in the northwestern region.

This study contributes to the literature by providing region-specific evidence that demonstrates microfinance's capacity to enhance entrepreneurship among rural households, despite ongoing challenges like market access and social barriers. It underscores the necessity of complementary support such as financial literacy and infrastructural development to sustain entrepreneurial growth, aligning with calls from broader research for integrated approaches to microfinance-led development.

Conclusion and recommendations

Based on the findings of this study, it can be concluded that microfinance has significant and positive impact on the development of entrepreneurship among rural households in Northwestern Nigeria. Access to microfinance services has enabled households to improve their income levels, increase savings and diversify their entrepreneurial activities, particularly in agriculture, food processing and livestock production. Despite the progress, persistent challenges hinder full entrepreneurial potential. Therefore, while microfinance is a critical tool for economic empowerment in rural areas, its effectiveness can be enhanced through integrated support measures and inclusive policies. That will foster enabling environment for rural entrepreneurship through comprehensive microfinance initiatives in Northwestern Nigeria.

The study thus provided the following recommendations to enhance entrepreneurship development among rural households in northwestern Nigeria.

i. Enhance Financial Literacy Programs: Implement targeted financial education initiatives to improve rural entrepreneurs' understanding of microfinance products, business planning and financial management, fostering sustainable growth.
ii. Improve Market Access Infrastructure: Invest in rural infrastructure such as roads, transportation and market facilities to enable easier access to markets, thereby increasing sales and income for rural entrepreneurs.
iii. Strengthen Support Services: Develop complementary support systems, including business training, mentorship and access to information, to empower entrepreneurs and address social and knowledge barriers.
iv. Promote Inclusive Microfinance Policies: Design microfinance programs that specifically address the needs of marginalized groups, such as women and youth to ensure equitable participation and benefits across rural communities.
v. Facilitate Policy and Institutional Coordination: Encourage collaboration between microfinance institutions, government agencies and development partners to create an integrated support framework that sustains entrepreneurial development in Northwestern Nigeria.

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TRANSPARENCY, ACCOUNTABILITY, AND DONOR CONFIDENCE: THE ROLE OF INTERNAL CONTROLS IN NGO FINANCING PERFORMANCE IN MAIDUGURI

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Abstract
This study investigates the role of internal controls in enhancing transparency, accountability, and donor confidence among non-governmental organizations (NGOs) operating in Maiduguri, Borno State, Nigeria. The research recognizes that NGOs both international and local play crucial roles in humanitarian aid, reconstruction, and social development, particularly in post-conflict contexts. However, concerns about weak financial management, misuse of funds, and declining donor trust persist. The study adopts a quantitative research design using structured questionnaires administered to 220 staff members of NGOs, out of which 200 valid responses were analyzed using SPSS version 25. Descriptive and inferential statistics were employed to determine relationships between internal control mechanisms and organizational performance indicators such as transparency, accountability, and donor confidence. The findings reveal that well-structured internal control systems significantly enhance financial transparency and promote timely, accurate reporting, which strengthens donor trust. Correlation analysis further indicates a positive relationship between internal control effectiveness and NGO performance ($r = 0.76$, $p < 0.05$). The study identifies major challenges including inadequate staff training, weak audit systems, and management interference in control implementation. It concludes that sound internal control frameworks not only ensure prudent fund management but also sustain donor partnerships critical for operational continuity. The research recommends strengthening internal audit units, adopting digital accounting systems, and instituting continuous financial ethics training to enhance accountability and donor confidence among NGOs in Maiduguri.

Keywords*: Internal, Controls, Transparency, Accountability, Donor, Confidence.*

Background of the Study

Non-Governmental Organizations (NGOs) serve as key development actors globally, especially in fragile states recovering from conflict, such as Nigeria's northeastern region. Their financial integrity and accountability have become central to sustaining donor confidence and ensuring that humanitarian resources reach intended beneficiaries (Afolabi, 2022). Internal controls comprising financial, operational, and compliance mechanisms are essential tools that enable NGOs to safeguard assets, ensure the reliability of financial reporting, and promote transparency in fund utilization (COSO, 2017; Onuorah & Okeke, 2023). In Maiduguri, Borno State, a hub for humanitarian and development interventions, over 120 international and local NGOs operate to provide relief and rebuild livelihoods (UN OCHA, 2023). However, increasing reports of misappropriation of donor funds and weak financial accountability have threatened stakeholder trust and funding continuity (Babatunde, 2021). Studies emphasize that without strong internal control systems, organizations risk inefficiency, corruption, and donor withdrawal (Afolayan & Abdul, 2020; Joseph & Tanko, 2022).

Transparency and accountability are therefore pivotal in maintaining donor confidence, particularly in environments characterized by limited oversight and fragile governance. Internal controls not only detect irregularities but also serve as assurance mechanisms that organizational objectives are being met ethically and efficiently. This study thus seeks to examine how internal control mechanisms influence transparency, accountability, and donor confidence among NGOs in Maiduguri, where post-conflict rebuilding demands high levels of credibility and operational discipline.

Statement of the Problem

NGOs in Maiduguri are entrusted with significant financial resources from international donors for humanitarian, reconstruction, and development projects. Despite this, several audit reports and donor reviews reveal persistent cases of weak internal control systems, inadequate segregation of duties, and poor documentation practices (Transparency International, 2023; Buba & Goni, 2022). Such deficiencies have led to allegations of fund diversion, inflated expenditures, and delayed project implementation, undermining donor confidence and jeopardizing future funding.

While some NGOs maintain strong compliance frameworks, many smaller or local organizations lack professional financial management structures, resulting in irregular audits and incomplete reporting (Afolabi, 2022). The absence of standardized internal control mechanisms reduces transparency, hinders accountability, and weakens organizational performance. Therefore, the central problem is whether existing internal control systems among NGOs in Maiduguri are sufficient to ensure transparency, promote accountability, and sustain donor confidence. This study seeks to fill the gap in empirical research on how control mechanisms function in a post-conflict environment, identifying the extent to which internal controls contribute to financial integrity and overall NGO performance.

Objectives of the Study

The general objective of this research is to examine the role of internal controls in promoting transparency, accountability, and donor confidence in NGO financing performance in Maiduguri.

The specific objectives are to:

i. Assess the relationship between internal control systems and financial transparency among NGOs in Maiduguri.
ii. Determine the effect of internal control mechanisms on organizational accountability.
iii. Evaluate how internal controls influence donor confidence in NGO operations.
iv. Identify challenges affecting the effectiveness of internal control implementation among NGOs in Maiduguri.

Research Questions

i. How do internal control systems enhance financial transparency in Maiduguri-based NGOs?
ii. What is the relationship between internal control mechanisms and organizational accountability?
iii. In what ways do internal controls affect donor confidence and funding continuity?
iv. What are the major challenges NGOs face in implementing effective internal control systems?

Research Hypotheses

H_{01}: There is no significant relationship between internal control systems and financial transparency in NGOs in Maiduguri.
H_{02}: Internal control mechanisms do not significantly affect organizational accountability.
H_{03}: Internal control practices do not have a significant impact on donor confidence in NGO operations.

Literature Review

Conceptual Framework

Internal control is defined by the Committee of Sponsoring Organizations (COSO, 2017) as a process designed to provide reasonable assurance regarding the achievement of objectives in operations, reporting, and compliance. For NGOs, internal control ensures that funds are used effectively, financial statements are accurate, and management acts within donor guidelines. Transparency involves openness in decision-making and clarity in reporting, allowing donors and stakeholders to verify how resources are allocated (Ebrahim, 2019). Accountability refers to the obligation of NGOs to report, explain, and justify their financial and operational activities to donors, regulators, and beneficiaries (Olaoye & Adebayo, 2022). Donor confidence reflects the degree of trust donors place in an NGO's capacity to utilize funds responsibly (Adediran & Okon, 2023). These concepts are interdependent: effective internal controls foster transparency and accountability, which in turn sustain donor confidence and enhance organizational performance.

Internal Controls and NGO Financial Transparency

Transparency in NGOs depends heavily on the robustness of internal control systems. According to Oduro and Nyarko (2021), transparent financial practices such as timely reporting, open disclosure, and regular audits enhance donor trust and organizational legitimacy. A study by Joseph and Tanko (2022) found that NGOs in northern Nigeria with strong internal audit systems exhibited higher transparency and reduced financial mismanagement.

Globally, Hwang and Powell (2020) emphasize that transparency not only ensures compliance with donor requirements but also improves operational efficiency by preventing resource wastage. In Kenya, Ndungu and Kamau (2022) discovered that internal financial controls particularly authorization and documentation had a direct positive relationship with NGO transparency scores. Similarly, Afolabi (2022) reported that internal checks, staff accountability, and regular monitoring significantly improved transparency among humanitarian NGOs in Nigeria. In Maiduguri, where donor scrutiny is intense due to the large inflow of humanitarian funds, NGOs with clear financial reporting and regular internal audits are more likely to attract repeat funding. Weak controls, on the other hand, have resulted in donor withdrawal and reputational damage for some organizations (Babatunde, 2021).

Internal Controls and Accountability in NGOs

Accountability requires that organizations provide accurate accounts of resource utilization, adhering to ethical and regulatory standards. According to Ebrahim (2019), accountability mechanisms involve both upward (toward donors) and downward (toward beneficiaries) reporting. Effective internal controls ensure that all financial transactions are properly authorized, recorded, and verifiable.

Research by Akinleye and Ogunmakin (2023) found that accountability levels are highest in organizations where management supports independent internal audit functions. Similarly, Olayinka and Adebayo (2021) established that segregation of duties, reconciliation, and periodic review processes promote accountability and deter fraud.

In the NGO context, especially within conflict-prone areas like Maiduguri, accountability failures often stem from weak monitoring systems and limited staff capacity. Adediran and Okon (2023) argue that NGOs lacking standardized control policies face challenges in meeting donor audit requirements, resulting in reputational and financial risks. Thus, the integration of accountability frameworks within internal control systems is essential for both operational credibility and sustainable financing.

Internal Controls and Donor Confidence

Donor confidence is shaped by an organization's perceived integrity, reliability, and financial discipline. When donors are assured of prudent fund management through effective internal controls, they are more likely to sustain partnerships (Eze & Nwankwo, 2022). An international study by Bawole and Ibrahim (2021) in Ghana revealed that NGOs with formalized internal control frameworks experienced higher donor retention rates. Similarly, Ibekwe and Uche (2022) reported that transparent audit trails, risk assessment procedures, and financial disclosures were positively correlated with donor confidence among Nigerian humanitarian organizations. In Maiduguri, donor confidence is particularly fragile due to the volatile socio-economic environment. Many donors demand audited statements, performance reports, and third-party verification before renewing grants (UN OCHA, 2023). Effective internal controls thus act as a safeguard, assuring donors that funds are being used responsibly and in line with project objectives.

Research Methodology

Research Design

This study adopted a quantitative research design, which allowed for the collection of numerical data to examine the relationship between internal controls, transparency, accountability, and donor confidence among NGOs in Maiduguri. A survey method using structured questionnaires was employed to ensure systematic data collection and generalization of findings.

Population of the Study

The target population comprised staff members of both international and local NGOs operating within Maiduguri, Borno State. These included finance officers, program managers, internal auditors, monitoring and evaluation officers, and administrative personnel. The total population was estimated at 500 NGO staff across organizations such as the International Rescue Committee (IRC), Norwegian Refugee Council (NRC), Action Against Hunger, and local NGOs such as Borno Women Development Initiative and Hope Restoration Foundation.

Sample Size and Sampling Technique

A sample size of 220 respondents was determined using Yamane's formula (1967) for finite populations with a 5% margin of error. A stratified random sampling technique was used to ensure representation from both international and local NGOs. Out of the 220 distributed questionnaires, 200 valid responses were returned and analyzed, representing a 90.9% response rate.

Instrument of Data Collection

Data were collected using a structured questionnaire designed on a five-point Likert scale (Strongly Agree = 5; Strongly Disagree = 1). The questionnaire comprised two sections:

i. Section A: Demographic information (age, gender, education, NGO type, and experience).
ii. Section B: Research items measuring internal control, transparency, accountability, and donor confidence.

Sample Questionnaire Items

i. Internal control systems in my organization ensure all transactions are properly documented.
ii. There is a clear segregation of duties in financial management.
iii. Regular internal audits are conducted in my organization.
iv. Financial reports are transparent and shared with donors.
v. Staff are held accountable for financial mismanagement.
vi. Donors have confidence in our financial reporting processes.
vii. Management promptly implements audit recommendations.
viii. Training is provided regularly to strengthen financial control capacity.
ix. My organization complies with donor funding guidelines.
x. Internal control mechanisms have improved overall project performance.

Validity and Reliability of the Instrument

The validity of the instrument was ensured through expert review by three senior lecturers in accounting and management from the University of Maiduguri. The questionnaire was also pre-tested among 20 NGO staff in Damaturu to refine clarity and relevance.

The reliability of the instrument was assessed using Cronbach's Alpha, yielding the following results:

i. Internal Control: 0.89
ii. Transparency: 0.87
iii. Accountability: 0.85
iv. Donor Confidence: 0.88

An overall Cronbach Alpha of 0.87 indicated high internal consistency and reliability.

Method of Data Analysis

Data were analyzed using SPSS version 25. Descriptive statistics (frequencies, means, and standard deviations) summarized responses, while inferential statistics (Pearson correlation and regression analysis) tested the hypotheses.

Data Presentation and Analysis

Table 1: Descriptive Statistics of Responses

Response Category	Frequency	Percentage (%)
Strongly Agree	80	40.0
Agree	70	35.0
Neutral	25	12.5
Disagree	15	7.5
Strongly Disagree	10	5.0
Total	200	100.0

Mean Score = 3.97,
Standard Deviation = 1.05

Interpretation: The majority of respondents (75%) agreed that internal control systems enhance transparency, accountability, and donor confidence within NGOs in Maiduguri.

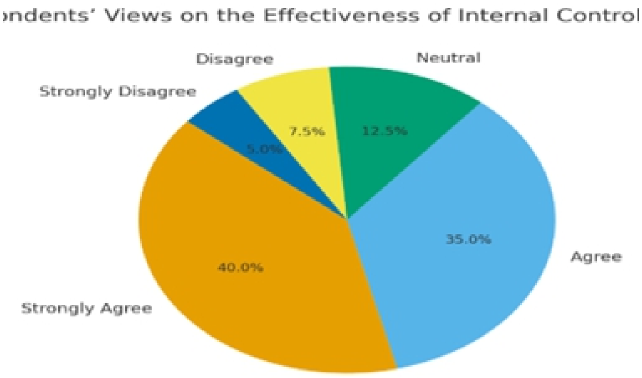
Table 2: **Correlation Analysis**

Variables	Internal Control	Transparency	Accountability	Donor Confidence
Internal Control	1.000	0.754**	0.702**	0.762**
Transparency	0.754**	1.000	0.689**	0.714**
Accountability	0.702**	0.689**	1.000	0.695**
Donor Confidence	0.762**	0.714**	0.695**	1.000

(Correlation is significant at the 0.01 level)

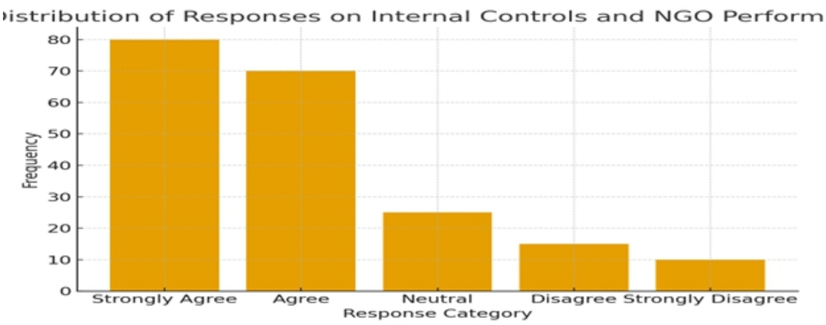
Interpretation: Internal controls show a strong and positive correlation with transparency (r = 0.75), accountability (r = 0.70), and donor confidence (r = 0.76), indicating their critical role in organizational performance.

Figure 1: Pie Chart of Respondents' Opinions



Pie chart visualization — 40% Strongly Agree, 35% Agree, 12.5% Neutral, 7.5% Disagree, 5% Strongly Disagree

Figure 2: Bar Chart of Response Distribution



Bar chart showing frequency of responses across categories.
(Label: "Distribution of Responses on Internal Controls and NGO Performance in Maiduguri.")

Discussion of Findings

Given the strong positive correlations between internal controls and key organizational indicators transparency (r = 0.75), accountability (r = 0.70), and donor confidence (r = 0.76) the statistical evidence provides sufficient grounds to reject the null hypothesis (H_0), which stated that internal controls have no significant relationship with organizational performance. Accordingly, the alternative hypothesis (H_1) is accepted, affirming that internal controls significantly and positively influence organizational performance through enhanced transparency, accountability, and donor confidence.

These findings corroborate Oduro and Nyarko (2021), who established that internal audits promote integrity and transparency in financial management. Similarly, Bawole and Ibrahim (2021) confirmed that donor retention rates increase when NGOs maintain structured control systems. In line with Joseph and Tanko (2022) and Afolabi (2022), this study confirms that internal controls especially regular audits, documentation, and segregation of duties reduce risks of misappropriation and foster organizational trust. Weak internal control systems, often due to management interference or insufficient training, remain the primary obstacle to accountability in Maiduguri NGOs.

Conclusion

This study concludes that internal controls significantly influence transparency, accountability, and donor confidence among NGOs in Maiduguri. The results affirm that NGOs with strong internal audit systems and sound financial oversight are better positioned to sustain donor trust and operational efficiency. Moreover, effective internal controls enhance compliance with donor requirements and ensure that resources are used ethically and efficiently.

The findings emphasize that strengthening internal controls not only improves organizational performance but also safeguards NGOs' reputations and long-term sustainability in the humanitarian landscape of Maiduguri.

Recommendations

i. NGOs should strengthen internal audit units and ensure auditors operate independently without managerial interference.
ii. Regular financial management and ethics training should be conducted for staff to enhance accountability.
iii. Management should implement audit recommendations promptly to demonstrate compliance.
iv. Regulatory bodies such as the Corporate Affairs Commission (CAC) and EFCC should monitor NGO financial practices.
v. Donors should require transparent digital reporting platforms to enhance real-time monitoring and accountability.
vi. Local NGOs should adopt international best practices in financial governance to attract sustainable funding.
vii. Periodic third-party audits should be made mandatory for all NGOs operating in conflict-affected areas.

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EFFECT OF DIGITAL FINANCIAL TOOLS ON THE PROFITABILITY AND GROWTH OF SMALL AND MEDIUM ENTERPRISES (SMES) IN ADAMAWA, BORNO, AND YOBE STATES

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Abstract

This study investigates the impact of digital financial tools on the profitability and growth of Small and Medium Enterprises (SMEs) in Adamawa, Borno, and Yobe States, focusing on Adamawa, Borno, and Yobe States. In recent years, digital financial solutions such as mobile banking, digital wallets, and cloud-based accounting software have transformed the way businesses manage finances. However, despite the growing availability of these technologies, SMEs in Adamawa, Borno, and Yobe States face multiple challenges ranging from infrastructural limitations to digital illiteracy and insecurity. With SMEs constituting over 90% of Nigeria's enterprises and contributing significantly to employment and GDP (SMEDAN/NBS, 2017), understanding the influence of digital finance on their growth is imperative. The research adopts a quantitative methodology, surveying 200 SME operators through structured questionnaires designed to evaluate the extent of digital financial tool usage, perceived benefits, challenges, and impacts on financial performance. Data were analyzed using SPSS with descriptive and inferential statistics including correlation and regression. The study found a strong positive relationship between the use of digital financial tools and improved profitability ($r = 0.71$, $p < 0.01$). Notably, SMEs using digital platforms reported better cash flow management, timely access to credit, and improved customer payment systems. Despite the benefits, key barriers such as poor internet connectivity, lack of awareness, and cybersecurity concerns persist. Findings also revealed that businesses engaging regularly with digital tools demonstrated higher growth indicators such as revenue increases and business expansion. Reliability and validity of instruments were confirmed through expert reviews and test-retest with a Pearson reliability coefficient of 0.85. The research concludes that the integration of digital financial tools is a significant predictor of profitability and growth among SMEs in Adamawa, Borno, and Yobe States. It recommends the implementation of *targeted digital literacy programs, investment in ICT infrastructure, and partnerships between fintech firms and local businesses. These strategies could catalyze economic resilience and foster inclusive growth in the region. The insights are vital for policymakers, financial institutions, and development agencies aiming to leverage digital finance to stimulate SME development and regional economic advancement.*

Keywords: *Digital, Financial Tools, Profitability, Growth, Small, Medium, Enterprises*

Background of the Study

Small and Medium Enterprises (SMEs) play a pivotal role in the Nigerian economy, contributing nearly 48% to the national GDP and employing over 60 million people (SMEDAN/NBS, 2017). They are widely recognized as drivers of innovation, employment, and economic diversification (Agbim, 2020). However, SMEs, especially in Nigeria's North-East region, face several operational challenges including insecurity, limited access to finance, and poor infrastructure (World Bank, 2020). The emergence of digital financial tools such as mobile money services, point-of-sale (POS) systems, cloud-based accounting, and fintech lending platforms offers a transformative opportunity for SMEs to overcome traditional financial bottlenecks. These tools provide access to faster transactions, improved record keeping, access to financial products, and real-time decision-making capabilities (Ozili, 2018). Despite the national push towards digital finance adoption, uptake among SMEs in Adamawa, Borno, and Yobe States remains inconsistent, potentially due to infrastructural and educational disparities. Prior research emphasizes the importance of digital finance in fostering inclusive financial ecosystems and promoting business sustainability (Demirguc-Kunt et al., 2018). However, empirical studies specifically focusing on Adamawa, Borno, and Yobe States remain limited, leaving a gap in understanding how these tools influence business outcomes in high-risk and underserved regions. This study aims to fill this knowledge gap by assessing the relationship between the use of digital financial tools and the financial performance of SMEs in Adamawa, Borno, and Yobe States. Through this research, we aim to provide actionable insights that inform policy design, entrepreneurial strategy, and development interventions in the region.

Statement of the Problem

In Nigeria, the SME sector faces persistent financial constraints that hinder growth and profitability. These challenges are particularly pronounced in the North-East region, where decades of socio-economic instability and infrastructural decay have weakened business environments. SMEs operating in this region often lack access to traditional financial services due to the closure of bank branches, limited physical security, and high transaction costs. Digital financial tools have the potential to mitigate some of these barriers by providing SMEs with alternative channels for accessing credit, managing payments, and tracking financial performance. However, the extent to which these tools have been adopted and their actual impact on SME profitability and growth in Adamawa, Borno, and Yobe States remains poorly understood. Preliminary observations suggest that many SMEs are either unaware of or unable to effectively utilize these tools. This disconnect raises critical questions: Are digital financial tools accessible and usable by SMEs in the region? Do they contribute meaningfully to profitability and business expansion? What barriers impede their usage? Addressing these questions is essential for developing targeted interventions that support digital financial inclusion and promote economic resilience. This study, therefore, seeks to bridge the empirical gap by systematically evaluating the role of digital financial tools in enhancing SME performance in Adamawa, Borno, and Yobe States. Understanding these dynamics is crucial for designing responsive policies and support mechanisms that can empower SMEs and stimulate inclusive regional development.

Objectives of the Study

i. To examine the level of awareness and adoption of digital financial tools among SMEs in Adamawa, Borno, and Yobe States.
ii. To assess the impact of digital financial tools on the profitability and growth of SMEs.
iii. To identify the key barriers and enablers of digital financial tool adoption among SMEs.

Research Questions

i. What is the level of awareness and usage of digital financial tools among SMEs in Adamawa, Borno, and Yobe States?
ii. How do digital financial tools influence SME profitability and growth?
iii. What challenges limit the adoption of digital financial tools in the region?

Hypothesis

Ho: There is no significant relationship between the use of digital financial tools and the profitability of SMEs in Adamawa, Borno, and Yobe States.
H1: There is a significant relationship between the use of digital financial tools and the profitability of SMEs in Adamawa, Borno, and Yobe States.

Literature Review

The integration of digital financial tools into SME operations has garnered significant attention in development finance and entrepreneurship literature. Digital finance encompasses technologies that deliver financial services through mobile phones, the internet, or smart cards (Aron, 2018). Such tools enhance financial access, especially in remote and underserved regions like Adamawa, Borno, and Yobe States. According to Ozili (2018), digital finance reduces transaction costs and improves efficiency in financial operations. SMEs that embrace mobile banking, digital wallets, and cloud accounting can better manage their cash flow and make informed financial decisions (Asongu et al., 2022). Empirical evidence by Bongomin & Ntayi (2018) indicates that mobile banking enhances credit access and financial inclusiveness for small enterprises in sub-Saharan Africa. Asongu & Odhiambo (2020) argue that digital platforms facilitate customer engagement and business expansion, thereby boosting sales and profitability. In Adamawa, Borno, and Yobe States, however, weak ICT infrastructure, limited power supply, and security challenges obstruct adoption (Agwu, 2022). Despite these barriers, findings by Oluwafemi (2023) show that digitally equipped SMEs demonstrate better growth indicators and operational stability. Digital literacy plays a critical role in tool adoption and utility. Adeola et al. (2019) found that SMEs with digital knowledge are more likely to explore fintech services. This supports the view of Osei-Assibey (2015), who emphasized the role of human capital in digital financial inclusion. Moreover, the COVID-19 pandemic accelerated digital finance usage among SMEs (KPMG, 2021), underscoring its resilience-enhancing potential. Furthermore, FinTech lending platforms provide an alternative to traditional banks, offering quick and collateral-free credit (Zetzsche et al., 2017). These services have proven particularly valuable to SMEs in conflict-affected regions (McKinsey, 2016). However, concerns around cybersecurity and fraud remain a deterrent (Oyedokun et al., 2020). A lack of consumer protection regulations and trust in digital channels also hinders broader adoption (CBN, 2018). In summary, the literature suggests that digital financial tools significantly contribute to SME performance. Their impact, however, is mediated by infrastructure, literacy, regulatory frameworks, and security. Addressing these gaps is key to unlocking their full potential in Adamawa, Borno, and Yobe States.

Research Design

The research design for this study on the Effect of Digital Financial Tools on the Profitability and Growth of Small and Medium Enterprises (SMEs) in Adamawa, Borno and Yobe is structured to ensure a rigorous, systematic, and replicable approach. It aligns with the study's quantitative methodology, focusing on empirical testing of relationships between digital financial tool adoption and SME outcomes in Adamawa, Borno, and Yobe States. The design is guided by the positivist philosophy, emphasizing objective measurement and statistical analysis to test hypotheses.

Population

The target population comprises SME owners/operators in Adamawa, Borno, and Yobe States, estimated at over 1 million based on national MSME surveys (SMEDAN/NBS, 2017). SMEs are defined per SMEDAN criteria: micro (1-9 employees, assets < N5 million), small (10-49 employees, assets N5-50 million), and medium (50-199 employees, assets N50-500 million).

Sampling Technique

Stratified random sampling is used to ensure representation across states (Adamawa: 40%, Borno: 30%, Yobe: 30%) and SME sizes (micro: 50%, small: 30%, medium: 20%). Strata are based on state registries or local business associations to account for regional variations (e.g., higher insecurity in Borno).

Sample Size

A sample of 200 SME owners is selected, calculated using Yamane's formula (n = N / (1 + N(e)^2), where N is the estimated population, e = 0.07 margin of error at 95% confidence). This size ensures statistical power for correlation/regression analysis while being feasible given logistical constraints.

Data Collection Methods

i. Primary Data: Collected via a structured questionnaire with closed-ended (e.g., Likert-scale for impact perceptions) and multiple-choice items. The 10-key questions focus on awareness, frequency of use, benefits (e.g., profitability improvement), challenges, and recommendations. Questionnaires are administered in-person.
ii. Secondary Data: Drawn from literature, reports (e.g., SMEDAN/NBS, 2017; World Bank, 2020), and databases for contextual background.
iii. Ethical Considerations: Informed consent is obtained, anonymity assured, and data stored securely.

Instrumentation: A structured questionnaire was designed with two sections: demographic data and perception/usage of digital financial tools. It included the following 10 key questions:

i. Are you aware of digital financial tools (e.g., mobile banking, POS, fintech platforms)?
ii. How often do you use digital financial tools in your business operations?
iii. What types of digital financial tools do you use?
iv. Have digital tools improved your access to credit facilities?
v. Do you experience any challenges in using digital tools? If yes, specify.
vi. Have digital tools helped in improving your business profitability?
vii. Do you track your income and expenses using any digital platform?
viii. How secure do you feel using digital tools for transactions?
ix. Do digital tools help in making faster and better financial decisions?
x. Would you recommend the use of digital tools to other SMEs?

Data Analysis Techniques

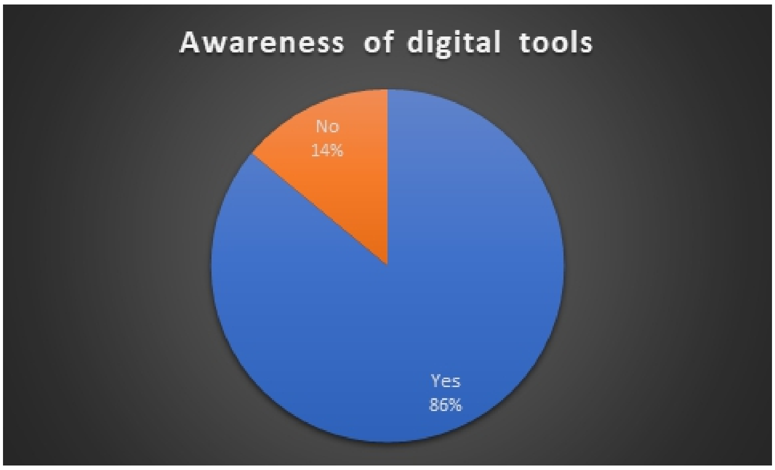
i. **Software: SPSS v25 for processing.**
ii. **Descriptive Analysis**: Frequencies, percentages, means, and visuals (e.g., pie charts for awareness levels, bar charts for profitability impacts) to summarize data.
iii. **Inferential Analysis**:
    i. Pearson correlation to test relationships (e.g., tool usage vs. profitability).
    ii. Linear regression to predict growth/profitability (dependent variables) from tool adoption (independent variable), controlling for confounders (e.g., SME size, state).
    iii. Significance tested at $p < 0.05$; assumptions (e.g., normality, linearity) checked via histograms and scatterplots.
iv. **Validity and Reliability**: Content validity via expert reviews; construct validity through pilot testing. Reliability via test-retest ($r = 0.85$) and Cronbach's alpha (>0.7 for scales).

Data Collection and Analysis: Data were collected over four weeks through in-person visits and digital forms. Responses were coded and analyzed using the Statistical Package for the Social Sciences (SPSS v25). Descriptive statistics (mean, frequency, percentages) and inferential statistics (Pearson correlation, regression analysis) were used to assess relationships between digital tool usage and SME profitability.

Table 1: Data Presentation (Selected Responses)

Question	Response Option	Frequency	Percentage
Awareness of digital tools	Yes	172	86%
Use digital tools weekly	Yes	144	72%
Improved access to credit	Yes	130	65%
Profitability improved	Yes	156	78%
Recommend to others	Yes	180	90%

Pie Chart: SME Awareness of Digital Financial Tools



Bar Chart: Impact of Digital Tools on Profitability (Bar chart displaying percentage of SMEs reporting profitability improvements by tool type)

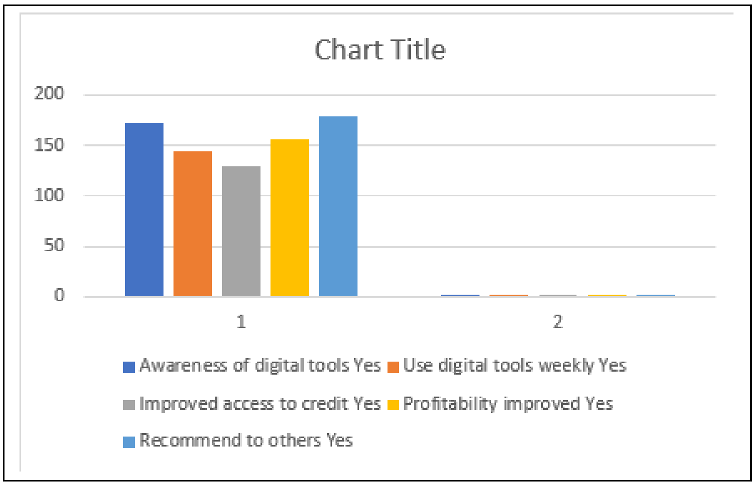


Table 2: Statistical Analysis

Test	Result	Decision
Pearson Correlation	$r = 0.71$, $p < 0.01$	Reject Null Hypothesis (H_0) – Significant positive relationship
Regression (R^2 value)	$R^2 = 0.504$	—
F-Statistic	$F(1,198) = 74.23$, $p < 0.001$	Reject Null Hypothesis (H_0) – Model is statistically significant

Interpretation

The Pearson correlation coefficient ($r = 0.71$, $p < 0.01$) reveals a strong positive relationship between the use of digital tools and SME profitability.
The regression result ($R^2 = 0.504$) shows that 50.4% of the variance in profitability can be explained by the adoption of digital financial tools.
The F-statistic (F (1,198) = 74.23, $p < 0.001$) indicates that the overall model is statistically significant, confirming that digital tool usage meaningfully predicts SME profitability.
Thus, the null hypothesis (H_0) — that "there is no significant relationship between digital tool adoption and SME profitability" — is rejected.
The alternative hypothesis (H_1) — that "digital tool adoption significantly influences SME profitability" — is accepted.

Conclusion

The study confirms a statistically significant and positive relationship between the adoption of digital financial tools and the profitability and growth of SMEs in Adamawa, Borno, and Yobe States. The strong correlation ($r = 0.71$) and high explanatory power ($R^2 = 0.504$) indicate that digital tool adoption accounts for more than half of the observed changes in SME profitability. These results align with prior research (Ozili, 2018; Asongu et al., 2022; Bongomin & Ntayi, 2018) linking digital finance with financial inclusion, cost efficiency, and operational effectiveness.

Moreover, despite infrastructural and capacity constraints, SMEs utilizing digital tools reported improved access to credit, better cash-flow management, and faster decision-making processes. The findings underscore that digital adoption remains a transformative driver for SMEs in conflict-affected and underserved areas, reinforcing the need for capacity-building and digital finance access programs across Northern Nigeria.

Recommendations

i. **Digital Literacy Campaigns:** Government and development partners should initiate training programs to improve SME owners' digital and financial literacy.
ii. **Infrastructure Development:** Investment in broadband internet, stable electricity, and mobile connectivity is essential for tool effectiveness.
iii. **Subsidized FinTech Solutions:** Financial institutions should develop low-cost, user-friendly digital tools tailored to small business needs.
iv. **Cybersecurity Awareness:** Create programs that educate SMEs on data protection and fraud prevention.
v. **Policy and Regulatory Support:** Formulate SME-focused digital finance policies that encourage safe adoption and growth.

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EXPLORING THE POTENTIAL OF FEE-BASED LIBRARY SERVICES, UTILIZATION AND USER SATISFACTION IN ACADEMIC LIBRARIES IN NORTH-EAST, NIGERIA

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Abstract
This paper explored the potential of fee-based library services, utilization and user satisfaction in academic libraries in North-East, Nigeria. The study was guided with three (3) objectives. The objectives of the study are to determine; the types of fee-based library services available in academic libraries, utilization of fee-based library services in academic libraries and user satisfaction with fee-based library services in academic libraries in North East, Nigeria. The study employed primary and secondary sources of data, interview, observation and investigation for proper discussion. The study also adopted case study design to explore the variables of the study. The population covers federal university libraries in the Northeast, Nigeria. The research instrument for data collection was interview via mobile calls and observation. Results: The study revealed that majority of the academic library employed fee-based services in order to encourage library users' from patronizing the library resources from time to time. Others who have not deployed the strategies for now, intend to adopt the system in nearest future so as to make available the library resources to users. The adoption of this system has also clear or reduced what we called overnight loans to users. The study concluded that providing fee-based library services in academic libraries would enhance and promote library patronage by different categories of users on daily basis. This is because professional competence in librarianship, encompassing expertise in resource management, dissemination of such resources effectively and efficiently to library users will boost the image of the library to users. Based on this study, the following recommendations were made for improvement: the library management should make more efforts to increase types of fee based services that will encourage users' from patronizing the library, the institutions management in collaboration with library management should promote the level of fee based utilization so as to

encourage more users' from utilizing the services and the fee based library services should be made affordable to users' most especially the students so as to satisfy their information need.

Keywords: *Application, Fee Based, Library Services, Utilization and Users Satisfaction.*

Introduction

The library is one of the functional organs of the University charged with the responsibility of collecting, processing organizing, disseminating and securing all sources of information (print and non-print) to meet the needs of all members of the academic community (staff, students, researchers and community members). Generally, the university environment is a place where transfer of knowledge and information takes place. The achievements and goals of the universities depend to a great extent on the level of services and resources provided by the university library.

Utilization is the extent to which fee base services are used by students to satisfy their information need. Utilization involves being able to obtain, access or make use of fee base services as some material are made not to be borrowed out of the library. Therefore, such material need to be reproduce to users so as to satisfy the need of the library user to some extent. Information access is effective when students can easily identify and obtain library resources they need for use. Utilization of fee based services simply means using the reprographic unit and other services of the library such as photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges. Therefore the person that uses such services to achieve his or her purpose is a utilizer or user. In the same context, one can state that those who make use of the library materials for their benefits are library users. Also, those who enter the library and find such materials useful are library users (Ajogwu, Onyebuchi, & Agu, 2024).

The utilization, access to knowledge and preservation of information resources with effective service delivery to library users is the main mandate of academic libraries along site supporting the mission of their parent institutions which is teaching and research. It is therefore, with the use of fee based services that users can have a copy to materials in serial, reference and electronic unit of the library. Utilization of different fee based services allow library users to have access to information resources that promote and enhance teaching and learning process. Since information is of great importance to the society because it is essential for individual or organization in planning, decision making and growth; information resources must be available, accessible, adequate, accurate, relevant, genuine and provided on time to the information seekers for utilization. Utilization of library resources and services means ensuring their presence in the library for immediate use. The available information resources can only be surplus with the aid of reprographic unit, since the resources are not user bound as they can be utilized by all categories of students, lecturers and many others in the host community. If print information resources are of limited copies in the library, there is the need to reproduce to users' when the need arises Panle, Odanwu, & Mang, 2021).

Utilization of library services refer to making use of the available resources by the students through adequate access where the library ensures that the resources are acquired and processed as well as making them readily available and utilized at the right time through the right medium which students would be able to make use of such resources and services. There cannot be maximum utilization of library periodicals without the availability of fee based services since the university cannot carter for free reprographic services. Utilization of fee based services can be of low extent or under-utilized due to several factors such as; lack of awareness, poor access, high cost, poor knowledge on how to use the library and so on. Any librarian or library patron will acknowledge that printing is an essential part of patron services in the modern academic library due to the prevalence of e-journals, e-books, and other full-text sources (Emiri, & Olise, 2023). Librarians have accepted this service as just as necessary as properly shelved books. Thus, utilization of the available information resources is paramount to every academic library management as it determines the user's satisfaction goal of the library. It is the knowledge from the fact that the designated information resources and services available will prompt users' to come to the library and use such resources or not (Ashmore & Morris, 2022). User satisfaction is considered one of the significant ways to determine the effectiveness of library resources and services.

The objectives of fee-based library services go hand in hand with the objectives of free library services which is to satisfy library users with information resources at the right time. The main target in both services is to satisfy user's information needs. Studies depict that user satisfaction is clearly dependent on the library resources, relevance and diversity of collections, quality of the service, physical surroundings and conduciveness of the environment, availability of Information and Communication Technology, and confidence of the library staff. User satisfaction is the backbone of any serious library and information center. When a user is satisfied with a welcoming and helpful environment, easy accessibility of resources, conducive atmosphere, friendly and knowledgeable staff, offer access to digital resources such as subscribed databases which will be renewable periodically, the user will continue patronizing the library whenever the need arises. According to Obu, and George, (2023), posited that "User satisfaction is the fulfillment that patrons have after using the library's numerous information resources and services to meet their information needs.

Reprographic service is one of the cardinal functions of the library and this is to make information resources available to library users, particularly when the materials cannot be borrowed out on a long term or when the student desires to have a personal copy of such materials. The main thrust of reprographic service in the library is to make information available to library patrons so as to satisfy their need. University libraries are essential component and organ of the university. It is built to satisfy the information needs of students, staff, researchers, and other users in the university's environment. In spite of the current resources stocked in the libraries, Libraries find it challenging to effectively access and reproduce the accessible resources in the library, due to either complete absence or shortage of reprographic facilities, this calls for great concern (Udochukwu, 2019). Consequently, the importance of effective reprographic facility and the need to stock library with relevant and current information resources cannot be under estimated. In view of the above, university librarians' function is to effectively provide services to meet user's information needs. However, for libraries to adequately serve its patrons there is need for librarians to explore other means of providing services and making library materials available to patrons, this can also be done through reprographic service (Achugbue, 2022).

Fee-based library services refer to supplementary fee services rendered to library users' by academic libraries for which patrons are required to pay a certain fee to have access to a copy of periodicals or rare resources which cannot be borrowed out of the library through photocopying or printing services. Student can also make photocopy of their lecture note in this unit at cheaper rate in order to encourage their patronage to the library. These services includes; photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges (Owolabi, Abdullahi, Agboola, & Ogungbade, 2024). These services provide benefits such as access to rare or exclusive materials, extended borrowing periods, personalized research assistance, and enhanced study space. It is an information service provided by a library or information agents in exchange for monetary payment. In other words, fee-based library service is a type of service that provides access to specialized information resources, services, and facilities for patrons who are ready to pay for a fee. Akinde, and, Chukwuemeka, (2019) posited that "fee-based library services refer to services and products rendered by the library to her clientele in exchange for financial benefits". This means that services that are included in the type of fee-based service can only be accessed and utilized by paying a specific fee. This kind of library service gives an increased ability to serve large users' satisfaction with the services they render and this is made possible with resource sharing. Fee-based library services is an attempt made by libraries to market, in exchange for money, the services rendered to their users. It can boost multi-sources of financial avenues in the library and information centers. It seems to be the only solution to the financial difficulties that constrain academic libraries from effective and efficient service delivery. It is a fact that libraries receive many requests for specific services from users based on their needs. The number of users who have limited time, knowledge, and access to the use of services in the library makes this service a solution to their problems. According to Zumairotus, and Mecca (2022), fee-based service is a service with a fee that is provided by several libraries in which the types of fee-based services can only be accessed and utilized by paying a specified fee.

User satisfaction can be describe as the users' feelings after using reprographic resources of the library and services, along with their willingness to return when in need of such services. When users are not satisfied with the library services such as printing, photocopying, binding, scanning and hosting events of academic activities, they may likely have low interest in patronizing the library for academic purposes. User satisfaction is an exercise that entails assessing the quality of library services or resources so as to determine whether it meets the user's expectations and needs or not (Boakye, Boakye, & Adjei, 2022). User satisfaction can be view as "the feelings the users get after using fee based services, and the decision made by the library user to either come back to the library next time they have fee based needs or not to come back. An academic library mainly exists to satisfy users with the information needs and other services like fee based services, thus user satisfaction is very pivotal in justifying the continued existence of the library and the need to commit more resources and services to the library. The mission of the library is to provide quality services to its users and therefore, the librarian, need to improve the quality of their services and information resources to satisfy the information needs of users. As such, library need to have a better understanding of user expectations and their specific demands so as to avail relevant resources that will meet the need of the users. Library can achieve its mission only when it can meet users' expectations and also satisfy their information needs. Users' satisfaction would motivate users from using the services of the library over and over again, and even recommending it to others. As a result, user satisfaction may be deemed as a more reliable and perhaps, the best measure for ascertaining library efficiency and effectiveness (Amarasekara & Marasinghe, 2020).

User satisfaction in academic libraries play a vital roles in ascertaining whether the library users are satisfied with fee based services such as photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges. User satisfaction measure how well the library meets the needs and expectations of its patrons with respect to their demands and targets. The more these services are cheaper, faster and clearer, the more the user patronize the library resources and services for academic purposes. Libraries are the central entity of the university, along with well-equipped reprographic facilities such as printers, photocopier and scanners, that will encourage users to patronize the library as well generate income that can be used to maintain and improve services in the libraries. Furthermore, in order to satisfy users, library must provide appropriate services that meet their needs. Firstly, libraries should raise awareness about the available fee based services so as to enable users to understand the types and kinds of services that are available and accessible in the library (Kaishe-Mulungu, Lwehabura, & Angello, 2024).

Users' satisfaction can base be achieve with various range of services, including photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students, overdue charges and institutional repositories. Additionally, there are supplementary services available, such as recreational amenities like a coffee shop, designated areas for reading magazines, and catering services that could also boost user satisfaction in patronizing the library. According to Shahzad and Khan (2023), another library service that could meet users' satisfaction is the provision of high-speed internet for efficient access to information as the government could not meet the demands of the users in regards to internet services. Libraries serve as the heart of universities, supporting all the programs with resources and services. The responsibility of university libraries is to cater for the needs of students, lecturers, and researchers. They should provide scholarly materials and reprographic services that align with the institution's mission, vision and academic needs to enhance teaching and learning process. Thus, the role of the university library is to offer users with information and services that fulfils their academic needs.

Users' satisfaction is regard as the means which users determine whether a resources or services meet the required needs and expectations of their academic activities. If the resources or services do not meet their needs or expectations, it is therefore assumed that they are dissatisfied with the resources or services. Users satisfaction with the library resources and services is a way in which users judge the adequacy of the library resources and services rendered to them and also know if their expectations are provided to them or not. Library user satisfaction implies how users feel after using the available services like photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students, overdue charges and their willingness to return to the library when next they need information resources or services (Anmol & Muhammad, 2021). The level of using the library depends on users' satisfaction with the available information resources and services rendered to them in regards to their teaching and learning process.

Service quality and users satisfaction, though are distinct, closely related concepts, and an examination of service quality does not necessarily encompass an evaluation of users' satisfaction, and vice versa. When considering service quality as a strategic planning tool, it involves identifying the attributes that users' associate with in an ideal library and the expectations deemed essential by the library to fulfill. The conventional method of gauging users' satisfaction is through gap analysis. On the other hand, users' satisfaction is a measure of how customers perceive the delivery of services and any potential shortcomings at a given moment. Assessing customer satisfaction is crucial as a management tool and can be done efficiently and inexpensively (Mendoza, 2024). Effective library services help greatly in the achievement of the library aims and objectives. These services involve the total support provided by the library to its users. It is also seen as the exertion made by the library staff to endeavor the available, accessible and utilization of library resources to users'. In other words, library services remain an essential work to the actualization of educational goals (Okwu, & Chineme, 2021).

The library has different divisions which work differently but collectively in serving the university community. With all the resources and services in the library, fee based services could attract users from patronizing the library most especially photocopying of rare and periodic library materials. The library has seemingly become more or less a reading room where they go to read than were they go to acquire information and knowledge. The reason could be as a result of the lack of proper organization of these resources. When library resources are not properly organized, or access may not be facilitated; thus, also affecting use of materials available in the library. Therefore, there is need to explore the extent of fee based services. This need arose with the aim of identifying problems and preferring solutions in academic libraries. The researcher through preliminary observation shows that, most of the libraries under study apply fee based services in order to attract users' and increase patronage. It seems like the library users are not satisfy with the library services as a result of low level of fee based services which could help users' have access to rare and periodical library materials.

Statement of the Problem

The researcher through preliminary observation in the north-east academic libraries revealed that, academic libraries appear to face with challenges of poor funding to enhance fee based services, maintenance of facilities used for fee based, leading to serving low satisfaction, outdated information resources and services, inadequate utilization of fee based services which directly or indirectly appear to affect services such as photocopying, printing, access to internet, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges. It is against this background that the research embarked on this study titled " Exploring the Potential of Fee-Based Library Services, Utilization and User Satisfaction in Academic Libraries in North-East, Nigeria

Objectives of the Study

The objectives of the study are to determine:

i. Types of fee-based library services available in academic libraries in North East, Nigeria
ii. Utilization of fee-based library services in academic libraries in North East, Nigeria
iii. User satisfaction with fee-based library services in academic libraries in North East, Nigeria

Literature Review

Libraries play a crucial role in providing services and information resources. The types of fee-based library services are photocopying, printing, sale of old stocks/weeded material, hiring of library space, consultancy services, clearance of students and overdue charges. Study by Kaishe-Mulungu, Lwehabura, and Angello (2024) on the level of user satisfaction with library services in Tanzania revealed that, reprographic unit provide services like photocopying, printing and time for internet access so as to satisfy the need of library users. But these university libraries in Tanzania lack sufficient fee-based services, facilities, and resources to meet the needs of their users. The study employed descriptive survey design. The objective of the study specifically are, to determine the existing library services provision in the selected universities, to determine the extent of users' satisfaction with library services, and to examine the influence of library service provision on user satisfaction. The sample size was 397 respondents, who were academic staff, library staff and students from five selected universities, selected through simple random sampling as per Israel (1992) sample determination table, and 68 key informants, who were heads of university departments, were selected through purposive sampling. Both qualitative and quantitative information were collected using questionnaires and interviews. The quantitative data were analysed using SPSS software, while the qualitative were analysed through content analysis. The results indicated that the primary services provided by libraries were circulation (22.2%), internet (15.6%) and reference services (14.9%). Furthermore, the study found that the satisfaction levels were statistically significant at 5% and 1% levels of significance. The majority of respondents (53%) rated the service quality in terms of information availability as high. The study also revealed that library service provision significantly influenced user satisfaction. These results imply that respondents were satisfied with library services. However, there are some challenges, such as internet connectivity, institutional repository and secretarial services, which were recommended for improvement.

Study conducted by Akinde and Chukwueke (2019) on the effects of fee-based services on library service delivery in federal university libraries using the Michael Okpara University of Agriculture Library, Umudike as a focal point. The study was guided by four (4) research objectives. It adopted a survey design with a population of fifty-three (53) library staff from the university. The complete census sampling technique was adopted which implies the use of the entire population as respondents. A checklist and researcher- made questionnaire were the instruments for data collection. Hence, fifty-three copies of the questionnaire were administered to the respondents. All the copies administered were retrieved giving a response rate of 100%. Data was analyzed using simple percentages, frequency counts, and mean scores, as well as presented in frequency tables. Furthermore, a criterion mean of 2.50 was adopted to ascertain the level of agreement or disagreement of item statements. The study found out that the library studied adopted few fee-based services, more of free-based services, and total absence of some of the library services investigated. The study revealed that although only few fee-based library services were adopted, it has numerous effects on the federal university library such as generation of additional income, increases library services, goodwill and patronage among other numerous positive effects. The study also found out challenges of poor planning/pricing policy, absence of quality services, and gross resistance of the concept of fee-based services as among the challenges facing fee- based library services and its effectiveness in federal university libraries. Based on the findings, the study recommends efforts to make the prices for fee-based services affordable, strong relationship between the library and its users, provision of relevant library services and introduction of digitized services as means to further strengthen fee-based library services and make it effective in federal university libraries, in order to engender the desired delivery.

Fee-based library services is of significant in enhancing user satisfaction within libraries can be encapsulated as Tailored Services for Specific Needs. Fee-based libraries services have the capacity to provide specialized services customized to the requirements of their paying patrons, encompassing personalized research assistance, document delivery, or instructional workshops. According to Ejezie and Okeke (2021) conducted a research on fee-based library services: availability, extent of use, and impediments in federal academic libraries in south east Nigeria. The work revealed that the high extent, federal academic libraries in South East Nigeria uses fee-based library services in the forms of: Sale of Discarded Books, Membership fees for Primary Users; Membership fees for Non-library members; Renting out Conference Hall/ Meeting Room; Document supply from other Libraries/ Inter library Loan; Sale of Library Publications; and Issuing Audio Visual and other Non-book Materials. This implies that their extent of use of fee-based library services is quite impressive and should be sustained, if not improved. Librarians and libraries must examine more variables and avenues which determine the extent of usage of fee-based library services.

Agustine and Rejeki (2021) conducted a study on the effect of fee-based information on library services the study made mentioned that previously libraries are free places for those who want to share information or get the information they need. The collections provided by the library are diverse but sometimes they are still limited, as happened in the UPN Veteran Yogyakarta library. Starting from the large number of mineral engineering students who complained about the lack of information resources in the form of maps to support their learning activities, the library collaborated with Bakosurtanal or the National Survey and Mapping Coordinating Board to organize special outlets for maps and atlases placed in libraries. The existence of map outlets in libraries is clearly ambivalent with the concept of libraries as service institutions that provide free information. This is not a mistake, considering that the maps that are traded in the library are topographic maps that display some of the natural and man-made elements in the territory of the Republic of Indonesia. This is a non-loanable learning support tool. With the fee-based information in the library, we can know that the library is a developing organism, where the library must readily meet the needs of users, even if it is fee-based information. Although, librarians toward users has been ambivalent, that on the one hand, librarians are philosophically committed to freedom of access to information; on the other, practical considerations often force academic libraries to limit access and services to external users, librarian must still be able to provide the best service for users.

Theoretical Framework

The researcher developed a theory of Fee Based Library Services in order to explain the application, utilization and users' satisfaction on fee based services. The theory postulated that fee–based services in the library context, is the demand for financial payment for services and resources offered to users. For decades, the issue of charging fees for library services (photocopying, printing, sale of old stocks/weeded material, hiring of library space, consultancy services, clearance of students and overdue charges) and information resources has been a subject of debate among information professionals. Akinde and Chukwueke (2019) are of the view that libraries should offer free services. The library shall in principle be free of charge, but can academic library maintain their services effectively without fee based certainly no. Therefore, there is the need for fee-based services in the library. Information is more than a commodity; wide access to information can empower citizens and therefore be a method of wealth distribution.

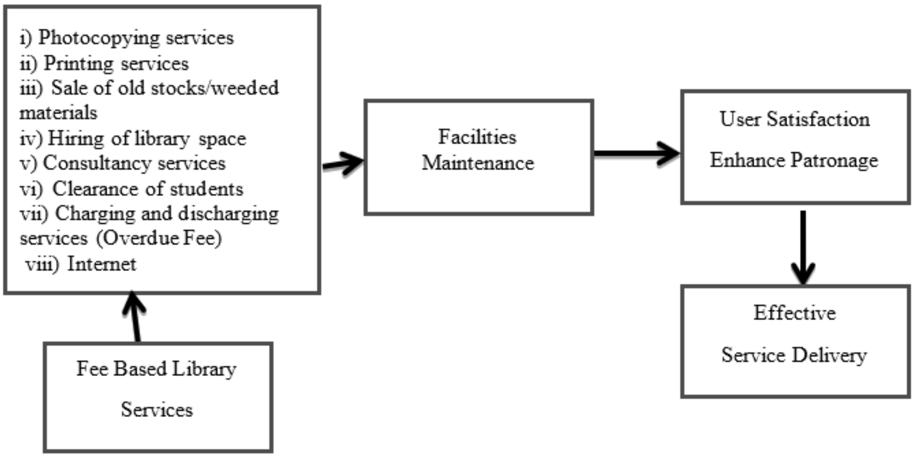

Fig. 1.1 Theory of Fee–Based Library Services by Agboola, B. (2025)

The fee-based library services model provides a diagrammatic view of how fee generated from photocopying, printing, internet, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges can be used in maintaining facilities as well as information resources in the library. The effectiveness of these services would also attract users from patronizing the library efficiently. In some cases, library users go out of the library to photocopy or print resources retrieved from the library. If these users are willing to pay for these products outside the library confines, then they will also be willing to pay in the library especially if they are offered superior and wider services in cheaper rate. In view of these developments, there is need for librarians to re-examine their strategies and develop new initiatives to remain relevant providers of information. Fee-based library services can be one of such strategies of responding to these inevitable changes.

Lack of funds is at the root of these problems. The library is traditionally regarded as a social service provider on free of charge to her target audience. Most libraries depend on subventions from their parent institutions and grants from enabling bodies to meet their overhead cost and to embellish their collections. The dwindling finances have led to inability of some libraries to sustain their services and institute new programmes. The impact of dwindling finances is largely felt in this era of ICTs where service provision requires recurrent spending for maintenance of equipment and updating of electronic resources. There is also reduction in international assistance by donor agencies. In Africa, these agencies played important roles in building and renewing the collection of many libraries. The twin problems of dwindling subventions and realities of current developments in the information scene as call for revaluation of free services in library and information centers. Libraries need to seek alternative sources of funding in order to keep afloat.

This model is found relevant to the study as fee-based library services relates to one of the variables of the study as the services will also improve service delivery to library users. The acceptance of fee-based services and its utilization by library staff would fasten, ease, promote and enhance library activities. This model is chosen and relevant to the study because it focuses on the fee-based services such as photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges which are part of the services to be considered in this study. Thus, this model believes that providing these services to library users will attract more patronage to the library and improve quality of service delivery to users.

Methodology

The study also adopted case study design to explore the variables of the study. The study employed primary and secondary sources of data, interview, observation and investigation for proper discussion. The population covers the six (6) federal university libraries established before 2014 in the Northeast, Nigeria. The research instrument for data collection was interview via mobile calls and observation. The application of services like photocopying, printing, sale of old stocks/weeded materials, hiring of library space, consultancy services, clearance of students and overdue charges would encourage users from patronizing the library from time to time. Satisfaction of User is a critical measure of success for libraries in educational institutions. Satisfaction hinges on the quality of service provided, which is influenced by the availability of resources, quality services that will attract the users, the competence of library personnel, and the overall service experience. Ensuring that libraries meet the required needs of users in a modern technological way so as to encourage their patronage to the library.

Discussion

The study revealed that majority of the academic library employed fee-based services in order to encourage library users' from patronizing the library resources from time to time. Others who have not deployed the strategies for now, intend to adopt the system in nearest future so as to make available the library resources to users. The adoption of this system has also clear or reduced what we called overnight loans to users. Especially, users' that assimilate fast at late hours of the day, when the library is about to be closed, such user can easily photocopy the portion or pages he/she needed that is if the resources are rare collection which are meant not to be borrowed out. The fee-based library services adopted by academic libraries are; photocopying, printing, hiring of library space, consultancy services, clearance of students and overdue charges which facilitate adequate response to the needs of library users. The utilization of these services has been contributing immensely to the users' satisfaction in academic libraries.

Conclusion

The study concluded that providing fee-based library services in academic libraries would enhance and promote library patronage by different categories of users on daily basis. This is because professional competence in librarianship, encompassing expertise in resource management, dissemination of such resources effectively and efficiently to library users will boost the image of the library to users. A conducive library environment, a well-maintained collection, and efficient staff are pivotal in fostering user satisfaction. Quality fee-based library service is crucial for enhancing the effectiveness of library services and ensuring that users remain content with their library experiences. Resource availability and quality services are essential for user satisfaction, with regular library use indicating contentment by library users.

Recommendations

Based on this study, the following recommendations were made for improvement:

i. The library management should make more efforts to increase types of fee-based services that will encourage users' from patronizing the library
ii. The institutions management in collaboration with library management should promote the level of fee-based utilization so as to encourage more users' from utilizing the services.
iii. The fee-based library services should be made affordable to users' most especially the students so as to satisfy their information need.

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THE ROLE OF PUBLIC ADMINISTRATION IN SECURITY AND ECONOMIC SUSTAINABILITY IN NIGERIA

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Abstract
The role of public administration in promoting security and economic sustainability in Nigeria is fundamental to the country's development and stability. Effective public administration ensures the execution of policies that enhance national security by directing efforts across various government agencies, law enforcement, and community stakeholders. It fosters an environment where security problems such as insurgency, terrorism, and communal conflicts are addressed through strategic planning, resource management, and accountability machineries. Simultaneously, public administration offers a vital role in driving economic sustainability by framing and implementing good policies that encourage economic diversification, infrastructure development, and inclusive growth. It facilitates the efficient allocation of resources, promotes transparency, and combats corruption, thereby creating a conducive atmosphere for investment and innovation. The study concluded that Nigeria's complex socio-political landscape, a robust and responsive public administration system is indispensable for balancing security imperatives with economic objectives. By integrating security concerns with sustainable economic policies, public administration helps to build resilient communities, protect national assets, and ensure long-term prosperity. This integrative approach not only stabilizes the socio-economic environment but also enhances public trust in government institutions, ultimately contributing to the overall progress and sustainability of Nigeria. The study adopted the development theory as its theoretical framework. More so, the research adopted secondary means to collect the data and analyses the findings descriptively. The study recommended that government should provide enough research funding in public administration and adopt a comprehensive framework in security and economic sustainability policies in Nigeria.

Keywords: *Development; Economic Sustainability; Promoting; Public Administration; Security.*

Introduction

Public administration constitutes the backbone of governance and public policy implementation in modern states. It represents the institutional machinery through which government decisions are translated into concrete actions that affect citizens' welfare, national security, and economic development. Adebayo (2021) states that in Nigeria, public administration occupies a critical position due to the country's complex socio-political environment, diverse ethnic composition, and persistent security and economic challenges. Since independence, Nigeria has struggled with governance deficits manifested in weak institutions, corruption, policy inconsistency, and inadequate service delivery. These challenges have been further complicated by rising insecurity such as insurgency in the North-East, banditry and kidnapping in the North-West, militancy in the Niger Delta, and recurring communal conflicts across different regions. These security challenges have negatively affected economic activities, disrupted livelihoods, reduced foreign direct investment, and deepened poverty. Okoli and Orinya (2019) submit that economic sustainability, on the other hand, requires long-term planning, effective policy coordination, and prudent management of resources to ensure that present development does not compromise the ability of future generations to meet their needs. Public administration provides the framework for achieving this goal through sound economic planning, fiscal discipline, transparency, and accountability. This paper therefore examines the role of public administration in promoting security and economic sustainability in Nigeria, arguing that effective administration is indispensable for national development and stability.

Statement of the Problem

Despite Nigeria's vast human and natural resources, the country continues to face persistent security crises and economic instability. Ezeani (2018) states that insecurity has become widespread, resulting in loss of lives, displacement of persons, destruction of property, and disruption of economic activities. At the same time, the Nigerian economy faces challenges such as unemployment, poverty, inflation, weak industrial base, and overdependence on oil revenues. Transparency International (2022) posits that weakness of public administration due to poor policy implementation, corruption, lack of coordination among government agencies, and inadequate institutional capacity have undermined effective governance. Security policies are often not integrated with economic development strategies, leading to fragmented responses that fail to address root causes of insecurity such as poverty, inequality, and unemployment. The inability of public administration to effectively balance security imperatives with economic sustainability raises serious concerns about Nigeria's development trajectory. This study therefore seeks to interrogate the role of public administration in addressing these interconnected challenges.

Research Questions

i. How does public administration contribute to the promotion of security in Nigeria?
ii. In what ways does public administration enhance economic sustainability in Nigeria?

Objectives of the Study. The main objective of the paper will examine the role of public administration in promoting security and economic sustainability in Nigeria, while its specific objectives will include:

i. To assess how public administration contributes to the promotion of national security in Nigeria.
ii. To examine the role of public administration in fostering economic sustainability in Nigeria.

Conceptual Clarifications

Public administration

Public administration refers to the structured system of government institutions, processes, and personnel responsible for translating public policies into actionable programs and services. It encompasses ministries, departments, agencies, local governments, and public service institutions that collectively ensure governance continuity and effective policy execution. Wilson (1887) states that beyond routine administration, public administration functions as the operational machinery of the state, coordinating human, financial, and material resources to achieve collective societal goals. Peters (2021) submits that in contemporary governance, public administration extends beyond bureaucratic efficiency to include policy coordination, regulatory oversight, service delivery, and citizen engagement. Effective public administration is characterized by professionalism, transparency, accountability, responsiveness, and efficiency, which are critical for managing complex governance challenges in developing states such as Nigeria. Ezeani (2018) states that weak administrative capacity often results in poor policy implementation, corruption, and erosion of public trust. World Bank (2022) asserts that strong public administration enhances state capacity and promotes sustainable development outcomes by ensuring policy coherence and inter-agency collaboration In Nigeria, the effectiveness of public administration directly affects the management of security and economic policies, making it a central pillar for national stability and development.

Security

According to Buzan (1991) security refers to the protection of lives, property, territorial integrity, and societal values from internal and external threats. Consequently, UNDP (1994) argues that traditional security perspectives focused largely on military defense and state survival, but contemporary thinking has expanded to include human security, which emphasizes economic well-being, social stability, and freedom from fear and want In Nigeria, security challenges are multidimensional and deeply intertwined with governance and development deficits. Onuoha (2020) states that issues such as insurgency, banditry, kidnapping, militancy, and communal conflicts continue to threaten national cohesion and economic productivity. These challenges demonstrate that security cannot be achieved solely through military responses but requires effective public administration, institutional coordination, and socio-economic interventions. Achumba, Ighomereho and Akpan-Robaro (2019) argue that poor governance, unemployment, poverty, and social exclusion exacerbate insecurity Thus, security in Nigeria is closely linked to development and administrative effectiveness. Public administration plays a critical role in coordinating security agencies, managing intelligence frameworks, allocating resources, and ensuring accountability in the security sector.

Economic Sustainability

UNEP (2020) declares that economic sustainability refers to the capacity of an economy to achieve long-term growth and stability without undermining social equity or exhausting natural resources It involves prudent resource management, economic diversification, fiscal discipline, employment generation, and resilience against economic shocks. Sustainable economies are those capable of adapting to changing internal and global conditions while maintaining productivity and social welfare. World Bank (2023) states that Nigeria's economy faces significant sustainability challenges due to overdependence on oil revenues, exposure to global price volatility, high unemployment, and infrastructural decay. Ojo (2021) argues that achieving economic sustainability in Nigeria requires diversification into agriculture, manufacturing, technology, and services, supported by effective public administration. Obadan (2019) submits that public administration is central to economic sustainability through policy formulation, public financial management, regulatory reforms, and anti-corruption initiatives. World Bank (2021) declares that weak administrative institutions undermine economic policies and discourage investment, while strong institutions promote inclusive growth and long-term stability.

Promoting

Promoting implies deliberate, systematic, and strategic actions aimed at advancing or enhancing specific policy goals. Dye (2017) states that in public administration, promoting security and economic sustainability involves policy formulation, implementation, monitoring, and evaluation, as well as mobilizing stakeholders and ensuring accountability in governance processes. Hill and Hupe (2021) state that promotion is not a passive administrative function but a proactive governance responsibility requiring leadership, institutional capacity, and adaptive policy mechanisms. Governments promote security by strengthening institutions, funding security agencies, encouraging community participation, and addressing socio-economic root causes of conflict. Similarly, economic sustainability is promoted through investment incentives, regulatory reforms, and social protection programs. Andrews (2020) submits that in Nigeria, weak monitoring and political interference often undermine promotional efforts. Effective public administration is therefore essential for translating policy intentions into tangible outcomes in security and economic sustainability.

Development

Development is a multidimensional process involving improvements in economic growth, social welfare, institutional capacity, and quality of life. Todaro and Smith (2020) argue that development transcends mere income growth to include access to education, healthcare, security, political participation, and social justice. Sen (1999) conceptualizes development as the expansion of human capabilities and freedoms, emphasizing empowerment and choice. In Nigeria, development outcomes are closely linked to security stability and governance effectiveness. UNDP (2022) declares that persistent insecurity and weak institutions have constrained development efforts despite abundant natural and human resources. Development theory highlights the importance of state capacity and effective public administration in coordinating development initiatives and ensuring equitable resource distribution. Thus, sustainable development requires integrating security, economic sustainability, and social inclusion into a coherent policy framework. Sachs (2021) posits that public administration plays a critical role in aligning development planning with security and economic policies, thereby ensuring long-term national progress.

Nigeria's Security Landscape: An Overview

Nigeria's security environment has deteriorated significantly over the past two decades, presenting a complex mix of traditional and non-traditional threats. The scenario had made the country to confront a complex and evolving security environment that combines insurgency, organized criminality, communal conflict, and emerging technological threats. Nigeria faces a range of security threat which includes:

i. **Terrorism (Boko Haram/ISWAP)** in the Northeast: Foucher (2024) laments that the Islamist insurgency in the Northeast originally led by Boko Haram and later split into competing factions such as ISWAP remains a persistent source of violence, displacement, and humanitarian crises despite sustained military pressure.
ii. **Banditry and cattle rustling** in the Northwest. UNIDIR (2024) states that loosely organized bandit gangs have transformed into violent criminal networks that carry out cattle rustling, large-scale kidnappings, and extortion, severely disrupting rural economies and displacing communities.
iii. **Kidnapping** for ransom. National Bureau of Statistics (2024) states that kidnapping for ranson has proliferated across regions and now represents a mass security challenge with substantial social and economic costs; national surveys estimate millions of incidents in recent reporting periods, signaling a sharp uptick in everyday criminality and threats to mobility and business.
iv. **Militancy and oil theft:** International Crisis Group (2024) declares that in the Niger Delta, militant groups and criminal networks targeting oil infrastructure have persisted in attacks, vandalism, and oil theft actions that reduce government revenues, raise production costs, and undermine investor confidence in the hydrocarbon sector.
v. **Communal clashes and separatist tensions** in the Southeast: Global Initiative / GI-TOC. (2024) submit that the Southeast has seen a resurgence of separatist-linked violence and “sit-at-home” campaigns associated with groups like IPOB and its offshoots; these actions have produced deadly incidents, economic paralysis in affected areas, and complex legal and political responses.

These challenges impose substantial economic costs, displace populations, and weaken investor confidence.

The Role of Public Administration in Security Management

Policy Formulation and Implementation: Public administrators craft and execute national security policies through ministries such as Defence, Interior, and Police Affairs. Dye (2017) presents public administrators as human resource that are responsible for formulating and implementing national security policies through institutions such as the Ministries of Defence, Interior, and Police Affairs. These policies provide strategic direction for addressing internal and external threats and ensuring public safety.

Coordination of Security Agencies: Institutions like the National Security Adviser (NSA) facilitate interagency cooperation. Peters (2021) submits that, the efficient and effective interplay of this function enhances inter-agency collaboration, intelligence sharing, reduces duplication of efforts, and improves operational efficiency. This means that fragmented security governance often undermines counter-terrorism and crime-prevention efforts in Nigeria.

Intelligence Management: Public agencies gather, analyze, and share intelligence to prevent crime and conflict. Onuoha, (2020) Public administration also plays a vital role in intelligence management, including data collection, analysis, and dissemination to prevent crime and conflict.

Peace-building and Conflict Resolution: Local governments engage in grassroots conflict mediation and community policing initiatives. UNDP (2022) declares that at the grassroots level, local governments contribute to peace-building and conflict resolution through community policing, mediation, and early-warning mechanisms.

Regulatory Frameworks: Public administration enforces laws governing firearms, border control, and movement of goods and persons. This means that regulatory frameworks governing firearms, borders, and migration are enforced through administrative institutions. Finally, security governance succeeds when public administration is proactive, accountable, and community-oriented. Without effective administration, security institutions remain reactive and ineffective.

The Role of Public Administration in Economic Sustainability

Economic Planning and Policy Design: Agencies such as the Ministry of Finance, Budget Office, and National Planning Commission develop economic frameworks. World Bank (2023) states that economic planning and policy design are achieved through institutions such as the Ministry of Finance, Budget Office, and National Planning Commission that develop frameworks that guide fiscal discipline, growth, and development priorities. Effective planning ensures alignment between national development plans and available resources.

Resource Management: Proper allocation of resources through budgeting enhances sustainability. Ojo (2021) submits that public administration ensures efficient resource management through budgeting, public financial management systems, and accountability mechanisms such as the Treasury Single Account (TSA) and Integrated Payroll and Personnel Information System (IPPIS). This role of public administration has been credited with reducing leakages and improving fiscal transparency in Nigeria.

Infrastructure Development: Public administration drives improvements in transportation, energy, water, and ICT. Infrastructure development in transportation, energy, water, and ICT is largely driven by administrative coordination and regulatory oversight.

Diversification Policies: Administrative bodies promote agriculture, manufacturing, and the digital economy. Obadan (2019) states that public administration promotes economic diversification by implementing policies that support agriculture, manufacturing, and the digital economy, thereby reducing dependence on oil revenues.

Public Sector Reforms: Reforms such as IPPIS, TSA, and anti-corruption campaigns strengthen fiscal discipline. Public sector reforms and anti-corruption campaigns which are implemented by public administrators strengthen investor confidence and long-term economic resilience. Thus, sustainable economic growth is unattainable without strong administrative institutions capable of policy consistency and effective implementation.

Table 1: Public Administration Functions in Security and Economic Sustainability

Public Administration Function	Security Role	Economic Sustainability Role
Policy Formulation	National security strategies	Economic policies and frameworks
Resource Allocation	Defense and policing budgets	Sectoral allocation for growth
Coordination	Interagency security collaboration	Inter-ministerial economic harmonization
Regulation	Enforcement of security laws	Market regulations, fiscal rules
Service Delivery	Safety, policing, justice	Education, health, infrastructure

Relationship Between Public Administration, Security, and Sustainability

The relationship between public administration, security, and sustainability is inherently interconnected and mutually reinforcing in the context of national development. Ezeani (2018) states that public administration serves as the institutional engine through which policies are articulated, coordinated, and implemented to address complex societal challenges, including threats to security and the pursuit of sustainable development outcomes. Rothstein and Teorell, (2019) assert that effective public administrative systems provide the structural foundation that enables governments to design and enforce security strategies, allocate resources efficiently, and coordinate interagency actions to mitigate risks such as insurgency, communal violence, and criminality. World Bank (2022) highlights that robust governance structures in public administration directly influence national security outcomes by facilitating policy coherence, coordinated intelligence sharing, and crisis response mechanisms, thus ensuring the safety and stability required for sustainable socio-economic activities.

Security, in turn, is both a precondition and outcome of sustainable development. Without a secure environment, economic activities are disrupted, investment confidence declines, and social services such as education and healthcare are undermined, all of which weaken institutional capacity and long-term sustainability. Onuoha (2020) demonstrates that governance deficits such as corruption, fragmentation, and poor coordination within public administration can compound security challenges, limiting the state's ability to deliver essential services and weakening public trust. Conversely, UNDP (2022) states that sustainable development enhances security by addressing root causes such as poverty, inequality, and unemployment, which are often drivers of insecurity. For instance, sustainability frameworks emphasize inclusive economic growth, resilient infrastructure, and social equity as central pillars for both stability and long-term prosperity.

Ojo (2021) posits that public administration acts as a bridge between security and sustainability: it enables the implementation of policies that not only protect citizens but also promote equitable socio-economic progress. Effective administrative governance fosters trust and legitimacy, improves service delivery, and ensures that security strategies are harmonized with broader development goals. World Bank (2023) submits that this integrated approach demonstrates that neither security nor sustainability can be achieved in isolation; rather, they require coherent, accountable, and well-resourced public institutions capable of navigating the complexities of modern governance. Peters (2021) declares that the relationship between these three domains reflects a virtuous cycle wherein effective public administration promotes security, security underpins sustainability, and sustainable socio-economic development reinforces stability.

Challenges Affecting Public Administration in Nigeria

i. **Corruption and Weak Accountability**
   i. Corruption remains deeply entrenched across public institutions, diverting resources away from public goods and undermining trust in government. Nigeria ranked poorly in the Transparency International Corruption Perceptions Index, and anti-graft agencies report ongoing systemic challenges.
   ii. Weak accountability allows fiscal leakages, 'ghost workers,' and inflated contract costs to persist, affecting service delivery and public investment outcomes.

ii. **Poor Institutional Capacity and Workforce Competence**
   i. Many public institutions lack adequate human and technical capacity, undermining policy implementation and responsiveness to complex public needs.
   ii. Skill gaps and inadequate professional development hinder the adoption of modern administrative and digital governance practices.

iii. **Political Interference and Policy Instability**
   i. Political appointments and partisan influence compromise meritocracy, weaken institutional autonomy, and skew resource allocation.
   ii. Frequent shifts in policy direction with each administration disrupt continuity in major public programs and deter long-term planning.

iv. **Inadequate Funding and Resource Constraints**
   i. Chronic underfunding hampers the capacity of critical agencies, particularly in security, health, and education, limiting effective service delivery.
   ii. Budget releases often lag approved allocations, further weakening implementation capacity at national and subnational levels.

v. **Bureaucratic Inefficiency and Red Tape**
   i. Slow administrative processes and cumbersome procedures delay policy implementation and frustrate both officials and citizens.
   ii. Overlapping functions among ministries and agencies contribute to duplication, poor coordination, and resource waste.

vi. **Security Challenges as an Administrative Burden**
   i. Persistent insecurity—from insurgency and banditry to kidnappings strains public administration and diverts resources to emergency responses. Recent government emergency declarations and deployments illustrate the severity of the threat.

vii. **Fragmented Public Trust and Citizen Engagement**
    i. Declining trust in state institutions, driven by governance deficits, weak accountability, and poor service delivery, reduces citizen cooperation and compliance with public initiatives.

Strategies for Enhancing Security through Public Administration

i. **Strengthen Intelligence Coordination:** Enhance inter-agency intelligence sharing and real-time data integration to anticipate and respond to security threats more effectively.
ii. **Expand and Institutionalize Community Policing:** Prioritize localized community policing partnerships to foster trust and improve grassroots crime reporting and prevention.
iii. **Modernize Security Infrastructure and Technology:** Invest in digital surveillance, automated border systems, and communication networks to support rapid response and deterrence.
iv. **Enhance Border Security and Management:** Improve border control through better deployment of multi-agency units, bilateral cooperation with neighbors, and strategic infrastructure upgrades at crossing points.
v. **Strengthen Civil–Military Collaboration in Internal Security :** Coordinate defense, police, and civilian support services strategically under clear legal frameworks to manage insurgency and banditry effectively.

13. Strategies for Promoting Economic Sustainability through Public Administration

i. **Diversification Beyond Oil and Extractives:** Support sectors like agriculture, manufacturing, and technology through targeted incentives, credit access expansion, and value-chain growth. Recent reforms to expand formal credit support underline this approach.
ii. **Strengthening Anti-Corruption Institutions and Enforcement:** Build capacity and independence of agencies like EFCC and ICPC, alongside legislative reforms to insulate them from undue political influence.
iii. **Investing in Human Capital and Skills Development:** Prioritize education, vocational training, and digital upskilling to build a more adaptive workforce capable of driving sustainable economic transformation.
iv. **Enhancing Public-Private Partnerships (PPPs):** Leverage PPP models to finance infrastructure, service delivery, and technology investments, while strengthening transparency and contract monitoring mechanisms.
v. **Improving Fiscal Transparency and Budget Efficiency:** Adopt open budgeting platforms, robust audit systems, and performance-linked financing to improve public spending outcomes and investor confidence.
vi. **Promoting Inclusive Growth through Social Investment Programs:** Expand targeted social investment schemes to support vulnerable populations, promote youth employment, and stimulate local enterprise growth.

Theoretical Framework:

This paper employed Development Theory propounded by Walt W. Rostow (1960) as its theoretical framework. Often cited in political science and public administration literature. The theory proposed the Stages of Economic Growth, which views development as a linear process through stages from traditional society to high mass consumption. Rostow, is widely regarded as a classical propounder of modernization-oriented development theory. This arises from the reason that development theory emphasizes the role of the state and its institutions in driving socio-economic transformation. Scholars within this tradition argue that development does not occur automatically through market forces alone but requires deliberate state intervention through effective institutions and policies. Development theorists such as Rodney (1972) and Todaro and Smith (2020) posit that strong public institutions are essential for coordinating resources, managing conflicts, and promoting inclusive growth. In the Nigerian context, public administration serves as the primary mechanism through which development goals are articulated and implemented. Through effective administration, the state can integrate security policies with economic development strategies, ensuring that both objectives reinforce each other.

Methodology

The study adopted a qualitative research design based on secondary data sources. Data were obtained from textbooks, academic journals, government reports, and publications from international organizations. The data were analyzed descriptively to provide insights into the role of public administration in promoting security and economic sustainability in Nigeria.

Discussion and Analysis

This paper is anchored in Development Theory, which argues that state institutions particularly public administration is central to a country's socio-economic transformation and long-term development outcomes. Development theory emphasizes that governance systems, public policy implementation, and institutional capacity are critical for achieving national development goals, including security and economic sustainability. In the context of Nigeria's complex development challenges, this theoretical framework underscores how the effectiveness of public administrative systems determines the extent to which development outcomes are realized.

The first research question—how public administration contributes to the promotion of security in Nigeria—aligns with the study's first specific objective of assessing this contribution. According to development theory, security is not merely the absence of conflict but a foundation for development, enabling stable environments where economic and social activities can thrive. Public administration contributes to security through the design and implementation of policies that strengthen institutional responses to insurgency, banditry, and communal violence. Administrative coordination ensures that security agencies operate within coherent frameworks, resources are allocated efficiently, and community-based approaches (e.g., community policing) are institutionalized. Ogunwa (2025) declares that on governance and socio-economic development emphasize that weak institutional arrangements and governance disequilibrium can exacerbate instability and undermine security.

The second research question in what ways public administration enhances economic sustainability in Nigeria corresponds with the objective of examining the public administrative role in sustainable economic outcomes. From the lens of development theory, economic sustainability requires effective public policies, strong regulatory frameworks, strategic planning, and the capacity to implement development plans. Public administration influences economic sustainability by ensuring that development policies are executed, markets are regulated, fiscal management is prudent, and investment frameworks are in place to support growth sectors. Okolie and Ikenga (2025) emphasize that public administration and sustainable development in Nigeria highlight that administrative performance impacts socio-economic indicators such as employment, infrastructural development, and living standards.

Udo, Daniel and Willie (2024) argue that public administration policies and their effects on the Nigerian economy shows that administrative decisions such as policy consistency, fiscal discipline, and public sector reforms can significantly shape economic trajectories. This argument collectively affirms that when public administration is effective, both security and economic sustainability are more achievable. Conversely, gaps in governance, limited institutional capacity, and policy discontinuities impede development efforts, reinforcing why robust administration is crucial for national development. Finally, in the lens of development theory, the research questions offer a coherent framework for analyzing how public administration functions as a driver of both national security and economic sustainability in Nigeria. Thus, linking administrative practices to development outcomes, the paper illuminates the institutional dynamics that either facilitate or constrain sustainable development.

Conclusion

The study concludes that public administration is indispensable to promoting security and economic sustainability in Nigeria. Effective administration enables policy coordination, strengthens institutions, and integrates security imperatives with economic objectives. Without a robust public administration system, efforts to address insecurity and achieve sustainable development are likely to remain ineffective.

Recommendations

i. Government should increase funding for research and capacity-building in public administration.
ii. Public administration institutions should adopt integrated frameworks that link security policies with economic sustainability strategies.
iii. Transparency and accountability mechanisms should be strengthened to enhance public trust and governance effectiveness.

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HUMAN CAPITAL DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA: BRAIN DRAIN, CAPITAL FLIGHT, AND STRATEGIES FOR TALENT REPATRIATION

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Abstract
Human capital development is a fundamental driver of economic growth and national productivity. However, Nigeria faces structural challenges that undermine the effective utilization of its human capital, particularly brain drain, capital flight, and professional migration. Despite significant investments in education and skill development, large-scale emigration of skilled professionals and financial outflows continue to impede domestic productivity, innovation, and economic transformation. This paper examines the impact of human capital development on economic growth in Nigeria, highlighting migration trends, sectoral losses, and economic consequences. Using recent data from the World Bank, United Nations Development Programme, and national health workforce reports, the paper illustrates the magnitude of Nigeria's human capital loss. It further proposes a comprehensive policy framework designed to harness the Nigerian diaspora, attract talent back to the country, and ensure that human and financial capital are effectively deployed for sustainable economic growth.

Keywords: *Human capital development, brain drain, capital flight, professional migration, Nigeria, economic growth, diaspora engagement, talent repatriation.*

Introduction

Human capital development is widely recognized as a core determinant of economic growth. Investments in education, health, and skill development enhance labor productivity, stimulate innovation, and promote national competitiveness. The Human Capital Theory emphasizes that investments in education and training improve worker productivity and contribute directly to economic output, while the Endogenous Growth Theory highlights knowledge accumulation and technological innovation as drivers of long-term economic expansion. Despite these theoretical foundations, Nigeria continues to face challenges in converting human capital investment into economic prosperity. Structural issues, including brain drain and capital flight, reduce the availability of skilled labor and financial resources needed for domestic development. This dual challenge creates a "development trap" in which investments in human capital fail to generate their intended economic returns. This paper examines the relationship between human capital development and economic growth in Nigeria, focusing on the effects of brain drain, capital flight, and professional migration. The study also presents strategies for harnessing diaspora resources and repatriating skilled professionals to strengthen Nigeria's development trajectory.

Literature Review

Economic literature consistently identifies human capital as a key driver of economic growth. Becker (1964) and Schultz (1961) established that education and health investments increase individual productivity and generate positive spillovers for the economy. Subsequent studies using the Human Capital Index (HCI) and Human Development Index (HDI) demonstrate that higher education quality, better health outcomes, and workforce skills strongly correlate with economic performance.

However, structural constraints such as skilled labor emigration and financial capital outflows limit the benefits of human capital development. Brain drain refers to the migration of skilled professionals from their home country to more developed economies, resulting in a net loss of knowledge and productivity. Capital flight occurs when financial resources are moved abroad due to economic instability, poor governance, or low investor confidence. In the Nigerian context, research shows persistent shortages of doctors, nurses, engineers, and ICT professionals due to emigration. Similarly, Nigeria has experienced decades of capital outflows estimated at over $200 billion cumulatively, weakening domestic investment and slowing economic growth. Recent literature emphasizes the importance of diaspora engagement and repatriation policies to mitigate these losses and convert human capital into economic gains.

Conceptual Framework

Human Capital Development

Human capital development involves improving the knowledge, skills, and health of the labor force to enhance productivity and innovation. It includes education, vocational training, healthcare investment, and capacity-building programs.

Brain Drain

Brain drain is the migration of educated and skilled professionals to other countries for better opportunities. It reduces domestic labor availability, lowers productivity, and impedes technological advancement.

Capital Flight
Capital flight involves the large-scale transfer of financial resources from domestic economies to foreign jurisdictions. It reduces investment, slows infrastructure development, and weakens economic growth.

Professional Migration Trends
Migration of skilled professionals—doctors, engineers, academics, and ICT specialists—is a prominent form of human capital loss in Nigeria. Sector-specific migration trends provide insights into the impact of brain drain on the domestic economy.

Nigeria Case Study: Human Capital Loss
Skilled Labor Migration
Nigeria's human capital loss is evident in the health and academic sectors. National health workforce reports indicate that in 2024, approximately 4,193 doctors and dentists emigrated, contributing to an estimated doctor-to-population ratio of 1:5,000, far below the WHO recommendation of 1:600.

Survey data also reveal high migration intentions among young professionals: 85.8% considered emigrating, 69.2% actively planned to leave, and over 50% had taken steps toward migration.

Migration is concentrated in the following sectors:

i. **Healthcare:** Doctors, nurses, and pharmacists
ii. **Academic and Research:** University lecturers, researchers
iii. **Technology and Engineering:** Software engineers, ICT professionals

Capital Flight
Nigeria has experienced significant capital outflows over several decades. Conservative estimates suggest that between 2000 and 2024, over $200 billion left the country through both formal and informal channels. Capital flight limits domestic investment, reduces infrastructure funding, and constrains economic growth.

Economic Impact of Brain Drain and Capital Flight
The combined effect of brain drains and capital flight on Nigeria's economy is substantial:

i. **Reduced Productivity:** Loss of skilled professionals diminishes labor productivity in key sectors.
ii. **Innovation Deficit:** Outflow of engineers, researchers, and ICT specialists reduces technological progress.
iii. **Weakened Institutions:** Loss of skilled personnel in public administration and education lowers institutional capacity.
iv. **Reduced Domestic Investment:** Capital flight reduces available funds for infrastructure, technology, and industrial development.
v. **Development Trap:** The economy invests in education and training but fails to capture the benefits domestically.

Despite these challenges, diaspora remittances remain a stabilizing factor, contributing to household income and education but insufficient to offset the loss of skills and domestic productivity.

Policy Implications and Strategies for Talent Repatriation

To maximize the economic benefits of human capital, Nigeria must implement a comprehensive policy framework that focuses on retention, repatriation, and diaspora engagement.

Diaspora Engagement Programs

i. Establish structured initiatives to connect the Nigerian diaspora with domestic development projects.
ii. Encourage knowledge transfer through mentorship, remote collaboration, and temporary return programs.

Talent Repatriation Incentives

i. Offer competitive salaries, research grants, and relocation packages for returning professionals.
ii. Provide tax incentives for diaspora professionals who invest in domestic businesses or educational institutions.

Development of Innovation Ecosystems

i. Create technology parks, research hubs, and startup incubators to attract talent back into the country.
ii. Promote public-private partnerships that facilitate high-skill employment opportunities.

Governance and Institutional Strengthening

i. Strengthen transparency, policy consistency, and institutional capacity to reduce both capital flight and skilled labor emigration.
ii. Implement anti-corruption measures and efficient regulatory frameworks to enhance investor and worker confidence.

Education and Skills Development Reform

i. Improve learning outcomes, vocational training, and technical education to produce globally competitive human capital.
ii. Link training programs with market demand to reduce skill mismatches and increase domestic employment.

Reverse Migration Programs

i. Launch visa, housing, and relocation support policies to encourage skilled Nigerians abroad to return.
ii. Promote sector-specific return programs for healthcare, academia, engineering, and technology professionals.

Conclusion

Human capital development is central to Nigeria's economic growth and long-term development. However, the benefits of human capital investments are severely undermined by brain drain, capital flight, and professional migration. Statistical evidence demonstrates that Nigeria loses thousands of skilled professionals annually, particularly in healthcare, technology, and academia. The concurrent outflow of financial resources compounds the problem, creating a dual loss of human and financial capital. Addressing these challenges requires coordinated policies focused on retention, talent repatriation, diaspora engagement, and institutional reform. By implementing effective strategies, Nigeria can transform its human capital into a productive engine for economic growth, innovation, and sustainable development.

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ENHANCING SUSTAINABLE BUILT ENVIRONMENT RENEWABLE ENERGY INTEGRATION IN NIGERIA

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Abstract
The paper explored the integration of renewable energy sources into Nigeria's energy framework to drive sustainable development amid persistent challenges like energy poverty and fossil fuel dependency. It highlighted Nigeria's abundant solar, wind, hydro, and biomass potential while addressing barriers such as policy inconsistencies, infrastructure deficits, and financing gaps. The study proposed policy reforms, public-private partnerships, and technological innovations to accelerate adoption, ultimately fostering economic growth, environmental resilience, and improved energy access nationwide.

Keywords: *Sustainable development, Renewable Energy, Energy integration, Solar power, Energy Efficient Building Design.*

Introduction

Nigeria faces a critical energy crisis characterized by unreliable power supply, heavy dependence on fossil fuels, and significant barriers to economic growth. Integrating renewable energy sources offers a pathway to sustainable development by addressing energy poverty, reducing carbon emissions, and fostering resilience in a tropical climate. Nigeria, Africa's most populous nation, grapples with chronic electricity shortages despite vast hydrocarbon reserves. Over 80 million people lack reliable access to power, hindering industrial productivity and quality of life. This overreliance on non-renewable sources exacerbates environmental degradation and climate vulnerability.

The country boasts abundant renewable resources, including solar irradiation exceeding 5.5 kWh/m²/day, wind speeds suitable for northern regions, and biomass from agricultural waste. Harnessing these could meet growing demand projected to reach 30,000 MW by 2030 while aligning with global Sustainable Development Goals (SDGs), particularly SDG 7 on affordable and clean energy. Environment is the collection of the physical, chemical, and sociological factors that affects the actions and behaviours of living and nonliving substances together with natural, economical and human factors. Buildings, which are the components of the environment and sustain this environmental interaction throughout their lifetime, cause serious environmental problems. Thus; architectural discipline aims at creating healthy and habitable environments where the physical requirements of the users are provided thoroughly. Moreover, architectural discipline intends to protect the natural environment such that the next generation continues to use it well and depend less on non-renewable energy resources (Crosbie, 1998). A fact today is that urbanization, population growth, and improved technology cause environmental and energy resource related problems, and by using a significant part of the natural resources, the construction sector distracts the ecological balance and threatens the environmental health conditions for human thus negatively affects the human natural environment (Akpu, 2012).

Construction activities consume about 50% of the energy resources of earth, and 42% of water sources, and in addition, 50% of gases responsible for global warming, 40% of water pollution, 24% of air pollution, and 50% of CFC and HCFC releases are caused by activities related to construction (Bradshaw, 2016). More than 90% of the energy consumed in the world and more than 85% of the energy consumed in Nigeria today is supplied from fossil sources such as coal, petroleum, and natural gas. The gases released to the atmosphere due to the usage of the fossil resources force the solar lights to be held in the atmosphere longer, which in turn causes global warming with drought, flood, and fire situations being the product. These situations severely damage the health and safety of the environment, and thereby threatens the safety of the entire habitats (Botkin and Keller 1998, Enger and Smith, 2006, Alozie 2014). The fact that recent increase in heating, cooling, and ventilating costs of the buildings, and the environmental problems caused by the fossil resources as mentioned earlier, necessitates and prioritizes the need for the usage of renewable and environment friendly energy resources, must be underscored. In order to protect the habitats and decrease environmental problems, World Wild Fund for Nature (WWF) has been creating awareness, alerting countries to make interferences that will prevent excessive discharge of carbonic gases. An awareness that made countries to include the research and usage of renewable and environmentally friendly resources, in their energy strategies. Therefore, to prevent the problems caused by excessive usage of nonrenewable resources in the construction sector, sustainability approaches need to be a crucial context of the architecture discipline (Botkin and Keller 1998).

Sustainability is a key concept that requires careful and efficient usage of the natural resources in order to supply sufficient resources and healthy habitats for the next generations. Therefore architects, the main designers of the artificial environment, are supposed to create designs that provide energy efficiency by using renewable energy means (Bartelmus 1994). This study examined strategies for renewable energy integration in Nigeria's grid and off-grid systems. It analyzes policy frameworks, technological barriers, and economic viability to propose actionable pathways for sustainable development. By bridging gaps in current literature, the paper contributed to Nigeria's energy transition amid regional climate challenges.

Principles Of Sustainable Building Design

"Sustainable Building Design" is a comprehensive concept that considers buildings with respect to ecological, economic and social aspects and it requires decreasing the energy maintenance costs, and diseases related to the building, waste and pollution (Kohler 1999). Moreover, it necessitates increasing the efficiency and comfort of building materials, endurance and flexibility of the building, its components, as well as effective and efficient use of energy (Osso, 1996). The theme of the Sustainable Building Design concept is the design standards that change according to the sustainability aspect, and the environmentally friendly building materials and construction techniques selected in accordance with these standards. Therefore, the initial objective is to create environment friendly designs that offer the usage of renewable energy sources, and improves the energy efficiency in buildings (Osso, 1996).

In the processes of using and demolition of the buildings, natural resources are continuously used. These resources are transformed and returned to the nature as waste. At this stage, energy transforms into waste side materials, building materials into solid waste, water into waste water, consumer products into waste and renewable materials, wind into air pollution, and rain into underground water (Bourdeau, 1999). In this context, sustainability is assumed to be a negative and positive feed backed repeatable design principle through the life cycle of the building. Sustainable building design suggests efficient and effective usage of building through its life cycle, and the usage of renewable and environment friendly construction materials, it also requires designing healthy and longevity of buildings that could be conditioned to developments. This also could reduce inherent health risk resulting from buildings (Bourdeau 1999, WGSC, 2004 and Yeang 1999).

Renewable Materials in Buildings

Renewable energy sources have been utilized in different forms in architecture in the following forms; hydraulic, wave, wind, geothermal, biomass, and solar energy. Renewable energy sources help protects nature by preventing pollution, and by providing the usage of local energy sources. In the construction sector, one of the interferences that will eliminate the excessive usage of fossil sources is the usage of solar energy.

Solar Energy

In recent times, solar energy has become a preferable energy source because of its local applicability and free from inherent technology complexity. Solar energy is used not only for heating and cooling but also for producing hot water and electricity. Nigeria has better solar energy potential compared to most European countries, and the most common method to produce solar energy is by solar absorbers installed on the roof tops of buildings. Producing hot water by utilizing solar energy can either be held by a decision taken during the design stage or during the utilization of the building. By the help of solar energy, heating and cooling costs of the buildings are decreased significantly and energy preservation is provided (Daroda 2011).

The activities to preserve energy by using solar energy in buildings can be grouped as passive and active heating and cooling systems. Passive systems are mainly performed by the decisions taken during the planning stage. In these systems, solar lights exposed on the walls, windows, and ceilings of the buildings are absorbed and transferred to the interior parts by at least one of the transferring, transporting, or radiation methods (Abimare and Akingbohugbe 2013). South openings (windows, greenhouses, and ceiling openings), wall surfaces, winter garden, sun wall and sun ceiling and sections fitted with glass are basic examples of passive heating systems. In passive systems, various methods are performed in order to collect, store, distribute and control the solar energy (Heergween 2004). The most preferable method is the direct return system, which is mainly aimed to use the stored solar energy to create sera effect, and these forces the building to serve as energy absorber. To apply this method effectively, heat loss should be minimized on the openings where sun light is absorbed and stored, and to increase the amount of energy stored and transferred naturally to the interior space, and also to optimize the heat comfort, interior space should be kept small, and heat absorber mass space should be kept large. Even though window openings help the storage of heat and improvement of heat preservation during summer, they cause heat loss during cold when sun lights are not directly observed. For that reason, in cold climates, window openings should be kept large on south side and as small as possible on other sides of the building (Adebamowo, et al 2013).

Moreover, for cold nights, night insulation and for summer day's sun protection are suggested. In case, south side efficiency cannot be utilized because of neighbor buildings, and topography, solar energy should be stored by ceiling openings to achieve sufficient heat storage. However, the disadvantage of ceiling openings is extreme heating during summer and high heat loss during winter, and the necessity of night insulation. Another method for passive heating systems is indirect return systems. In this system, the heat transferring from the glass surface to the wall by the mediation of a heating mass, which is placed mainly on the glass surface and to the back of the glass surface, is transferred into indoor space by transporting or radiation. Direct return system provides easier interior heat control, and sun wall, water wall, and greenhouse addition are possible methods being used for this system (Means, 2011).

Furthermore, this system provides construction easiness and does not require any dynamic parts except for insulation, yet the time required for the heat mass to get warm is long, and heat transferred to the interior space cannot be controlled in this system, which can be regarded as the possible disadvantage. Active heating system includes addition of mechanical equipment and extra heat storing precautions to utilize solar energy. Moreover, heat distribution is controlled automatically; water air collectors, highly efficient collectors and photovoltaic panels are used in this system. Solar energy is collected by flat collectors in the active systems that are not used for directly heating the indoor spaces, the collected energy is stored in storage tanks near the building or below the building or on gravelly area, and the indoor spaces are heated by the stored energy by the mediation of hot water dispensed by pump and pipes. Passive and active systems, which are used to obtain heating and cooling from solar energy, are environment friendly and by the implementation of energy efficient building materials prevent any possible harm to the environment.

Solar Energy Potential in Nigeria

Nigeria has a higher solar energy potential compared to most other countries in the world with the help of its geographical position. According to the research conducted lately, most tropical environments such as Nigeria has average sun absorption duration of 2640 hours per year, and sun radiation power of over 1311 kWh/m2. If solar energy potential is utilized efficiently and actively, amount of energy achieved is estimated to be approximately 1015 kWh. By the decisions taken during the design and usage stages and the changes performed, the building can be improved in terms of energy saving, using the passive and active heating cooling systems (Alozie 2016b, 2016a and 2015).

In Nigeria, the most common usage of the solar energy is supplying light point, this is grossly underutilization, since solar energy has the ability and capacity to do more than just that. The solar energy potential has the capacity to supply the entire hot water requirement for domestic usage and hot voltaic panels that could be placed on houses, office buildings, and factories. These panels are estimated to provide 40 milliard kWh electricity on the average. Even in the countries that possess much less solar energy potential compared to Nigeria, photovoltaic panels are used widely to produce electricity due to the inexistence of mechanical depreciation, easiness of operations, quick preparedness for service, and long-life cycle. Photovoltaic panel applications will be providing electricity without any fuel cost, and much less release of CO_2 to the environment, which decreases the environment problems significantly (Smith, Bradshaw 2006)

Conclusion

At present day, industrialization and population growth causes environment pollution, and excessive use of energy resources. Sera gas releases due to the use of fossil-based fuels results with local and regional climate changes, and global warming and serious environmental problems resulting to global warming. Therefore, building sector should start taking precautions to limit the use of nonrenewable resources in order to constraint the environmental problems. With respect to these limiting efforts, buildings designs should enforce renewable resources so that less energy will be consumed, and the environment will not be harmed. Most significantly, solar energy should be utilized efficiently and more widely throughout Nigeria due to its infinite source and environment friendly properties. In Nigeria, even though there is huge potential of solar energy, required investments have not been made in order to utilize the solar energy potential, yet. Passive heating and cooling systems do not cause an extra financial burden for the building costs. Moreover, passive systems could be implemented in later stages of the building construction. Therefore, implementing passive systems will be an aid for Nigerian economy because of their efficiencies and affordable costs. Even though sustainable building design is a globally respected approach, it is not sufficiently known in Nigeria. The main usage of solar energy in Nigeria is in producing light points for households, yet only in applications used for improving energy efficiency is implemented on in government buildings or for academic researches. For that reason, architecture curriculum programs, should include studies that cover sustainability and energy preservation, issues such as ecology, energy active building design, and physical environment control.

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