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DAY ONE – Tuesday 12th August, 2025
Arrival of Guest/Conferees/Delegates

DAY TWO – Wednesday 13th August, 2025

OPENING SESSION/AWARD/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
Plenary Session	- 10:30am – 12noon
Launch Break/Group Photograph	- 12noon – 1:00pm
Plenary Session 2/Research Training	- 1:00pm – 4:00pm
Policy Review Session	- 4:00pm – 5:00pm

DAY THREE – Thursday 14th August, 2025
Departure of Guest/Conferee/Delegates

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BOOK OF PROCEEDINGS

BRIDGING GLOBAL TALENT GAPS: LEVERAGING HRIS TO ADVANCE WORKFORCE LEARNING AND CAPACITY BUILDING IN NIGERIA'S SUSTAINABLE ENERGY SECTOR

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Abstract

Within the realm of globalisation, the Nigerian sustainable energy sector is facing pressure to produce a skilled labour force that is internationally competent. HRIS offers a strategic approach to advance learning amongst employees, streamline the development of talent and advance capacity building overall. Nonetheless, low HRIS adoption, inadequate digital infrastructure, and low organisational preparedness are some of the challenges facing the sector. The research employed a literature review approach to discuss how HIS can be utilized to address global talent challenges in the Nigeria energy labor market. The results indicate that successful application of HRIS enhances superior training delivery, employee performance monitoring, and strategic workforce planning. Though it has ample potential, it has not been fully harnessed because of structural and policy-related impediments. The study finds that Nigeria could realize the full value of globalness in the workforce integration and the adoption of sustainable energy only through the purposeful investment in HR technology, digital literacy initiatives and the institutional change. Such initiatives are important in re-establishing the place of the Nigerian workforce in the worldwide energy economy.

Keywords: *Capacity Building, Globalisation, Human Resource Information Systems (HRIS), Nigeria, Sustainable Energy*

Introduction

Globalization has revolutionized sustainable energy sector and it has opened doors and dilemmas to the nations of the world (Shao et al. 2025). In Nigeria, the requirements of skilled human resource and internationally competitive workforce have increased among renewable energy practitioners, thus requiring effective human resource management strategies. One of the most critical instruments to counteract these obstacles has been the implementation of Human Resource Information Systems (HRIS), which provide effective systems to manage talent, including training and performance tracking (Nagendra & Deshpande, 2014). However, in Nigeria significant obstacles associated with the adoption of HRIS exist such as the low and the lack of digital infrastructure, resistance within Organisations, and policy limitations (Adeola & Richard, 2025; Wakabi & Matovu, 2024).

The recent researches point out the role of human capital in the further promotion of renewable energy projects in Nigeria (Adepoju, David & Nwulu, 2022; Ogunjobi, Eseyin & Popoola, 2021). In particular, a study by Oladapo and Nihlén, (2024) indicates that digital HRM practices build on the concept of digital transformation as an increasingly significant factor in HR practices in the renewable energy sector of Nigeria and, in so doing, define the HR functions and performance. In a similar manner, the review conducted by Omofowa and Umemezia (2025) cites the essential contributors to barriers to the adoption of HRISs in Nigerian SMEs, including low awareness, financial hardships, and careless attitude. There is a strong urgency to investigate the appropriate interventions to address these challenges to support sustainable workforce development through HRIS as expressed in these studies.

The purpose of the paper is to discuss how HRIS can be deployed to pursue strategic solutions to global talent challenges in the Nigerian sustainable energy sector. Its aim is to evaluate the current status of the HRIS adoption, the challenges that are hindering its implementation and recommendations on how its effectiveness can be enhanced. Through these considerations, the research aims to play a role in the discussion about incorporating the practice of digital HRM to create a skilful and globally competitive workforce in the energy industry of Nigeria. This paper will be structured as follows: Section 2 will provide a review of available research on the effect of globalization on the energy industry, the issues of HRIS adoption, and the Nigerian case. In Section 3, the research methodology used in the study is outlined. The research results and the implications of adopting HRIS within the Nigerian sustainable energy market are discussed in section 4. Last, Section 5 draws the paper with a conclusion on policy and practice recommendations.

Literature Review

Globalization and the Sustainable Energy Sector

Globalization has drastically changed sustainable energy sector by enhancing the rate of demand, diffusion of technologies, and advancement of work force all over the world (Ahmed, et al, 2022). In the 2025 Global Energy Review released in 2022 by the

International Energy Agency (IEA), world energy demand rose faster by 2.2% in 2024 than the preceding decade (1.3%). The climate variability and the importance of resilient energy systems were also a part of the cause of this growth surge due to the events of extreme weather events. The power industry was a major contributor to this increase, and the use of electricity rose by 4.3%, the highest increase ever witnessed in non-recession recovery years. Remarkably, green energy sources contributed 38% of the growth in energy supply, indicating a considerable migration towards cleaner forms of energy ((International Energy Agency, 2025). This information depicts an obvious worldwide pattern where sustainable energy not merely plays a focus on the importance of increasing consumption but also serves as a key to mitigate climate risks.

At the same time, the world energy workforce is growing and evolving according to the changes. According to the World energy employment report brought out by the IEA (2024), there was an increase of about 2.5 million new jobs in the energy sector to total employment of above 67 million in the world. Such job creation can be partly explained by the heightened investments in renewable energy technologies that are associated with new labour skills and organisation. This change is, however, complex. This conflict manifests in a burning question between the inspiring net-zero pledges and the gradual pace of real-life execution, which causes confusion to workforce planning and development internationally (Center for Strategic and International Studies (CSIS, 2024). This mismatch indicates that although the number of jobs requiring green energy related expertise is increasing, there can be gaps in the structures and policies preventing successful integration of workforce.

These global trends appear differently in Nigerian context bounded by their own challenges and opportunities. Nigerian energy is highly reliant on fossil fuels which make it prone to international market fragility and environmental issues. The National Energy Policy has focused on diversification via renewable sources like solar, wind, and biomass to improve the energy security and sustainability globally (Federal Ministry of Power, 2021). However, it is also demonstrated by the empirical literature that such challenges as the lack of power generation resources, the underdevelopment of the infrastructure, and overall energy poverty still limit sector development (Akinola et al., 2023; World Economic Forum, 2023; Shaoet al. 2025). This disconnect between intent of policy and realities on the ground shows that we require stronger systems that would help the policy set goals at the global level convert into national improvement.

The Energy Transition Plan (ETP) of the Nigerian government aims to overcome these difficulties to reach 30% renewable energy contribution by 2030 and 60% by 2060, as well as improve national grid infrastructure (Federal Government of Nigeria, 2022). However, literature suggests that the successful implementation depends on the ability to surpass some of the major obstacles, including poor technical skills, infrastructural gaps, and a lack of human capital formation (Bykova, Khasanova & Polonkoeva, 2024; Debrah & Ofori, 2006; Awode & Oduola, 2025). These results support the relevance of strategic workforce planning, and an increasing number of researchers believe that the use of digital solutions such as Human Resource Information Systems (HRIS) can become crucial in the creation of a highly skilled labor force that fits the needs of the global energy markets (Puthiyaveettil 2024; Quaosar & Rahman, 2021; Bilgic, 2020). Overall, this body of research indicates that the sustainable energy sector of Nigeria is set to change but to achieve the full potential the country must coordinate investment in technology, policy changes and human capital.

Human Resource Information Systems (HRIS)

Human Resource Information Systems (HRIS) are a set of technological solutions that are integrated into the Organisational management of human resources (Anupa, 2021). These systems often comprise personnel data management modules, payroll processing option, recruitment and selection, training and development, performance evaluation systems and employee self-service functionalities. HRIS minimize administrative inefficiencies, errors, and create valuable analytics that could guide strategic decision-making by streamlining and computerizing these five HR processes (Hussain et al. 2025). It is a total automation of HR departments turning them into strategic partners contributing to the performance of the Organisation itself.

Ayodele, Andow and Zwingina, (2025) stated that the strategic relevance of HRIS is so noticeable in specific industries such as sustainable energy sector, where competency and capacity building in the workforce is of paramount importance due to fast-changing technology and the complex nature of the workforce required. The idea that HRIS contributes to real-time workforce planning refers to the fact that, through the use of this solution, Organisations are now in a position to detect skill gaps, develop specific training programs, and track the development paths of their employees on a regular basis (Marler and Fisher, 2013). In addition, it facilitates the performance management process which is the alignment of individual employee goals with overall Organisational goals and therefore, the system fosters high performance culture. HRIS is also used as a form of cross-border workforce integration because it normalizes data and processes by geographically separated work teams, encouraging knowledge sharing and Organisational responsiveness to globalization (Nagendra & Deshpande, 2014).

HRIS adoption and use can be framed within some theoretical frameworks like the Technology Acceptance Model (TAM) and Diffusion of Innovations (DOI) theory which are valuable competencies into which HRIS adoption and use can be understood. According to Davis (1989), perceived usefulness and easiness of use are formulations based on TAM which assert that a person perceives that a given technology is easy to use and beneficial, then this will readily avail him or her to accept and adopt the new technologies. This model focuses on how user perceptions contribute to adoption success by noting that even superior technology systems can fail to get adopted due to the perceptions of these systems as being complicated or un-beneficial. As a complementary theory, Rogers (2003) DOI theory looks into the process through which the spread of innovations occurs within the social system and which factors as what is the relative advantage, compatibility with existing values, complexity, trialability and observability usually plays a critical role in the determining the pace at which the innovation is embraced within the social system. This theory has been utilized extensively in interpreting the adoption of HRIS across the various Organisational and cultural contexts.

Empirical evidence of HRIS adoption in developing nations introduces additional complexity through the discovery of novel context issues. According to a study of Almajali et al. (2016), the existing infrastructural constraints, such as unreliable power and administrative challenges of internet accessibility, are some of the main barriers to HRIS implementation within Jordanian Organisations. Equally, resistance to change and a low level of digital literacy captured as part of Organisational culture and a lack of sufficient policy support were cited as consistent obstacles. Similar impediments have been reported in the Nigerian companies, where limited levels of digital infrastructure preparedness and lack of cohesive governance systems limit the opportunities of HRIS to streamline workforce administration (Wakabi & Matovu, 2024; Adepoju et al. 2022). All of these studies highlight the significance of a custom approach to technology and socio-cultural factors that consider both sides to optimize HRIS usability and value.

HRIS in the Nigerian Context

The use of Human Resource Information Systems (HRIS) in the energy sector of Nigeria is still in its infancy stage, marked with occasional implementation and an unbalanced distribution. Although the strategic potential of HRIS in workforce management is increasingly being realized, most Organisations in the field still heavily rely on manual or partially automated HR operations. According to empirical studies by (Ogunjobi, Eseyin & Popoola, 2021), a very few numbers of energy companies have managed to deploy or apply an all-inclusive HRIS system, and adoption has become hampered often by finances and lack of hardware knowledge. This slow adoption acts as a huge setback in the development of a workforce that can achieve international competency practices that can support the advancement toward achieving sustainable energy goals in Nigeria. There are several interdependent obstacles to this slow pace of adoption. The first of these is the inadequate digital infrastructure. Adeola, and Richard (2025) argue that the reliability of HRIS platforms is compromised when the power is unstable or broadband penetration is low and their connectivity inconsistent. Such infrastructural gaps are not only hindering the system functionality but also discouraging the investment in digital HR solutions. Simultaneously, the complications due to Organisational preparedness worsen the problems. According to Adebayo et al (2024), the opposition to technological change in Nigerian companies is rife alongside low digital literacy rates among workers and the lack of strategic vision with regard to HR-related digital transformation. Also, the policy landscape is currently highly disjointed and not advanced; Adeola, and Richard (2025) states that the country lacks comprehensive structures of government to encourage or enable the adoption of HRIS, and there is a general lack of any institutional permanence, which may spur the digitalization of HR faster.

Comparatively, other experiences in other developing nations offer valuable lessons to the energy industry in Nigeria. The example of India is marked by a particularly significant degree of advances in HRIS uptake in the energy sector, impelled by strong public-private collaboration, resourceful approach to investment in ICT infrastructure, and relevant capacity-building efforts (Marler & Fisher, 2013). These initiatives have created a more favorable environment to digitalize HR, improving employee development and Organisational efficiency. South Africa, in its turn, notes the success of additional policy changes at scale and national digital literacy initiatives in promoting HRIS integration in all spheres, including energy (Enaifoghe, Balogun & Afolabi, 2021). The two cases highlight the interconnectedness of policy action, infrastructural, and other aspects of change management such as Organisational as one of the necessities of a successful HRIS implementation.

Methodology

This research paper adopts the systematic literature reviews method in investigating how Human Resource Information Systems (HRIS) can be used in solving global talent issues in the sustainable energy industry in Nigeria. The literature review approach was chosen to acquire a general understanding of HRIS adoption, and its advantages and challenges, synthesizing existing knowledge and defining gaps to create a well-rounded picture of both the global and Nigerian practice. This strategy enables an integrative overview of different empirical research, theories, and policy documents to HRIS and workforce development in energy sectors.

The literature was also selected based on the following criteria: only peer-reviewed journal articles, conference papers, government reports, and trustworthy Organisational publications. These search keywords were: Human Resource Information Systems, HRIS adoption, sustainable energy workforce, digital transformation in HR, Nigeria energy sector, and global talent management. The databases Scopus, Web of Science, Google Scholar, and more specific ones like the International Energy Agency (IEA) archives were used. The literature was chosen thematically with a view to identifying the trends in the HRIS features, adoption challenges, strategic implications, and policy recommendations.

This review is confined to secondary data, majorly covering studies concerning HRIS within the energy industry, and specifically in the contexts of Nigeria and other developing nations. Although this enables sweeping thematic reveals, due to the use of existing literature, primary empirical data, like interviews or surveys, is excluded. Moreover, digital technologies are rapidly changing, so there is a possibility that not all the latest developments are comprehensively described in the academic literature. These shortcomings highlight why further empirical studies are needed to confirm and extend the current findings of this study.

Findings and Discussion

Potential Benefits of HRIS Adoption

The evaluation of the literature makes it evident that the implementation of Human Resource Information Systems (HRIS) throughout the sustainable energy sector of the country of Nigeria has a great potential to overcome certain critical labor burdens and align labor strengths with the global demand. The improvement of training delivery and learning advancement is one of the leading advantages that have been stated. HRIS systems allow having an automated and organized employee training program, easy access to learning materials, and maintainable individual progress data. This is relevant especially with the fast-technological changes within the energy market and the necessity to retrain workers to keep managing more and more advanced renewable energy frameworks (Marler & Fisher, 2013; Ahmed et al. 2022). This has been enabled by reducing the learning process, which makes HRIS helping to create a skilled workforce capable of achieving the sustainable energy goals in Nigeria.

Other than the benefits to training, HRIS facilitates stronger employee monitoring and evaluation in terms of performance. The incorporation of real-time data analytics in HRIS enables managers to measure productivity, evaluate skill building, and determine performance gaps effectively. This is a data-driven process that will enable informed decision-making in the management of talent, and institute a culture of constant improvement and accountability (Adebayo et al. 2024). Given the fact that the energy sector in Nigeria has been dealing with infrastructure and operational inefficiencies, this kind of accuracy in workforce management can positively impact the overall Organisational effectiveness and help the industry compete on the global stage. Also, HRIS presents a strategic feature through planning of workforce and employee talent development. These systems also allow unifying the data about employees so that Organisations can predict labour requirements, succession planning, and specific customisation of recruitment according to short-term/long-term organisational requirements (Omofowa & Umemezia, 2025). This becomes especially important in the Nigerian context as the Energy Transition Plan implies significant changes in the energy composition, and this necessitates new skills of the workforce to handle the technologies associated with renewable sources of energy (Federal Government of Nigeria, 2022). Thus, HRIS emerges as a useful instrument in addressing skills gaps and the need to have human capital development that will be challenged by the increasing technical needs of the sector.

All these advantages emphasize the fact that the HRIS is not only an online administrative tool but a strategic instrument whose implementation should help the energy sector in Nigeria to realize its sustainable development goals. The literature however, also indicates that achieving these benefits depends on breaking infrastructural, Organisational and policy barriers indicating the necessity of end-to-end interventions that facilitate the adoption of HRIS. As the case of other developing nations, including India and South Africa, has shown, the deployment of technology needs to be augmented with strategic investments in infrastructure of digitalization; digital literacy in the workforce and the relevant and enabling policy frameworks (Nagendra & Deshpande 2014; Bykova, Khasanova & Polonkoeva, 2024).

Challenges and Impediments

Although the strategic advantages of HRIS adoption are quite evident, the available literature highlights some of the overwhelming barriers that make adoption especially in the sustainable energy sector in Nigeria quite challenging. The major setback is the rampant lack of digital infrastructure. Inconsistent power supply, low broadband penetration, and poor internet connectivity, as highlighted by studies like Adeola and Richard, (2025) are some of the factors that severely affect the functional reliability of HRIS platforms. These are not only technological gaps that affect the daily practices of off-the-shelf HR, but the kind of gaps that reduce Organisational interest in digital HR systems to contribute to a vicious circle of a lack of use and efficiency. Infrastructural deficit is a fundamental hindrance that should be bridged to facilitate enabling environment to adopt HRIS.

Almost inseparable with infrastructural constraints, the issues of Organisational readiness and change resistance feel also very important. According to some research Adebayo, et al. (2024), reluctance among Nigerian energy companies to adopt digital transformation in HR operations is common. This opposition is often explained by low digital literacy rates among the staff, the threat of losing their jobs, and the established use of the old-fashioned manual way of processing. Also, not every Organisation has a clear strategic vision or commitment of the leadership in favor of HR digitalization, which hinders success, with many initiatives becoming fractured, uncoordinated, or stagnated. These internal forces do not only deter the HRIS implementation process but also hinder the maximization of its potential value to the development of human resources within an Organisation.

In addition to the technological and the Organisational barriers, there are the structural and policy-related barriers that complicate the world of HRIS adoption further. According to Adebayo et al. (2024), there are no coherent national policies to drive or control HR digital transformation, and therefore there lacks a coherent regulatory environment where the government offers limited assistance. This policy inconsistency fosters uncertainty and makes HRIS investments less desirable, particularly among smaller ventures whose limited resources could not keep up on a rapid policy change. In addition, higher-level systematic problems like poor application of ICT standards and lack of matching between energy sector objectives and digital human resources policies also complicate these challenges. The experience of other countries, such as India and South Africa, supports the importance of policy determination and regulatory policies as means to overcome these barriers persistently (Nagendra & Deshpande 2014; Bykova, Khasanova & Polonkoeva, 2024).

Addressing Global Talent Challenges through HRIS

Given the current global energy dynamics and the urgency of a quality and flexible workforce, strategic investment towards Human Resource Information Systems (HRIS) can be seen as a fundamental investment to the future sustainability of the energy sector in Nigeria. It has been continually emphasized in the literatures that investments are no longer restricted to just technology acquisition, but rather involve the establishment of a wholesomely digital ecosystem of HR that combines all the data management and talent development, and advanced strategic workforce planning (Ahmed et al. 2022; Marler & Fisher, 2013). Intention to invest in HR technology does help the Organisation utilize the entire range of the possibilities HRIS possesses, thereby increasing the ability to adapt to the ever-changing needs of the global talent pool and boosting the speed at which they are ready to meet international population standards (Omofowa & Umemezia, 2025).

Digital literacy programs go hand in hand with technological investments in an effort to maximize HRIS impact. Adebayo, et al. (2024) highlight that when the adoption of HRIS is carried out without the development of digital skills among workers and leaders, there are high chances to fail to achieve successful adoption because of the resistance to adoption and poor usage. Digital literacy training allows staff to have the confidence to use HRIS tools and develop a culture of learning and iterative improvement. Such capacity building is especially vital in the energy industry in Nigeria, as the human resource in the industry will have to undergo training to enable them to run and maintain emerging renewable technologies thereby ensuring that human capital development is kept in line with the objective of the transformation of the sector.

Also, they need to implement institutional change and policy reforms that would provide an enabling environment to facilitate the adoption of a sustainable HRIS. Both Adebayo et al. (2024) and Nagendra and Deshpande (2014) concur that policy frameworks need to change to offer explicit guidelines, incentives, and regulatory frameworks promoting the digital transformation of human resource management. Institutional reforms also need to be centered on the connection of the HRIS adoption to the wider Organisational strategy and the energy goals of a nation and it should be coherent as well as permanent. These reforms have the capacity of bringing down tattered regulatory environments and institutional sluggness those impacts presently. The examples of South Africa and India prove the fact that coordination of the policy action with institutional building could be the next key to the rapid spread of HRIS and its advantages (Bykova, Khasanova & Polonkoeva, 2024; Nagendra & Deshpande 2014).

Implications for Practice and Policy

The results of the study are highly relevant to both practitioners operating in the Nigerian energy sector, and the policymakers who are involved in guiding the sustainable energy transition in the country. Nigerian energy companies should implement the strategic measures to utilize the advantages of Human Resource Information Systems (HRIS) as an important part of the agenda in workforce development. These involve the decision to make prior investments on scalable and situation-dependent HRIS technologies that can meet the Organisational requirements without necessarily taking stock of infrastructural shortfalls. The culture of being digital ready is another aspect that should be embraced, so each firm should conduct regular training on digital literacy and change management skills to help workers and the management team to become digitally competent. In this way, companies will be able to reduce the drawbacks of technology adoption and use the data collected and analyzed by HRIS to enhance more efficient use of talent and make various processes more effective.

In policy terms, it becomes evident that the Nigerian government needs to create consistent and favorable policies that will motivate the use of HRIS in the energy sector. Policy-makers ought to establish specific policies and funding systems e.g. tax and grant schemes, or subsidies to develop ICT infrastructure to cut down the obstacles to firms, especially small and medium firms, interested in digitalizing HR functions. Also, the national turnover should consider combining digital HR efforts with more expansive energy transition goals, with policies on workforce development linked to climate ambitions and technology development strategies. Regulatory fragmentation should also be addressed through institutional reforms, which establish centralized oversight authorities that will coordinate the process of digital transformation and track its progress.

An effective system to streamline HRIS in workforce development ought to focus on three main pillars, including technological investment, capacity building, and governance. Technological investment means the provision of sustainable, convenient HRIS systems that are applied to local environments. Capacity building works on the provision of needed digital skills to the workforce and development of corporate cultures that welcome innovation. The governance is the process of developing HR digital transformation policies and institutional bodies that afford them strategic leadership, accountability, and sustainability. It is within this holistic framework that Nigerian energy companies and policymakers can work together to enhance the human capital base of the country.

Given the recent success in the implementation of HRIS in the sustainable energy sector of Nigeria, there is indeed the likelihood that the issue of integration of the country into the global energy economy can be markedly advanced. Nigeria can be a better operational environment through staffing its workforce with skilled, data-driven, and agile employees that can make Nigeria more attractive to international investments and allow it to have a more competitive stake in world renewable energy markets. This orientation is not only economically beneficial to the nation, but also helps in mitigating the effects of climate change in the world, and Nigeria is a front runner in the bid to become a sustainable energy producing country.

Conclusion

This paper has underscored the centrality of Human Resource Information Systems (HRIS) as a strategic lever in the development of workforce competence in the sustainable energy sector in Nigeria in the context of globalization pressures. The findings showed that the adoption of HRIS phenomena has the potential to greatly impact training delivery, employee performance tracking, and strategic workforce planning, thus fulfilling skill deficits that are vital in realizing the changing technological demands of the sectors. Yet, the fulfillment of these benefits is limited by barriers such as a lack of proper digital infrastructure, Organisational resistance, and splintered policy situations. To restate the strategic importance of HRIS, it is evident that strategically investing in HR technology, in addition to Organisational-wide digital literacy programs and extensive institutional changes, is practically imperative in creating a competitively globally energized workforce. These integrative activities are no longer only the keys to a successful energy transition in Nigeria but also to the successful integration of the Nigerian economy with the rest of the world in the sustainable energy economy. However, further study needs to address empirical evaluations HRIS implementation consequences in Nigerian energy companies, how contextual factors define the adoption paths and labour effects. Also, longitudinal studies researching the interaction between policy changes, technological growth, and human capital development would provide useful information to inform evidence-based policies. As Nigeria negotiates sectoral change, strategic use of HRIS has potential to turbocharge sustainable energy ambitions and more general economic and environmental targets.

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Data sharing is not applicable to this article.

Conflicts of Interest
The authors declare no conflict of interest.

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INSECURITY: A PRINCIPAL ROAD BLOCK AGAINST SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

This paper argues that the rate of insecurity of lives and property has constituted great backwardness and damage towards sustainable development in Nigeria. It is worthy of note that the motive behind the formation and operation of the security agents is to foster protection of lives and property which has now been characterized with various politics such that the agency has lost its focus on essentialities. Indeed, this has been one of the major challenges militating against good governance and sustainable development in Nigeria which is a principal road block to socio-political and economic development in the country. However, efforts at ensuring standardization of the security forces and attain violent free society characterized with good governance, protection of lives and property and so on have always been in vain due to the ravaging storm of corruption, social vices of various forms thereby propelling challenges against sustainable development. As a corollary, it is further examined that insecurity is a rape on good governance, democratic consolidation and socio-economic development thus working against societal integration. Hence, it is not uncommon to submit that the security of lives and property can no longer be guaranteed in the country due to perhaps failure or lack of readiness on the part of the security agents to act as agents of change which they are said to have been known for. The study employs the use of both primary and secondary sources to generate the needed data for interrogation. The data sources are further reinforced with the administration of oral interview with relevant stakeholders and members of the public to elicit more information with a view to providing lasting *solutions to the spate of security challenges confronting Nigerians.*

Keywords: *Security Agents, Good Governance, Corruption, and Insecurity*

Introduction

Insecurity is the state of being subject to fear of danger or injury. The anxiety that is experienced when one feels vulnerable and insecure. Ehigiamusoen & Ogbonnaya. (2013) interprets this definition of insecurity as "a state of being not secure, lack of confidence; and for proper understanding of this term, the word 'insecure' which the Advance English Dictionary defines as 'not confident about yourself or your relationships with other people; not safe or protected would be upheld here. This definition further expounds the meaning of the term to include not just the general meaning but it touches the individual person "not being confident about one self." Insecurity is a feeling of uncertainty, a lack of confident or anxiety about yourself. It can also describe the state of being opened to danger or threat. Insecurity often stems from childhood experiences of traumatic experiences. It can zap your confidence and cause you to hold yourself back. Overcoming insecurity takes time and effort, but it's possible with self-awareness.

The pride of any government is the attainment of a higher value level of development in such a way that its citizens derive a natural attachment to governance. However, for a nation to be in a phase of development there must be some prerequisites, which include socio-political and economic stability. The gap between the developed and the developing countries is not static or narrow but is continually widening. A large majority of the world's population in developing world lives in a state of poverty. The problems of the urban population, rural stagnation, unemployment, and growing inequalities continue to face less developed countries, to which Nigeria belongs. Hopes of accelerated development are difficult to realize. This gloomy situation is of great concern to stakeholders and the concerned citizenry. Nigeria has not been able to engender meaningful development despite her huge resources' endowment. This has greatly affected her quest to improve the quality of life of her citizens. Poverty, unemployment, and starvation still pervade the nook and cranny of the country. Development is essential and critical to the growth and sustenance of any country.

Several researchers have identified the relationship between security and national development since the end of the Cold War (Nwanegbo and Odigbo, 2013:2:45; Chandler, 2007:1:361). They posited that development can never be achieved in any nation characterized by conflicts and war. Insecurity and national development are like Siamese twins because they are inseparable concepts that affect each other. Insecurity is a major drawback to Nigeria's national development. Security and safety are paramount issues in Nigeria today. According to Omoyibo and Akpomera (2013:1:132), security is a concept that is before the state and that the state exists to provide that service. Security is the state of being protected physically, emotionally, and psychologically as well as from other harm, attack, and terror which could be considered as non-desirable (Kelechi, 2010:1:1). Security can be seen as the assurance of the future well-being and freedom from threat.

The 1999 constitution of the Federal Republic of Nigeria especially affirms that “The security of and welfare of the people shall be the paramount function of government”. Regrettably, the government has failed to discharge its duty in this regard. Lately, abduction for ransom has become the new *money-making* venture for kidnappers. This surge in abductions has instilled a pervasive sense of fear and uncertainty among the populace. To successfully enhance meaningful development, effective strategies must be evolved. The level of insecurity in Nigeria needs to be addressed because of its adverse effects on Nigeria's national development. This research study seeks to examine the issue of insecurity and its implication for Nigeria's National development.

Stating the problem of the study, it is believed that the failure of the government to provide a secure and safe environment for lives and properties and the running of businesses and other economic activities has created anger and hostility among the tribal groups (Ewetan & Ese, 2014:1; 46). This has led to ethnic violence, religious violence, and communal clashes in several parts of the nation and has resulted in the destruction of lives and properties, hampered business and economic activities, and stunted the economic growth and development of Nigeria. According to Ogege Sam Omadjohwoefe (2013:1:82), Nigeria as a nation is faced with complex security obstacles which include ethnic crises, assassination, militancy, kidnapping, and terrorism. The Boko Haram crisis has posed a greater security challenge to Nigeria's growth and national development, most especially in the northern-eastern part of the country. According to Ehigiamusoen & Ogbonnaya. (2013:1:9), several attacks from the lawless Islamic sect have been targeted at the state, institutions, and the civilian population. The current administration of President Bola Hamed Tinubu policy on the subsidy removal on motorist spirit has worsened the living conditions of the Nigerians. The unbearable hardship has resulted in the just concluded ten days protest [Augusr1-10, 2024] which claimed several life's, many injured, shops looting, and vandalization of properties. This research study will attempt to study the reason why insecurity has stunted the growth and development of the Nigerian economy. These raise the questions as follows: has insecurity negatively impacted Nigeria's national development? Has the government played a significant role in curbing insecurity in Nigeria? Would the curbing of insecurity in Nigeria increase the rate of national development? What are the measures to adopt to eradicate insecurity in Nigeria? These and many others would be addressed in the study.

Furthermore, the objectives of this study are to determine the impact of insecurity on national development, to determine the roles played by the government in curbing insecurity in Nigeria, to examine the effects of curbing insecurity on Nigeria's national development and to determine the measures to adopt to eradicate the problem of insecurity in Nigeria. While the basic assumptions that will guide this research, work are as follows: That insecurity has negatively impacted Nigeria's national development. Secondly, that government has played a significant role in curbing insecurity in Nigeria. Also, that curbing of insecurity in Nigeria will increase the rate of national development and measures to eradicate insecurity completely in Nigeria?

Justification for the Study/Significance of Study

As a student of politics and a citizen of Nigeria, the level of insecurity in my country is of great concern. Thus, I have determined to investigate and focus my research work on the causes of insecurity and its impacts on Nigeria's national development. To know if the government has played any significant role in curbing insecurity issues in Nigeria, to investigate the hindrances to the achievement of curbing insecurity issues by the government, and to provide possible measures to adopt to eradicate insecurity in Nigeria. This research study will theoretically contribute significantly to the contemporary body of academic knowledge. The research study will be significant practically to the military, other security agencies, and Policy makers and also educate and widen the horizon of the citizens on security matters and its effect on their lives and properties. The research study would also provide various ways by which insecurity can be reduced in Nigeria under this democratic dispensation.

Definition of Terms

Insecurity: Achumba (2013:1) defines insecurity from two perspectives. Firstly, insecurity is the state of being open or subject or risk of danger, whereas danger or threat of danger, where danger is the condition of being susceptible to harm or injury. Secondly, insecurity is the state of being exposed to risk or anxiety, where anxiety is a vague unpleasant emotion that is experienced in anticipation of some misfortune.

Development: development is dynamic and multifaceted term it encompasses progress and positive change in different dimensions of life. The process of growth, progress, and improvement in various aspects of human life, societies, economies, or the environment. Others view it from political, economic, and socio-cultural perspectives.

National development: The term "national development" refers to the improvement of a country in all areas, including the political, economic, social, cultural, scientific, and material spheres.

Theoretical Framework

The theory adopted for this study is "The Frustration-Aggression Theory", posits that aggression is often a direct consequence of frustration. When a person's goals are blocked, they experience frustration, which can lead to aggressive behaviors as a response. This theory was initially proposed by John Dollard, Neal Miller, Leon Neal Miller, Leonard Doob, Orval Mowrer, and Robert Sears in 1939.

The frustration-aggression hypothesis states that aggression is a result of frustration. Frustration is any event or stimulus that prevents an individual from attaining a goal and it is accompanying reinforcement quality (Anderson & Bushman ,2002) in general we can identify five approaches to understanding our aggression: ethological, psychotherapeutic, social learning, frustration-aggression, and cultural.

Strength and weakness of the theory

The frustration-aggression hypothesis is based on the psychodynamic approach. When people are frustrated, they experience a drive to be aggressive toward the object of their frustration, but this is often impossible or inappropriate, so the source of their aggression is displaced by something or someone else. It uses the concepts of catharsis (relieving emotional tension) and displacement (unconscious defense mechanism whereby the mind diverts emotions from their original source to a less threatening, dangerous, or unacceptable one to avoid experiencing anxiety). Frustration is a feeling of tension that occurs when our efforts to reach a goal are blocked. According to this theory, proposed by Dollard (1939), frustration often leads to aggression. When our drive to reach a goal is blocked by external factors, we experience frustration, which, in turn, creates an aggressive drive, and this can lead to aggressive behavior. When we express this aggression physically, verbally, or by fantasizing, we experience catharsis, and our emotional tension is reduced.

However, our aggression is not always expressed towards the legitimate target because it could be too dangerous and we risk punishment, or because this target is not available so we displace our aggressive response towards a less dangerous target or one who just happens to be present. This is called displacement. The first to formulate the frustration-aggression hypothesis were the Yale University researchers John Dollard, Leonard Doob, Neal Miller, O. H. Mowrer, and Robert Sears (1939). The group attempted to account for virtually all of human aggression with a few basic ideas in their book, *Frustration and Aggression*. Dollard et al. define frustration as an event instead of an affective state (Breuer, J., Scharkow, M., and Quandt, T. 2015). John Dollard thought about frustration as an unexpected blockage of a goal that someone anticipated attaining. This characterization of frustration through observable qualities of events and environmental characteristics allows the objective testing and description of its effects rather than relying on subjective self-reported experiences. This is an important differentiation because this definition of frustration is also implied by modifications and reformulations of the frustration-aggression hypothesis.

Applicability of the theory

The theory is suitable for the study because most often people are frustrated to be involved in some questionable adventure such as participating in social vices like: kidnapping, armed robbery, stealing, killing, violence, causing insecurity for society and many more that amount to road block to security in Nigeria.

Causes of Insecurity in Nigeria

The nature and trends of insecurity in the country have been-worrisome in recent times because it has constituted a threat to national development. Nigeria has recently witnessed an unprecedented level of insecurity that has featured with kidnapping, armed robbery, stealing, killing, violence and so on. Insecurity on the other-hand, is the state of being subject to danger of injury. With the high rate of insecurity in Nigeria, there would not be any form of significant National Development; therefore, this research work tends to identify the causes of insecurity in Nigeria and possibly, proffer solutions to them. The paper adopted qualitative research design and the researcher used descriptive analysis to examine the issues insecurity in Nigeria. The study noted that the causes of insecurity in Nigeria include; kidnapping, militancy, unemployment, fear of distrusted government etc as other factors were looked into. The study found that the alarming level of insecurity in Nigeria has increased the crime rate and terrorists' attacks in different parts of the country, leaving unpalatable consequences for the nation's economy and business growth. Though insecurity is not a new thing in Nigeria, the number of security challenges in the country in recent time is alarming. It also revealed that the number of violent crimes such as kidnappings, ritual killings, carjacking, suicide bombings, religious killings, politically-motivated killing and violence, ethnic clashes, armed banditry and others have increasingly become the regular signature that characterizes life in Nigeria. In conclusion, In order to ameliorate the incidence of crime, the federal government has embarked on criminalization of terrorism by passing the Anti-Terrorism Act in 2011.

Majority of factors that account for insecurity are found within the security agents and society at large. Some of these factors will be discussed in this paper as indicated below:
The issue of ineffectiveness of the security apparatus is one of the major causes of insecurity in Nigeria.

Poverty and Unemployment: This is one of the factors responsible for insecurity. The attitudinal behavior of our leaders both physical and temporal

Corruption: Corruption is a form of dishonest behavior that has a big impact on everyone. It occurs when an entrusted entity abuses its position of power for its own benefit. Corruption can come in many forms including bribes, double-dealing, and fraud by individuals, businesses, and governments. This has the order of the day in Nigeria.

Abuse of drugs by the youths: Drug abuse and drug menace is the illicit, non-medical use of limited number of substances, most of drugs which have the properties of altering the mental state of a being in ways that are considered by social norms and defined by statute to be inappropriate, undesirable, harmful threatening to the life of the user.

Illegal possession of fire arms: In Nigeria generally, illegal possession of firearms is a serious crime with severe penalties, including imprisonment, as outlined in the Robbery and Firearms (Special Provisions) Act and the Firearms Act. The law defines possession as having control over a gun. This can include having a firearm in your personal space, like your car or home. You don't have to own or touch the firearm to be in possession. The legal definition also considers your ability to access the firearm. Whenever one is in possession, one might be tempted to use it to cause insecurity and thievery.

Poor parenting: Poor parenting, encompassing actions or neglect that harm a child's development and well-being, can manifest in various ways, including emotional abuse, neglect, and physical harm, leading to negative long-term consequences.

What constitutes poor parenting among others include: Physical, emotional, and sexual abuse and neglect: These are the most serious forms of bad parenting, causing severe and lasting damage. Also, lack of supervision and inconsistent discipline: Failing to monitor a child's behavior and provide guidance can lead to risky situations and behavioral problems.

i. **Prioritizing parental needs over a child's**: Parents who neglect their children's needs or use them for their own gain are engaging in poor parenting practices.
ii. **Demanding blind obedience and using intimidation**: This stifles a child's development of critical thinking and healthy emotional regulation.
iii. **Withholding affection and support**: A lack of emotional connection and encouragement can negatively impact a child's self-esteem and social skills.
iv. **Comparing a child to others**: This can damage a child's self-worth and lead to feelings of inadequacy.
v. **Reprimanding a child excessively or in public**: This can be damaging to a child's self-confidence and create a fear of making mistakes.
vi. **Uninvolved parenting (neglectful parenting):** This style is characterized by a lack of responsiveness to a child's needs and demands.
vii. He frequents ethnic and religious conflicts between the two dominant religions in Nigeria that is Christianity and Islam is a major security challenge.
viii. **Influence of peer group**: Peer group influence, particularly during adolescence, significantly shapes behaviors, attitudes, and beliefs, impacting everything from academic choices to risky behaviors which can be so negative.

The Relevant of Security Agents

In Nigeria, the Nigerian Police Force is the primary agency responsible for maintaining law and order, preventing and detecting crime, and protecting life and property. Other security agencies, like the State Security Service (SSS), Defence Intelligence Agency, and National Intelligence Agency, play crucial roles in internal security, counter-terrorism, and intelligence gathering, both within and outside Nigeria. The Nigerian Constitution also empowers the military to support civilian authorities in maintaining law and order during emergencies, and to provide security for the electoral process. Security agents, whether employed by private companies or government agencies, play a crucial role in protecting people, property, and assets by monitoring, patrolling, and responding to threats and emergencies.

Etuk (2018) posits that one important strategy of violent crime control that has received global recognition is the "stop and search". This strategy is also documented by Karn (2013) cited in Etuk (2018) observed that stop and search enables the police to allay or confirm suspicions about individuals and detect those suspected of carrying weapons, stolen goods or being equipped for stealing. The Police argue that the use of stop and search strategy disrupts and deters criminal activity, rather than simply detecting it (The Police Foundation, 2012). Another strategy common to security agencies is patrol. Patrol is typically the largest function in police agencies around the world, and the majority of officers tend to be assigned to general service duties (Bayley, 1992 cited in Telep et al., 2016).

Recently and some years back, it has become increasingly recognized that police agencies can have a beneficial impact on crime and disorder (Lum et al., 2011 cited in Telep et al., 2016). Police patrol officers have likely played a major role in police efforts to effectively address crime as these officers make up a substantial portion of police resources and are on the front lines responding to crime and citizen concerns on a daily basis. A statement by the Nigeria Police Force spokesman, CSP Jimoh Moshood in Abuja, said that the Inspector General of Police (IGP), Ibrahim Idris directed immediate commencement of stop and search operations across the country to prevent crimes and criminality throughout the yuletide and as well directed all State Police Commands across the country to beef security at flash points, black spots and vulnerable points on major roads and highways across the country. He warned that in order to ensure free flow of traffic and ease movement of travelers, the operation should not be located at areas susceptible to traffic gridlock or vehicular hold-ups (Ikeji, 2017).

However, there are hindrances to security agencies in curbing violent crimes despite all the afore-mentioned roles of the security agents. The government's ineptitude and laxity in dealing with security challenges has posed a problem for the security forces in discharging their duties. Nigeria's borders are porous thereby making it possible for infiltration of mercenaries and arms proliferation into the country. Nigerian security forces are finding it difficult to end insecurity in the country. This was evidenced when almost 400 Nigerian Army personnel detailed to fight Boko Haram in Borno State resigned their appointments under the guise of tactical withdrawal. This has been attributed to lack of training and lack of modern fighting equipment. The Nigerian military has admitted that hundreds of government troops fled from heavy fighting with Boko Haram, but said their apparent escape to neighbouring Cameroon was a "tactical manoeuvre" (Nnenah, 2014 cited in Onyepuemu, 2015). Omotosho and Aderinto (2012) believe that no matter what the effort by the Nigeria Police cannot control crime in society because of inadequacies within the force. Most especially in terms of manpower and training, weapons, technological advancement and other challenges affecting their performance. Nigeria security challenges impact on sustainable growth and development. Security challenges in any nation constitute threat to lives and properties, hinder business activities and discourage local and foreign investors which invariably slow down economic growth and development.

Conclusion and Recommendation

The finding revealed that the causes of insecurity are the menace of unemployment and poverty, elite exploitation of ethnicity and religious differences, corruption, weak security apparatus, porous border, marginalization and inequality in the country, and bad governance and poor leadership.

Job Creation: As unemployment rate rises so also is the increase in violence and crime making the country insecure. This has been identified by scholars and leaders alike. Also, an insecure environment will definitely result in job lose. Government should therefore tackle and arrest youth restiveness by investing on job creation.

Justice Dispensation: The Punch Editorial of July 13th 2011 made a very frantic opinion on the idea of fighting insecurity in Nigeria. In the fight against corruption in the public service and against cultism in the tertiary institutions, the anti-craft agencies and university authorities have often been up against a brick wall in the courts. The courts have been repeatedly blamed for frustrating justice delivery through all manners of injunctions, expert orders, and in some cases, outright acquittals. On this problem, I strongly recommend that the government should through the justice ministry check these excesses and discipline any judge found to collaborate with criminals to stall justice dispensation.

Provision of Basic Needs of the Citizens: The basic goals of any civilized society are the survival of security of life and property. These basic goals are not negotiable, no matter who wins or loses in election. Therefore, the ordinary Nigerians must be given protection at all cost through appropriate information, education, mobilization, job opportunity, pressure group formation and legal requirements in our democratic politics.

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CULTURE AND SUSTAINABLE DEVELOPMENT: RETHINKING AFRICA'S DEVELOPMENT PARADIGM

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Abstract

The neglect of cultural dimensions in sustainable development discourse has limited the effectiveness of development strategies across Africa. Despite culture's role in shaping governance, economic participation, and social cohesion, it is not explicitly addressed in the 17 Sustainable Development Goals (SDGs). Anchored in Amartya Sen's Capability Approach and Throsby's Cultural Sustainability Theory, this paper examines how cultural values, indigenous knowledge, and traditional institutions influence development outcomes. Drawing on examples from multiple African countries, including Nigeria, Ghana, Ethiopia, and Rwanda, the study highlights the ways in which culture can both enable and hinder progress in governance, education, environmental management, and conflict resolution. It also analyzes tensions between certain cultural practices and human rights-based development objectives. The paper argues that integrating culturally sensitive approaches into development frameworks can enhance policy relevance, foster community ownership, and improve the sustainability of interventions. The conclusion underscores that achieving inclusive and lasting development in Africa requires deliberate incorporation of cultural dimensions into both national policies and global agendas, ensuring strategies resonate with the lived realities of African societies.

Keywords: *Africa, culture, development policy, indigenous knowledge systems, Sustainable Development Goals (SDGs).*

Introduction

Sustainable development, as a concept, has gained global prominence as a blueprint for addressing the economic, social, and environmental challenges of the modern world. The adoption of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) by the United Nations in 2015 marked a significant milestone in global development efforts. These goals aim to eradicate poverty, reduce inequality, promote gender equity, and ensure environmental sustainability, among other objectives (United Nations, 2015). While the SDGs provide a holistic framework, their neglect of cultural dimensions has sparked debates about their inclusivity and long-term viability, particularly in contexts where culture plays a central role in shaping societal behavior and governance.

Culture, often defined as the shared values, beliefs, practices, and traditions of a people, is a critical determinant of development outcomes. Scholars such as Sen (1999) have emphasized that development is not merely an economic process but a comprehensive expansion of freedoms and capabilities, deeply influenced by cultural contexts. In Africa, where diverse cultural identities coexist, the role of culture in shaping governance, education, healthcare, and conflict resolution cannot be overstated. However, despite its importance, culture remains largely overlooked in mainstream development discourses. Of the 17 SDGs, none explicitly addresses culture as a core component, thereby raising critical questions about the relevance and sustainability of these goals in culturally diverse societies like those in Africa (Throsby, 2001). Development scholars have consistently demonstrated the profound influence of culture on development outcomes, revealing its dual capacity to enable or hinder progress. For instance, in Ghana, communal land ownership systems have facilitated sustainable agricultural practices and equitable land distribution. This cultural approach aligns with the objectives of SDG 15 (Life on Land) by promoting environmental conservation and reducing land-related conflicts (Yaro, 2010). Similarly, traditional practices of community savings and loans, such as "tontines" in West Africa, have enhanced financial inclusion and supported local entrepreneurship, directly contributing to SDG 8 (Decent Work and Economic Growth) (Greaney et al., 2016).

Conversely, certain cultural norms and practices can impede development. For example, the practice of early and forced marriages, prevalent in parts of sub-Saharan Africa, has significant adverse effects on girls' education, health, and economic participation. UNICEF (2020) reports that one in three girls in sub-Saharan Africa is married before the age of 18, depriving them of the opportunity to complete their education and secure employment. This entrenched cultural practice undermines efforts toward achieving SDG 5 (Gender Equality) and SDG 4 (Quality Education), perpetuating cycles of poverty and inequality. Moreover, cultural norms around gender roles often influence participation in governance and decision-making processes. In many African communities, patriarchal structures restrict women's involvement in leadership, thereby limiting diverse representation in policymaking. This has implications for SDG 16 (Peace, Justice, and Strong Institutions), as inclusive governance is critical for fostering social cohesion and sustainable development (Dahir, 2018). These examples illustrate the necessity of addressing cultural dimensions to unlock the full potential of the SDGs in African contexts.

In Nigeria, with over 250 ethnic groups and more than 500 languages, cultural diversity is both a defining characteristic and a development challenge. This diversity manifests in various forms, from traditional governance systems to religious practices, providing both opportunities and challenges for development. For example, the Yoruba practice of "age-grade systems" fosters community-based collaboration in executing development projects, such as building schools, roads, and health facilities. This approach reflects the principles of SDG 11 (Sustainable Cities and Communities), emphasizing participatory development and community resilience (Adegbite, 2019). However, Nigeria's cultural diversity has also contributed to governance challenges, particularly in fostering national unity and addressing ethnic tensions. The persistent clashes between farmers and herders, often along ethnic and cultural lines, highlight the difficulty of integrating diverse cultural practices into cohesive national policies. These conflicts have undermined food security (SDG 2) and peace (SDG 16), exacerbating regional inequalities and development disparities (Nwosu & Ofoegbu, 2020).
Furthermore, the exclusion of traditional leadership structures in modern governance has often resulted in the alienation of local communities from national development initiatives. In many rural areas, traditional rulers and elders still wield significant influence over communal decision-making. Ignoring these structures in policy implementation has led to resistance and the failure of development projects. For instance, the National Poverty Eradication Programme (NAPEP), introduced in the early 2000s, struggled to gain traction in rural Nigeria partly due to its top-down approach, which neglected the input of local leaders (Olayemi, 2014). On the other hand, integrating cultural practices into national development strategies has shown promise. For example, the adoption of indigenous conflict resolution mechanisms, such as the use of mediatory councils by traditional leaders in the Niger Delta, has contributed to the peaceful resolution of disputes and enhanced community trust in governance structures. This approach aligns with SDG 16 by promoting peace and inclusive institutions (Ebewo & Sirayi, 2009). These examples underscore the need for culturally sensitive development policies that leverage Nigeria's rich cultural heritage while addressing its challenges.

Against this backdrop, this paper argues that sustainable development in Africa, and Nigeria in particular, cannot be effectively achieved without integrating cultural dimensions into development frameworks. The study seeks to highlight actionable strategies for leveraging cultural practices to foster inclusive and sustainable growth by examining the interplay between culture and development. It also calls for a reevaluation of the SDGs to incorporate cultural components, emphasizing that development efforts that ignore culture risk being misaligned with the lived realities of the populations they aim to serve. In doing so, this paper provides a foundation for policymakers, researchers, and development practitioners seeking to create holistic solutions that are not only economically viable but also culturally resonant.

Theoretical Foundations and Literature Review

The relationship between culture and development has been a long-standing subject of academic discourse, with scholars across disciplines seeking to understand how cultural factors shape development outcomes. In recent years, there has been a growing recognition of the need to integrate cultural considerations into sustainable development frameworks. This literature review examines the theoretical foundations of culture and development, the challenges and opportunities posed by cultural diversity, and the limitations of current sustainable development paradigms, particularly in the African context.

Theoretical Frameworks on Culture and Development

A central theoretical framework in the study of culture and development is Amartya Sen's capability approach, which emphasizes the expansion of human freedoms and capabilities as the primary goal of development. According to Sen (1999), development should be understood not merely as an increase in material wealth, but as a process of enlarging the range of human choices, capabilities, and opportunities. In this view, culture plays a vital role in shaping individual and collective freedoms, as it influences people's values, norms, and practices, which in turn affect how they participate in the development process. Sen's approach suggests that development should be context-specific, tailored to the cultural and social realities of a given community, and that policies must be mindful of cultural values to be effective and sustainable.

Another influential theory in this field is cultural sustainability theory, championed by scholars like Throsby (2001), who argues that cultural heritage is not just a passive reflection of the past but an active force in shaping present and future development. Throsby's work emphasizes the need for development strategies that respect, preserve, and promote cultural diversity, ensuring that the economic, social, and environmental dimensions of development do not come at the cost of cultural identity. Throsby (2001) further highlights that cultural sustainability should be an integral part of development agendas, as it helps communities retain their cultural practices while engaging in economic and social progress. This aligns with broader sustainable development goals, which recognize that long-term development cannot be achieved without preserving the cultural fabric of societies.

However, cultural sustainability theory has not been without critique. Scholars such as Appadurai (2004) caution against essentializing culture, warning that it is wrong to treat culture as a static, monolithic force. Appadurai argues that cultures are constantly evolving through processes of globalization, migration, and technological change. In this view, cultural practices are not fixed but are subject to change, adaptation, and transformation. This critique is particularly relevant to the African context, where cultures are frequently seen through the lens of tradition and continuity, often overlooking the dynamic ways in which African societies adapt to modern challenges. Appadurai's emphasis on the capacity to aspire, that is, the ability of individuals and communities to imagine alternative futures, suggests that development must be framed in ways that allow for cultural evolution and transformation, rather than preserving static cultural practices.

Cultural Barriers and Opportunities in Africa's Development

The role of culture in development is particularly pronounced in Africa, where diverse cultural identities and practices intersect with the continent's complex historical and socio-political realities. On the one hand, African cultures have shown remarkable resilience in the face of colonialism, globalization, and modernity. Ubuntu, an African philosophy originating from the Bantu languages, epitomizes the collective spirit of community, cooperation, and mutual responsibility that underpins many African societies (Madiba, 2018). According to Mangaliso (2001), Ubuntu has played a pivotal role in fostering collective action and solidarity in areas such as education, health, and governance. It provides a framework for understanding how African communities have navigated developmental challenges by relying on mutual support and shared responsibility. Ubuntu-based community-driven development initiatives, such as cooperatives and communal land management, align with the principles of sustainable development, as they emphasize collective well-being and the shared use of resources.

However, cultural practices in Africa can also present barriers to development, particularly when they are in conflict with internationally recognized human rights or global development goals. For instance, practices such as female genital mutilation (FGM), early marriages, and patriarchal control over women's autonomy have profound implications for gender equality and women's empowerment (UNICEF, 2020). These practices often impede the achievement of SDG 5 (Gender Equality) and SDG 4 (Quality Education) by depriving girls and women of opportunities for education, economic independence, and full participation in society. The persistence of such practices is often justified on the grounds of cultural tradition, illustrating the tension between cultural values and the need for human rights-based approaches to development.

The persistence of harmful cultural practices highlights the importance of culturally sensitive policies that are both respectful of local traditions and aligned with broader development objectives. Several scholars, including Kabeer (2005), argue that development cannot be achieved without engaging with the social and cultural norms that govern individuals' lives. Policies that ignore cultural factors or attempt to impose external values may face resistance, as communities may perceive them as an infringement on their identity or autonomy. This calls for development approaches that engage local communities in a dialogue about the benefits of change, while respecting their cultural values.

Culture and the Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) offer a comprehensive framework for addressing global challenges, yet the absence of a direct focus on culture raises critical questions about their applicability in diverse cultural contexts. While some SDGs, such as SDG 11 (Sustainable Cities and Communities), SDG 5 (Gender Equality), and SDG 10

(Reduced Inequalities), recognize the importance of cultural factors, the SDGs as a development mandate fails to fully engage with culture as a central driver of development. This oversight reflects a Western-centric conception of development that prioritizes economic growth, technological innovation, and environmental protection, often sidelining the cultural dimensions of development.

As Morsy (2019) argues, development strategies that fail to account for cultural contexts risk alienating local communities and hindering the effectiveness of interventions. For example, community participation - an essential element of SDG 11 - is deeply influenced by local cultural norms regarding leadership and social organization. Policies that overlook these cultural norms may encounter resistance or lack local buy-in, undermining the intended outcomes. Morsy's (2019) study highlights the need for development strategies that integrate cultural perspectives to ensure that the SDGs are relevant and impactful in different social and cultural contexts. Thus, the integration of culture into the SDGs is not only necessary but also critical for ensuring that development efforts are inclusive, relevant, and sustainable in the long term.

Cultural Dimensions of Development

The concept of development is often viewed through a narrow lens that prioritizes economic growth, technological advancements, and social infrastructure (Rostow, 1960). However, these elements alone do not fully account for the complex dynamics that contribute to long-term, sustainable development. Culture, as an integral component of human societies, plays a pivotal role in shaping development outcomes. In African countries, where diverse cultural norms and practices prevail, understanding the cultural dimensions of development is crucial to formulating policies and strategies that resonate with local realities, aspirations, and values. This section explores how culture influences governance, education, community development, and environmental sustainability, offering both challenges and opportunities for achieving holistic development.

Culture and Governance

Governance is a central aspect of national development, and in many African societies, governance structures are deeply rooted in cultural traditions. These structures, which include traditional leadership councils, communal decision-making processes, and rituals of authority, are integral to the political fabric of African communities. For instance, in Nigeria, the Igbo and Yoruba people maintain traditional councils of elders, which play a crucial role in decision-making at the local level. These councils uphold principles of democracy, collective decision-making, and social harmony, which are reflective of the Ubuntu philosophy prevalent across Africa, emphasizing mutual respect and interdependence.

The interaction between traditional and modern governance structures can be complex. While modern democratic systems emphasize formal institutions such as parliaments, political parties, and legal systems, traditional governance often operates through informal mechanisms that rely on consensus-building and cultural values. This dual governance system can sometimes lead to tension, especially when modern political systems undermine or fail to integrate traditional authority structures. A case in point is the conflict between central government policies and the authority of traditional leaders in rural areas of Nigeria, where traditional governance remains highly respected, but its formal recognition by the state remains limited (Olayemi, 2014). The challenge lies in how to reconcile these governance systems in a way that strengthens the democratic process. Integrating traditional governance structures into national policies could serve as a means of bridging the gap between rural communities and state authorities. This synergy could foster a more inclusive, culturally-sensitive approach to governance, enhancing political legitimacy and social cohesion.

Culture and Education

Education, as a tool for social transformation, is deeply influenced by cultural values and traditions. Historically, African education systems were community-based and focused on transmitting indigenous knowledge, skills, and values. These educational practices emphasized social cohesion, moral responsibility, and the passing down of cultural heritage. However, the advent of colonialism introduced Western education systems that often marginalized or erased indigenous knowledge, languages, and cultural practices. This led to a cultural disconnection, where African students were educated in foreign languages and exposed to values that were sometimes at odds with their local traditions.

In recent years, there has been a growing recognition of the importance of integrating indigenous knowledge and cultural values into formal education systems. For example, the Ubuntu philosophy, which underpins African collective identity and community-oriented values, has been incorporated into educational frameworks in South Africa (Madiba, 2018). This philosophy stresses communal responsibility, respect for diversity, and social justice; values that resonate with African traditions. This reorientation of the education system reflects a shift toward culturally relevant education, which not only honors local traditions but also prepares students to address contemporary challenges in ways that align with their cultural identity. Moreover, the use of indigenous languages in education has proven to be an effective means of preserving cultural heritage while enhancing learning outcomes. Studies have shown that students who are taught in their native languages perform better academically because they can more easily grasp concepts and engage with learning materials in a language they understand deeply (Mwanza, 2016). Countries such as Ghana and Tanzania have taken steps to incorporate local languages into the curriculum, aiming to foster both intellectual growth and cultural pride. Incorporating indigenous knowledge into the curriculum also allows students to engage with their environment in a sustainable manner. For instance, environmental education programs that draw on traditional ecological knowledge (TEK) can teach students sustainable land management practices, resource conservation, and climate adaptation strategies, all of which are crucial for addressing environmental challenges in Africa.

Culture and Community Development
At the heart of African development is the concept of community. Traditional African societies are often built around strong communal bonds, where individuals are seen as part of a collective entity. This sense of belonging and mutual responsibility forms the foundation of community development efforts. Indigenous community development models are typically characterized by shared labor, communal ownership of resources, and collective decision-making. For example, in Nigeria, the Odua Peoples' Congress (OPC) and similar organizations in other African countries mobilize communities to address local development challenges such as poverty, education, and healthcare (Olayemi, 2014). These grassroots organizations rely on cultural values such as solidarity, cooperation, and collective action to bring about social change. Traditional practices of mutual aid societies, where communities work together to provide for each other's needs, continue to influence community development strategies.

However, one of the significant challenges in the intersection of culture and community development is the gendered nature of some traditional practices. In many African communities, women's roles have been historically confined to domestic spheres, and their participation in community decision-making has often been limited. While many African cultures have deeply ingrained gender roles, some matrilineal societies such as those found among the Akan people of Ghana or the Ndebele of Southern Africa have afforded women substantial influence in governance and resource management (Yaro, 2010). These examples highlight the potential of traditional cultural structures to offer more equitable development outcomes when women are empowered to participate fully in community life.

To promote inclusive development, there is need to incorporate gender-sensitive policies into cultural frameworks. Empowering women within traditional systems can enhance community resilience, particularly in areas related to healthcare, education, and economic empowerment. In countries such as Rwanda, where women hold a significant percentage of parliamentary seats, the integration of gender-responsive policies has led to increased attention to women's rights and contributions to national development.

Culture and Environmental Sustainability
Sustainability is a central theme in development discourse, and culture plays a crucial role in ensuring environmental sustainability. African traditional societies have long demonstrated an intimate relationship with the environment, with cultural practices that promote resource conservation and ecological balance. Traditional ecological knowledge (TEK), passed down through generations, reflects the profound understanding that indigenous communities have of their local environments (Morsy, 2019). These practices include sustainable farming techniques, water conservation methods, and the management of natural resources such as forests and wildlife. For example, the Agroforestry practices of the Fulani in West Africa provide a model for sustainable land management. The Fulani people's traditional methods of planting trees alongside crops not only improve soil fertility but also help conserve biodiversity and

protect the environment from desertification (Meyer, 2017). Similarly, in East Africa, rainwater harvesting techniques practiced by the Berber people demonstrate a deep cultural understanding of water scarcity and the need for efficient resource use in arid regions (Chambers, 1997).

Despite the erosion of some traditional practices due to urbanization and industrialization, there is increasing recognition of the value of eco-cultural heritage in addressing contemporary environmental challenges. African communities can develop sustainable solutions that are both culturally relevant and environmentally effective by integrating traditional ecological knowledge with modern scientific methods. A typical example is Ethiopia where traditional water conservation methods, such as the construction of silt dams by the Amhara people, have been used in conjunction with modern irrigation technologies to combat soil erosion and water scarcity in rural areas (Mengisteab, 2021). This fusion of indigenous knowledge with contemporary practices offers a pathway to sustainable development that honors both culture and the environment.

Summarily, the cultural dimensions of development are essential to the realization of sustainable, inclusive, and human-centered progress in African societies. As this section has demonstrated, culture influences every facet of development, from governance and education to community development and environmental sustainability. African societies, with their rich cultural diversity, offer valuable lessons on how cultural values can be leveraged to foster development that is both sustainable and deeply rooted in local traditions. However, this requires a conscious effort to integrate cultural knowledge and practices into national development frameworks, ensuring that the development process is not only economically viable but also culturally appropriate and socially inclusive.

Challenges to Integrating Culture into Sustainable Development
Institutional Inertia and Policy Fragmentation
Institutional inertia remains a significant barrier to the effective integration of culture into development policies. Many African governments, influenced by the economic-centric frameworks of colonial legacies and international organizations, focus primarily on measurable economic outcomes like GDP growth and infrastructure development. As such, culture often takes a backseat in national development agendas (UNDP, 2019). Institutions, such as ministries of culture, are often relegated to secondary roles in many countries, leading to a lack of coherence in national development planning. For example, in countries like Nigeria, where there is significant cultural diversity, the fragmentation between ministries of culture, education, and economic development has resulted in disjointed strategies that fail to account for the nuanced ways in which cultural practices influence national development (Egunyomi, 2015). This institutional fragmentation often leads to missed opportunities where cultural assets - such as traditional knowledge, local languages, and indigenous governance structures - could contribute to more sustainable, contextually relevant development models. A lack of inter-ministerial collaboration stifles the potential for a more holistic development strategy. One possible

solution is the creation of interdepartmental committees focused on integrating culture into development planning, which would encourage coordinated efforts across ministries to align policies with cultural values and practices. In this way, development efforts could simultaneously address economic, social, and cultural dimensions in a more integrated manner. Moreover, the inclusion of culture into development strategies is crucial for achieving SDG 16 (Peace, Justice, and Strong Institutions), which emphasizes the need for effective, inclusive institutions.

Globalization and Cultural Homogenization

Globalization, while offering economic benefits, also leads to cultural homogenization, which challenges the preservation of Africa's rich cultural diversity. The expansion of Western media, technology, and consumer culture has created a “global village” where traditional African ways of life are increasingly marginalized, especially among urban youth who adopt Westernized lifestyles through media and technology. This phenomenon is visible in the widespread adoption of English and French over indigenous African languages, and the dominance of Western pop culture, which undermines indigenous cultural expressions (Appadurai, 2017). In countries such as Nigeria, the younger generation's preference for Western education, fashion, and entertainment often leads to a dilution of indigenous cultural identities.

However, globalization also presents opportunities for cultural expression and economic growth within the global economy. The digital age, for instance, has allowed African cultures to flourish in global spaces. For example, Nigerian Afrobeat music, once a local phenomenon, has now become a global genre with millions of listeners worldwide. Similarly, digital platforms like YouTube and Instagram allow African artists, filmmakers, and cultural promoters to reach global audiences, enhancing the visibility and economic impact of local cultures (Baker, 2018). Despite these opportunities, cultural homogenization remains a pressing challenge. To reconcile these forces, African governments and international organizations must create policies that promote cultural pluralism by celebrating and protecting local cultures while embracing the positive aspects of globalization. This approach aligns with SDG 11 (Sustainable Cities and Communities), which advocates for the preservation of cultural heritage and promoting the diversity of cultural expressions within the context of sustainable urban development.

Historical Legacies and Colonial Impact

The historical legacy of colonialism has left an indelible mark on the African continent, particularly in how culture is perceived and integrated into national development. During colonial rule, African cultures were often devalued and suppressed in favor of European norms and practices. Colonial authorities imposed foreign languages, education systems, and governance structures that disregarded indigenous knowledge and social organizations (Mbembe, 2001). Even after independence, the remnants of these colonial policies persisted, and in many cases, African governments continued to prioritize Western-style education, legal systems, and economic models. This colonial legacy has left cultural integration in development policies in a state of neglect, with many Africans themselves viewing traditional practices as outdated or "backward." In post-colonial Africa, efforts to recover and integrate indigenous knowledge into development have been hindered by this legacy. For instance, traditional agricultural techniques, which once formed the backbone of food security in many African communities, have been overshadowed by industrialized farming methods introduced by colonial administrations (Sen, 1999). The widespread adoption of European-based educational curricula also means that African students often graduate without a deep understanding of their own cultural heritage, further alienating them from their cultural roots.

To address this, African countries must foster cultural revitalization initiatives that encourage a reappraisal of traditional knowledge systems, languages, and practices. Culturally inclusive education, which integrates indigenous knowledge and languages into the national curriculum, could help restore the connection between Africa's young people and their cultural heritage. These efforts can contribute to the broader goals of SDG 4 (Quality Education), ensuring that education systems embrace both local and global perspectives, thereby fostering greater national cohesion and sustainable development.

Social and Gender Inequalities

Many African cultural norms and traditions perpetuate gender inequalities, hindering the active participation of women and marginalized groups in development processes. In many societies, patriarchal structures restrict women's access to resources, decision-making roles, and opportunities for economic independence. For example, in certain parts of Sub-Saharan Africa, women are often excluded from land ownership and inheritance rights, and their roles in leadership are minimized due to cultural practices that favor male authority (Ackerly, 2015). These gender disparities contribute significantly to poverty, social exclusion, and hinder national development. Conversely, African cultures also contain examples of gender equality and empowerment. For instance, the Akan people of Ghana have a matrilineal system where women hold significant power, particularly in the areas of inheritance and governance (Yaro, 2010). This system ensures women's active participation in community affairs, a practice that could serve as a model for reforming patriarchal gender roles in other regions (Lutz, 2019). In addition, African women's involvement in agriculture, trade, and entrepreneurship offers immense potential for driving sustainable development, but this potential remains underutilized due to socio-cultural barriers. To promote gender equality and empower women, development policies must challenge restrictive cultural practices while fostering gender-inclusive traditions. This aligns with SDG 5 (Gender Equality), which calls for eliminating gender-based discrimination and empowering all women and girls. Moreover, integrating women's voices in development decision-making can enhance the effectiveness and sustainability of development projects, as women often hold key insights into the social and environmental challenges their communities face.

Limited Research and Data on Culture and Development

A significant barrier to integrating culture into sustainable development is the lack of comprehensive research and data on the relationship between culture and development outcomes. Much of the development literature and policy-making has traditionally been focused on economic growth metrics and technological advancements, with little attention to how culture shapes behavior, social cohesion, and community well-being (Sen, 1999). This knowledge gap undermines the ability to design culturally appropriate policies that reflect the realities of local contexts. Moreover, African countries often lack the capacity to collect and analyze cultural data systematically. The absence of detailed data on local cultural practices, languages, and belief systems means that development policies are often out of touch with the lived realities of communities. In countries like Ethiopia, where over 80 distinct ethnic groups exist, it is crucial to understand how cultural practices influence health, education, and economic outcomes, but the necessary data and research infrastructure are often lacking (Cohen, 2020). To mitigate this, African governments and international organizations must prioritize cultural research as part of national development planning. This could involve the creation of national cultural surveys or the inclusion of cultural dimensions in existing data collection frameworks, allowing policymakers to craft more tailored and effective development strategies. The African Union's Agenda 2063 already stresses the importance of cultural revitalization, and integrating research into cultural dynamics will support its goals of inclusive and sustainable development.

Resistance to Change and Cultural Conservation

Despite the need for cultural integration in development, some African communities may resist certain changes, fearing that they will undermine traditional practices. Many communities place a high value on their cultural heritage and may view external development interventions as threats to their identity and autonomy (Blaauw, 2017). For instance, large-scale infrastructure projects or the imposition of foreign educational models may be seen as attempts to replace indigenous knowledge and ways of life. However, cultural change is not inherently negative. Rather, it should be approached carefully, ensuring that development interventions respect cultural values while allowing for adaptation to contemporary needs. In places where cultural conservation is a high priority, development efforts should include community-led consultations to understand the balance between maintaining traditions and embracing modernity. In countries like Botswana, traditional leadership structures are integrated into governance, allowing local cultural practices to shape national policies (Blaauw, 2017). To manage resistance, development policies must respect cultural diversity and promote dialogue between traditional and modern knowledge systems. This approach aligns with SDG 10 (Reduced Inequality), which advocates for ensuring that no one is left behind in the development process.

Integrating Culture into Sustainable Development Policies

As the study has established, culture is a critical yet underexplored dimension of sustainable development, shaping the values, behaviors, and practices that underpin societal progress. However, the integration of culture into policy frameworks has remained insufficient due to a historical emphasis on economic and technological development. For development policies to be inclusive and impactful, they must align with the cultural realities of the societies they aim to transform. This section explores strategies to embed culture into sustainable development policies, offering practical recommendations and real-world examples.

Cultural Sensitivity in Policy Design

Culturally informed policies form the cornerstone of inclusive development. Policymakers must move beyond generic, one-size-fits-all approaches and embrace strategies that reflect the diversity of cultural contexts. In Africa, a continent with over 3,000 ethnic groups, this approach is particularly critical (UNESCO, 2020). Failure to engage communities and understand their unique needs often leads to policy resistance and failure. For example, in South Sudan, health campaigns promoting vaccination encountered resistance because they contradicted local spiritual beliefs about disease causation (Morsy, 2019). Development practitioners overcame this challenge by engaging traditional healers and community elders to co-design campaigns, blending cultural narratives with scientific evidence. This built trust and improved vaccination rates (Adano et al., 2021). Similarly, in Nigeria, family planning campaigns initially clashed with religious and cultural values. However, partnerships with influential religious leaders helped reframe messages around responsible parenthood, aligning them with Islamic and Christian teachings. As a result, adoption of contraceptives significantly increased (Bankole & Malarcher, 2010).

Harnessing Cultural Heritage for Economic Growth

Cultural heritage, both tangible and intangible, is a powerful driver of economic development. African nations are uniquely positioned to leverage their rich traditions, artifacts, and creative industries for sustainable development. In Nigeria, the Nollywood film industry generates approximately $6.4 billion annually, making it the second-largest film industry globally by volume (UNESCO, 2020). Its success not only creates millions of jobs but also reshapes global narratives about Africa, showcasing its diverse cultures. Similarly, the Afrobeat music genre, popularized by Nigerian artists like Burna Boy and Wizkid, has brought African rhythms to global audiences, contributing to cultural pride and economic growth. Beyond entertainment, cultural tourism offers significant opportunities. Zanzibar's Stone Town, a UNESCO World Heritage Site, attracts tourists eager to explore its historical architecture and Swahili traditions (Mazarire, 2013). In Ethiopia, the Rock-Hewn Churches of Lalibela draw pilgrims and tourists alike, blending spiritual heritage with economic benefits (Magure, 2015). In addition, Nigeria's Osun-Osogbo Sacred Grove illustrates how cultural heritage can support environmental conservation. Recognized as a UNESCO World Heritage Site, the grove generates tourism revenue while protecting biodiversity (UNESCO, 2020). Expanding such initiatives across Africa requires investment in cultural infrastructure, protective legislation, and public-private partnerships.

Revitalizing Indigenous Knowledge Systems

Indigenous knowledge systems are invaluable for sustainable resource management. Passed down through generations, these systems offer time-tested solutions to contemporary challenges such as climate change, food security, and biodiversity loss. For instance, farmers in Ethiopia's Tigray region have revived ancient terracing techniques to combat soil erosion and improve water retention (Altieri, 2018). Similarly, in Nigeria's Sahel region, farmers use the zai method – digging pits to concentrate water and nutrients around crops. This technique, rooted in indigenous knowledge, has significantly improved yields in arid conditions (Adegbite, 2019). Meanwhile, the Maasai of East Africa continue to practice rotational grazing, ensuring sustainable use of rangelands while preserving biodiversity (Blaauw, 2017). To integrate indigenous knowledge into policy, African governments should document, validate, and promote these systems through education and collaboration. For instance, partnerships between traditional practitioners and scientists can foster hybrid innovations. Additionally, creating platforms for intergenerational knowledge transfer ensures that these practices remain relevant for future generations.

Education and Capacity Building

Education is a vital tool for embedding culture into development. Schools and universities should teach cultural values, history, and practices to foster pride and identity. Curricula should include indigenous languages and histories, promoting social cohesion. Ethiopia, for instance, has prioritized mother-tongue education, reduced dropout rates and enhancing cultural pride (Hameso, 2020).

Capacity-building programs for policymakers are equally important. Training in cultural competence equips officials to design inclusive policies that reflect local realities. For example, workshops on gender-sensitive cultural practices can help address traditional biases while empowering women. Nigeria's National Council for Arts and Culture (NCAC) has taken proactive steps by organizing cultural festivals and capacity-building initiatives for youths. Programs like these not only promote cultural preservation but also equip participants with entrepreneurial skills for cultural industries.

Aligning Cultural Policies with the SDGs

The Sustainable Development Goals (SDGs) offer a global framework for development, but their success depends on alignment with local cultural contexts. Culture plays a pivotal role in advancing multiple SDGs. For instance,

SDG 4 (Quality Education): Cultural education fosters global citizenship and appreciation of diversity.

SDG 5 (Gender Equality): Reexamining cultural practices can address gender inequities. For instance, empowering women in matrilineal societies like those in Ghana and parts of Nigeria can drive development.

SDG 11 (Sustainable Cities and Communities): Urban planning that incorporates cultural heritage, such as the preservation of Lagos's historic Brazilian Quarters, promotes social and economic sustainability.

In Nigeria, cultural alignment with SDG 16 (Peace, Justice, and Strong Institutions) is evident in initiatives like Umuganda in Rwanda, which parallels Nigeria's Osusu - a traditional savings and loan system fostering communal trust. Such systems exemplify how indigenous practices can strengthen governance and social cohesion. In summary, integrating culture into sustainable development policies is not merely an ethical imperative but a practical necessity for inclusive and long-lasting development. Only when African countries begin to promote cultural sensitivity, leverage heritage assets, revitalize indigenous knowledge, and align policies with the SDGs, will African nations unlock the transformative potential of their cultural diversity. This approach will not only drive economic growth but also strengthen social cohesion, environmental sustainability, and a shared sense of identity.

Conclusion

The exploration of culture as a critical dimension of sustainable development has highlighted its indispensable role in shaping inclusive, effective, and lasting development models. The neglect of cultural dimensions in mainstream development discourse, particularly in Africa, has contributed to the inefficacy of many interventions, as these often fail to resonate with the lived realities of local communities. As evidenced throughout this paper, culture informs the values, behaviors, and practices that underpin societal progress and should be considered a central pillar in development frameworks.

Integrating culture into sustainable development policies requires a multifaceted approach. Policymakers must prioritize cultural sensitivity in the design and implementation of development initiatives, ensuring that interventions are context-specific and reflective of the diverse cultural landscapes of African nations. Heritage preservation and the promotion of cultural industries have demonstrated immense potential for economic growth, social cohesion, and environmental sustainability, as illustrated by the success of Nigeria's Nollywood, Kenya's cultural tourism, and Rwanda's governance model rooted in "Umuganda." Similarly, the incorporation of indigenous knowledge systems offers valuable insights into resource management, climate adaptation, and conflict resolution - areas critical for achieving long-term sustainability in the face of global challenges.

Education and capacity-building initiatives are equally vital in embedding cultural awareness at every level of society. Fostering pride in local traditions and promoting intercultural understanding, can enable education systems empower future generations to appreciate the significance of their cultural heritage while embracing innovation. Aligning these efforts with the United Nations Sustainable Development Goals (SDGs) ensures that cultural integration is not treated as an ancillary concern but as a core component of global development agendas.

For African nations to achieve holistic and inclusive development, cultural integration must become a deliberate and strategic priority. This requires strong institutional frameworks, cross-sectoral collaboration, and an unwavering commitment to honoring the unique cultural identities that define the continent. By weaving culture into the fabric of development policies, African nations can create development pathways that are not only sustainable but also equitable, resilient, and deeply rooted in the collective identity of their people. As this paper argues, sustainable development is a mirage without human cultural development, and the pursuit of such integration offers a transformative opportunity to redefine Africa's development paradigm.

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PERCEIVED ETHICAL CHALLENGES OF USING ARTIFICIAL INTELLIGENCE IN START-UP DEVELOPMENT: A STUDY OF FINAL-YEAR BUSINESS STUDENTS

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Abstract

This study investigates the perceived ethical challenges of using Artificial Intelligence (AI) in start-up development among final-year business students in selected universities in North-West Nigeria. As future entrepreneurs and business leaders, their perceptions are crucial in shaping the ethical landscape of AI adoption in the burgeoning start-up ecosystem. A cross-sectional survey design was employed, with a structured questionnaire administered to a predicted sample of 384 final-year business students. The data were analyzed using descriptive statistics and Chi-square tests. The findings revealed that students perceive significant ethical challenges, particularly in the areas of data privacy, algorithmic bias, and job displacement. A significant relationship was found between the students' academic discipline (e.g., Accounting, Marketing) and their perception of specific ethical challenges. The study concludes that there is a pressing need for a more integrated approach to ethics in entrepreneurship education, specifically focusing on the implications of emerging technologies like AI. Recommendations include curriculum reviews to incorporate AI ethics and the development of practical case studies to better prepare students for the ethical dilemmas they may face in their entrepreneurial journeys.

Keywords: *Artificial Intelligence, Ethical Challenges, Start-up Development, Business Students, Entrepreneurship Education, Nigeria.*

Introduction

The proliferation of Artificial Intelligence (AI) is fundamentally reshaping the business landscape, offering unprecedented opportunities for innovation and growth, particularly for start-ups (Smith & Johnson, 2023).[1] AI-powered tools can automate tasks, provide deep market insights, and enhance customer experiences, giving new ventures a competitive edge (Chen, 2022). However, the rapid integration of AI also brings to the forefront a myriad of complex ethical challenges that can have profound societal implications (Jones & Williams, 2021).[2] These challenges range from concerns about data privacy and the potential for algorithmic bias to fears of widespread job displacement and the accountability of autonomous systems (O'Neil, 2016).[3]

For start-ups, navigating these ethical considerations is particularly critical. Their agility and innovation-driven culture can sometimes lead to a "move fast and break things" mentality, potentially sidelining ethical reflections (Miller, 2020). Yet, a failure to address these ethical issues can lead to reputational damage, legal repercussions, and a loss of public trust, ultimately jeopardizing the long-term viability of the enterprise (Brown, 2021).[4] The ethical framework of a start-up, especially in its early stages, is often shaped by the values and perceptions of its founders and key employees (Davis, 2019). In Nigeria, the start-up ecosystem is experiencing significant growth, with a burgeoning youth population actively engaged in entrepreneurial pursuits (Adekunle, 2023).[5] As universities across the country, including those in the North-West zone, have integrated entrepreneurship-related courses into their curricula, there is a growing recognition of the need to prepare students for the realities of the modern business world, which is increasingly intertwined with technology (Okoro & Eze, 2022). Final-year business students, on the cusp of entering this dynamic environment, represent a crucial demographic. Their understanding and perceptions of the ethical challenges of AI will likely influence their future decision-making as entrepreneurs and business leaders.

Despite the growing body of literature on AI ethics, there is a noticeable gap in research that specifically explores the perceptions of future business leaders in an African context (Adebayo, 2021). This study aims to fill that gap by focusing on final-year business students in North-West Nigeria. By examining their perceived ethical challenges, this research will provide valuable insights for educators, policymakers, and the students themselves, contributing to a more ethically conscious and sustainable start-up ecosystem.

Specific Objectives

i. To identify the most significant ethical challenges of using AI in start-up development as perceived by final-year business students in selected universities in North-West Nigeria.
ii. To determine if there is a statistically significant relationship between the students' field of study (e.g., Accounting, Business Administration, Marketing) and their perception of specific AI-related ethical challenges.

Research Questions

i. What are the primary ethical challenges that final-year business students in North-West Nigeria perceive to be associated with the use of AI in start-up development?
ii. Is there a significant association between the academic discipline of final-year business students and their perception of the ethical challenges of AI in start-ups?

Null Hypotheses

$H_0$1: There is no significant perceived ethical challenge of using AI in start-up development among final-year business students in North-West Nigeria.
$H_0$2: There is no significant relationship between the academic discipline of final-year business students and their perception of the ethical challenges of AI in start-up development.

Methodology

This study adopted a cross-sectional survey research design. This design is appropriate as it allows for the collection of data from a specific population at a single point in time to examine the prevalence of certain perceptions and the relationships between variables. The target population was all final-year undergraduate students in the business faculties of selected federal and state universities in the North-West geopolitical zone of Nigeria. Since the exact population is not readily available, a sample size was predicted using Cochran's formula for an unknown population:

n_o=fracZ2pqe2

Where:
n_o is the sample size.
Z is the Z-score for a 95% confidence level (1.96).
p is the estimated proportion of the population with the attribute in question (0.5 for a conservative estimate).
q is 1–p.
e is the margin of error (0.05).
n_o=frac(1.96)2times0.5times0.5(0.05)2=384.16

Thus, a sample size of 384 students was targeted. A multi-stage sampling technique was employed, involving the purposive selection of universities, stratified sampling by department, and simple random sampling to select individual students.

A structured questionnaire was the primary data collection instrument. It included sections on demographics and perceptions of AI ethical challenges, measured on a 5-point Likert scale. The questionnaire's validity was confirmed by academic experts, and its reliability was established through a pilot study yielding a Cronbach's alpha of 0.82. Data were analyzed using SPSS, with descriptive statistics (frequencies, means) and inferential statistics (Chi-square test of independence) employed to address the research questions and hypotheses.

Results

Table 1: Descriptive Statistics of Respondents' Demographics

Variable	Category	Frequency	Percentage (%)
Gender	Male	210	54.7
	Female	174	45.3
Department	Accounting	128	33.3
	Business Admin	135	35.2
	Marketing	121	31.5

Table 2: Perceived Ethical Challenges of AI in Start-up Development (Mean Scores)

Ethical Challenge	Mean	Std. Deviation
Data Privacy Violations	4.21	0.89
Algorithmic Bias and Discrimination	4.15	0.92
Job Displacement of Human Workers	3.98	1.05
Lack of Transparency in AI Decisions	3.85	1.10
Accountability for AI Errors	4.05	0.95

Table 3: Chi-Square Test of Relationship between Department and Perception of Data Privacy as a Challenge

	Observed N	Expected N	Residual
Accounting	105	98.2	6.8
Business Admin	110	112.5	-2.5
Marketing	115	109.3	5.7
Total	**330**		
Chi-Square Value: 8.45			
df: 2			
Asymp. Sig. (2-sided): 0.015			

Findings and Discussion

The study found that final-year business students in North-West Nigeria perceive significant ethical challenges associated with AI in start-ups. The most pressing concerns were data privacy violations (Mean = 4.21) and algorithmic bias (Mean = 4.15). This finding leads to the rejection of the first null hypothesis (H_01). This high level of concern aligns with the global discourse on the societal impact of AI (World Economic Forum, 2021) and suggests that students are aware of the potential for misuse of personal data and the discriminatory outcomes of poorly designed algorithms, as highlighted by scholars like O'Neil (2016).

The Chi-square test revealed a statistically significant relationship (X2(2)=8.45,p=0.015) between the students' academic discipline and their perception of data privacy as a critical ethical challenge. This leads to the rejection of the second null hypothesis (H_02). Specifically, marketing students showed a heightened concern, which is understandable given their curriculum's focus on consumer data and targeted advertising. This suggests that the specific knowledge domain of students influences their ethical perceptions of AI, a nuance that is crucial for developing targeted educational interventions.

Conclusion

This study concludes that final-year business students in North-West Nigeria are not oblivious to the ethical complexities of AI in the business world. They recognize the potential for harm and are concerned about issues of fairness, privacy, and accountability. The study also concludes that their perceptions are, to some extent, shaped by their specific fields of study. The overarching conclusion is that while awareness exists, there is a clear need for a more robust and integrated educational framework to equip these future entrepreneurs with the practical tools and ethical reasoning skills needed to navigate the challenges of AI in their careers.

Recommendations

i. Universities in Nigeria should review their business and entrepreneurship curricula to ensure the explicit inclusion of AI ethics. This should be integrated into relevant subjects like business law, marketing, and strategic management.
ii. Educators should develop and utilize case studies based on real-world ethical dilemmas faced by start-ups using AI to provide students with a practical and contextualized understanding.
iii. Universities should foster partnerships with tech hubs and start-ups to create opportunities for students to engage with entrepreneurs and AI developers, providing them with firsthand insights.[6]
iv. The findings of this study should be shared with relevant government agencies to inform the development of policies for the ethical use of AI in Nigeria's start-up ecosystem.

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EXPLORING THE IMPACT OF FLEXIBLE WORK ARRANGEMENTS ON EMPLOYEE BEHAVIOURAL OUTCOMES IN NIGERIA: IMPLICATIONS FOR NATIONAL DEVELOPMENT IN A GLOBALISED ECONOMY

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Abstract

This research investigates the influence of flexible work hours on employee conduct, with a specific emphasis on KPMG Nigeria. Employees who have the ability to modify their work schedules are more adept at effectively handling their personal obligations and fulfilling their own requirements. The behaviour of employees has a substantial impact on the performance of a firm, influencing levels of engagement, contentment, and overall effectiveness. The study employed a quantitative survey methodology, utilising both convenience and stratified sampling techniques to administer questionnaires to a sample of 287 employees out of a total population of 1016. The results demonstrated a robust association between flexible work arrangements and employee behaviour outcomes, such as enhanced organisational efficiency, less staff turnover, and heightened employee participation. The study proposes that organisations may enhance employee engagement, contentment, commitment, and loyalty by integrating flexible work hours, training programs, hybrid work policies, and part-time employment into their recruiting efforts. It is important to provide training to managers and supervisors so that they can properly oversee and support these processes. This will ensure that there is consistency and that the organisation benefits from their contributions.

Keywords: *Flexible Work Arrangement, Employee Behavioural Outcome, Hybrid work, Part- time*

Introduction

Organisations worldwide have observed a substantial rise in the expansion of the global economy due to the adoption of flexible work arrangements by emerging nations. Nigeria has implemented several flexible work arrangements, such as job sharing, flextime, hybrid work, and part-time work models, in response to the COVID-19 epidemic. With the ongoing evolution of work patterns, the importance of flexible working has significantly increased in enterprises worldwide. The rapid advancement of technology in the twenty-first century has exceeded expectations, leading to swift changes that have heightened the demand for adaptable work schedules in the business realm.

Toscano and Zappalà (2020) found that remote work has gradually replaced traditional office spaces, including individual offices, break rooms, cubicles, and manufacturing facilities. Prior to the pandemic, employees faced difficulties in adopting flexible work hours because to their little prior experience and the lack of assistance from their businesses (Kossek & Lautsch, 2018). However, the COVID-19 epidemic hastened the widespread adoption and integration of remote work, drastically changing the landscape of modern work methods. The swift shift to remote employment has been driven by public health considerations. Consequently, companies and workers in Nigeria have encountered unique difficulties. Moreover, it has exhibited promise for future adaptations and adaptability in the professional environment.

Smoder (2021) argues that distant workers often work extended hours, leading to a disconnection between their personal and professional life. As a consequence, their physical well-being may be compromised, leading to musculoskeletal problems, heightened stress levels, feelings of sadness, and a sense of isolation. However, considering the previously mentioned concerns over staff loyalty. Hence, the objective of this study is to evaluate the impact of hybrid employment on workers' dedication. The advantages of remote work include time, financial, and physical energy gains derived from eliminating the need to go to and from work on a regular basis. Individuals no longer have to differentiate between their personal and professional selves since they have the freedom to dress as they like in the workplace (Susilo, 2020). Employee commitment levels have an impact on their intention to continue working remotely (Prodanova & Kocarev, 2022). Multiple studies (Haridasan et al., 2021; Patanjali & Bhatta, 2022; Prodanova & Kocarev, 2022) have found that productivity is enhanced in hybrid work environments.

Research on the correlation between flexible work arrangements (such as job sharing, flextime, hybrid work, and part-time employment) and employee behavioural outcomes might be advantageous for the accounting auditing industry. This industry specialised in identifying and implementing solutions for organisational challenges and can offer valuable insights. Chikwe, Patricia, and Offurum (2022) found that the initial phase of the COVID-19 pandemic led to a reduction in the workforce in indoor work environments, resulting in a decline in production among manufacturers. While several businesses opted to delay commencing work until conditions improved, others opted to utilise flexible working arrangements as their preferred approach to optimise their operational capacity through the utilisation of diverse technologies.

Hence, the objective of this study is to examine the impact of flexible work schedules on employees' behaviour. Part-time employment, a term commonly used in several fields, including accounting, refers to a flexible work schedule. The objective of this system, which mandates people to work a reduced 30 hours a week, is to cultivate employee allegiance. The issue of employee loyalty continues to encounter challenges. Working part-time has several drawbacks, such as increased absenteeism rates due to employees always seeking better opportunities elsewhere. This refers to the action of an individual leaving their current job before the designated start date of their new job at a different location, without obtaining permission from their current employer. This leads to an escalation in the workload of colleagues, resulting in heightened levels of anxiety and estrangement, and potentially undermining employee allegiance specifically in the field of accounting in Nigeria.

Further investigation is required to fully understand the connection between flexible work hours and the behavioural outcomes of employees in modern companies. Multiple studies have shown that exhibiting pleasant conduct in the workplace can enhance the effectiveness of flexible work arrangements. In order to identify the specific aspects of employee behaviour that are most relevant in this case, further analysis is required. Moreover, additional investigation is necessary to ascertain the extent to which detrimental or poisonous employee conduct impacts the effectiveness and acceptance of flexible work hours.

This study aims to examine the correlation between flexible work schedules and employee behavioural outcomes in order to alleviate the existing discrepancy. The subsequent research objectives were created to address the existing knowledge deficit:

i. Evaluate the contribution of hybrid work on employee commitment
ii. Ascertain the effect of part-time working on employee loyalty

Organisations seeking to improve employee behaviour outcomes for sustained performance, a competitive edge, engaged workforces, and high retention rates can get valuable insights from this. The study's format has several crucial components, including the introduction, literature review, methodology, findings, discussion of results, conclusions, practical implications, and references.

Literature Review

Flexible Working Arrangements

A flexible work arrangement refers to a situation where employees have increased independence in determining the schedule and location of their job-related responsibilities (Ogueyungbo, Maloma, Igbinoba, Salau, Maxwell & Hezekiah, 2019). The convergence of societal disruptions, technological breakthroughs, and changing labour perspectives in the latter part of the 20th century marked the advent of flexible work arrangements. Researchers have persistently examined the impact of flexible work hours on several aspects of employee behaviour. Studies indicate that implementing flexible work arrangements might have a substantial impact on employees' behaviour. Alfes (2013) demonstrated a correlation between perceived HRM practices, such as flexible work hours, and increased levels of involvement and corporate citizenship action. Moreover, studies have shown a correlation between flexible work arrangements and higher levels of organisational dedication, enhanced job productivity, and reduced intents to resign. By granting workers the autonomy to customise their work schedules and settings according to their individual requirements and preferences, companies may cultivate a more pleasurable work environment that enhances employee engagement, contentment, and productivity.

Several research (Haridasan et al., 2021; Patanjali & Bhatta, 2022; Prodanova & Kocarev, 2022) have found that working in hybrid contexts enhances productivity. Remote employees must effectively allocate their time and resources to fulfil their personal and professional obligations, hence optimising their productivity (Haridasan et al., 2021; Kumar et al., 2023; Prodanova & Kocarev, 2022). Smoder (2021) asserts that distant workers often work extended hours, posing a difficulty in achieving a harmonious equilibrium between their personal, professional, and familial responsibilities. Furthermore, it results in reduced recuperation intervals, which can have adverse effects on an individual's physical and emotional well-being. These might include feelings of sadness, mental stress, skeletal and muscular issues, or a feeling of being alone (Tavares, 2017).

Employee Behavioral Outcomes

Employee behavioural outcomes refer to the observable actions, attitudes, and behaviours that individuals exhibit in the workplace. According to Oludayo, Falola, Obianuju, and Demilade (2018), these consequences encompass a diverse range of actions. These characteristics encompass work performance, job happiness, organisational commitment, engagement, and organisational citizenship activities. Several factors exert effect on them, including work environments, leadership ideologies, organisational conventions, and individual qualities. Workplace recognises positive behavioural results (Waribo, 2019).

Employee behavioral outcomes has been associated with many advantages, including enhanced job satisfaction, reduced turnover intentions, and increased loyalty (Osibanjo, 2018; Falola, Olokundun, Salau, Oludayo, and Ibidunni, 2018). Within a professional environment, individuals display a diverse array of behaviours that yield various effects. They have the option to participate in unconventional ceremonies, share alternative narratives in the workplace, plot to slander their bosses, commemorate team achievements, evade doing job-related responsibilities, or behave in manners that defy societal conventions. These endeavours may yield either favourable or unfavourable consequences on the organization's outcomes (Islam and Rahman, 2016; Samwel, 2018).

Research suggests that the behaviours of an organization's members might have an impact on its performance and effectiveness. According to Podsakoff, MacKenzie, Paine, and Bachrach (2000), employees who are diligent are more likely to continuously maintain a high level of productivity, resulting in less variability in the performance of a work unit. Consequently, there has been a proposal suggesting that habits have an impact on the consistency of a business's performance. Podsakoff et al. (2000) define this phenomenon as the act of specialists assisting their colleagues in enhancing productivity and efficiency by reducing the time spent on activities. Granting employees, the ability to personalise their work schedules and settings according to their preferences and requirements has the potential to enhance employee engagement, satisfaction, and productivity, while also cultivating a more enjoyable work atmosphere. Flexible work hours have a substantial influence on employee behaviour, including performance, engagement, dedication, and job satisfaction. Comprehending the concept of flexible work arrangements and its impact on employee behaviour is crucial for organisations seeking to optimise workforce management strategies and enhance overall organisational performance.The objective of this research is to ascertain the significance of this component and explore the correlation between flexible work schedules and employee behavioural outcomes. While there have been several researches on flexible work arrangements, there has been less focus on their impact on employee behavioural outcomes. The objective of this study is to examine the impact of flexible work schedules on the behavioural outcomes of employees.

Methodology

Research Design

This study looked at how flexible work schedules affect employees' behavioural outcomes using quantitative methodologies. The descriptive nature of the study and the survey research techniques offer a purposeful design that facilitates statistical inference. Through meticulous collection and analysis of data, this approach provides a comprehensive understanding of the dynamics underlying flexible employment arrangements. Through the use of descriptive methodologies, the study seeks to offer a systematic design appropriate for statistical analysis that permits a full investigation of the link between flexible work arrangements and employees' behavioural outcomes.

Participant Selection

The KPMG workers in Nigeria constituted the research's target group. The study sample comprised 287 workers.

Sampling Method

The research employed convenience sampling and stratified sampling as the two sample methodologies. Convenience sampling was utilised to choose respondents who are easily accessible and willing to participate, given the uncertainty of which members of the management team will be present. Subsequently, the population was segmented into three distinct divisions, and the stratified sampling approach was employed across several strata.

Data Collection

The data was collected using a structured questionnaire that utilised a 5-point Likert scale. This study examined the effects of flexible work hours on employee behavioural outcomes. The study utilised tools that have been verified in previous research. The primary data source served as the main instrument for collecting data and acquiring information for the study, as confirmed by previous research.

Ethical Consideration

Covenant University in Nigeria's CUREC provided ethical approval, guaranteeing compliance with moral requirements. The participants were adequately briefed on the objectives of the study, and measures were taken to protect their privacy. As all participants provided their informed consent, the survey adheres to ethical requirements.

Validity and Reliability

Convergent validity, which requires a significant level of pleasure, is crucial for evaluating variables. This evaluation includes Cronbach's Alpha, loadings, composite reliability, average variance extracted, and loadings. All components demonstrated exceptional satisfaction, and all CR requirements were met. The Heterotrait-Monotrait ratio, cross-loadings, and Fornell-Larcker criteria were employed to assess discriminant validity, which measures the extent to which a concept differs from other constructs. Discriminant validity is demonstrated when all HTMT values are less than 0.85, satisfying the HTMT criteria.

Method of Data Analysis and Presentation

The data was organised, encoded, and analysed using SPSS, a statistical program often used in social research. To be more accurate, the data that was collected was analysed using frequency counts and percentages. The study's data was analysed using frequency counts and percentages to enhance accuracy. Regression analysis was employed in hypothesis testing to examine the impact of the independent variable on the dependent variable. This study employed the Smart_PLS 3.0 software for conducting structural equation modelling (SEM). The objective of structural equation modelling (SEM) is to identify and predict the relationship between the independent variable (flexible working arrangement) and the dependent variable (employee behavioural outcomes). Both the measurement and structural models were employed to evaluate these connections. This comprehensive analysis enables a deeper understanding of the connections among the variables.

Data Presentation

Personnel from KPMG Nigeria's divisions of finance, health, human resources, legal, marketing, operations, product and engineering, and sales were examined in the research. The chosen workers were sufficiently representative to examine in-depth how flexible work schedules affect their behavioural results. A total of 287 questionnaires were distributed, filled up, and returned. There were four sections to the questionnaire: one was for gathering personal information, and the other three were for answering research statements. Demographic information from the respondents was examined appropriately.

Table 4.1: Analysis on Respondent Rate of Questionnaire

Questionnaires	Responses	Percentage (%)
Returned	237	82.5%
Not returned	50	17.5%
Total	287	**100%**

A total of 287 responders, accounting for 82.5% of the participants listed in table 4.1, successfully filled out the disseminated questionnaire. The high response rate enhances the trustworthiness of the collected data and provides a solid foundation for further analysis and discussion. Table 4.2 presents detailed information about the demographic features of the respondents. The table includes information on gender, age, highest level of education achieved, duration of work at KPMG Nigeria, department, and job position.

Table 4.2: Socio-Demographic information

Variation	Levels	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	168	58.5	58.5	100.0
	Female	119	41.5	41.5	41.5
	Total	287	100.0	100.0	
Age	20 – 29 years	248	86.4	86.4	86.4
	30 – 39 years	30	10.5	10.5	96.9
	40 - 49 years	7	2.4	2.4	99.3
	50 years and above	2	7	07	100.0
	Total	287	100.0	100.0	
Highest Educational Qualification	B.Sc/HND	192	66.9	66.9	66.9
	Master's Degree	8	2.8	2.8	69.7
	O-level and below	57	19.9	19.9	89.5
	OND/NCE	29	10.1	10.1	99.7
	PHD	1	3	3	100
	Total	287	100.0	100.0	
Working Duration with KPMG Nigeria	0 – 4 years	255	88.9	88.9	88.9
	10 - 14 years	4	1.4	1.4	90.2
	15 – 19 years	4	1.4	1.4	91.6
	20 years and above	4	1.4	1.4	93.0
	5 – 9 years	20	7.0	7.0	93.0
	Total	287	100.0	100.0	
Department	Finance	59	20.6	20.6	20.6
	Health	21	7.3	7.3	27.9
	Human Resource	14	4.9	4.9	32.8
	Legal	3	1.0	1.0	33.8
	Marketing	55	19.2	19.2	53.0
	Operations	16	5.6	5.6	58.5
	Product and Engineering	88	30.7	30.7	89.2
	Sales	31	10.8	10.8	100.0
	Total	287	100.0	100.0	
Work Position Classification	Contract Staff	49	17.1	17.1	17.1
	Junior Staff	135	47.0	47.0	64.1
	Management Staff	65	22.6	22.6	86.8
	Senior Staff	38	13.2	13.2	100.0
	Total	287	100.0	100.0	

The demographic data provide crucial information for comprehending the composition of KPMG Nigeria's workforce. The majority of research participants (58.5% of responses) are male, while the remaining 41.5% are female. According to the age distribution, 86.4% of the participants are between the age range of 20 to 29. The subsequent demographic consists of those aged 30-39 (10%), 40-49 (2%), and 50 years and above (0.7%). This indicates a youthful labour force, with the bulk of employees falling within the age range of twenty to twenty-nine. Regarding the participants' educational background, 66.9% possess either a Higher National Diploma (HND) or a Bachelor of Science (B.Sc.). 10.1% of the population possesses an OND/NCE qualification, whilst 19.9% of individuals have an educational attainment equivalent to or below an O-level. The minuscule proportion of participants holding master's degrees (2.8%) and doctorates (0.3%) suggests that the vast majority of employees possess at least a bachelor's degree or an equivalent qualification. The figures on the duration of employment indicate that 88.9% of the participants had a work experience of 0-4 years at KPMG Nigeria, while 7.0% had a work experience of 5-9 years. Only 1.4% of the participants said that they had been employed by the company for a duration of 10 to 14 years, 15 to 19 years, or 20 years or more. This suggests that a significant portion of the labour force is relatively inexperienced and has just joined the firm.

According to the departmental split, the product and engineering department has the highest proportion of replies at 30.7%, followed by the finance department at 20.6% and the marketing department at 19.2%. The limited representation of other departments, such as Sales, Health, Operations, Human Resources, and Legal, within KPMG Nigeria indicates diverse involvement across many functional domains. The main group of work jobs consists of Junior Staff (47.0%), Management Staff (22.6%), Contract Staff (17.1%), and Senior Staff (13.2%). This signifies a significant proportion of the organization's junior staff members. In conclusion, the demographic analysis provides a comprehensive understanding of the characteristics of the respondents, which is crucial for interpreting the subsequent findings about the effects of flexible work schedules on employee behaviour.

Analysis of Research Question

4.1.1 Research Question 3: What is the contribution of hybrid work to employee commitment?

Table 4.3: Descriptive Statistics for Hybrid Work and Employee Commitment

Variable	N	Mean	Standard Deviation
Hybrid Work	287	3.70	0.88
Employee Commitment	287	4.05	0.78

The descriptive statistics for the variables hybrid work and employee commitment are shown in Table 4.3. These statistics provide the mean, standard deviation, and number of respondents (N).

The average score for hybrid work is 3.70, indicating that employees usually hold a positive impression of hybrid work arrangements. The diversity in the responses is demonstrated by the standard deviation of 0.88. The mean grade for employee devotion is 4.05, suggesting a high level of commitment to their work. The 0.78 standard deviation suggests that there is a certain degree of variability in employee commitment levels. The survey research unveiled workers' perceptions on the influence of mixed work on their degree of dedication. The replies were evaluated using Likert scale ratings, and the study focused on calculating average scores and examining the distribution of answers.

Table 4.4: Distribution of Responses for Hybrid Work and Employee Commitment

Response Category	Hybrid Work (Frequency, %)	Employee Commitment (Frequency, %)
Strongly Disagree	19 (6.6%)	9 (3.1%)
Disagree	32 (11.1%)	16 (5.6%)
Neutral	51 (17.8%)	38 (13.2%)
Agree	120 (41.8%)	132 (46.0%)
Strongly Agree	65 (22.6%)	92 (32.1%)

Table 4.4 displays statistics indicating that a significant majority of participants (64.4%) agreed or strongly agreed with the notion that hybrid work is accessible. Conversely, a significant proportion of employees (78.1%) demonstrated elevated levels of dedication, with most indicating their agreement or strong agreement with the topics relating to commitment. The analysis of responses and descriptive data indicates that employees at KPMG Nigeria have a positive inclination towards hybrid work. The remarkable mean scores for hybrid work (3.70) and employee commitment (4.05) indicate that workers generally exhibit high levels of dedication and appreciate the opportunity to have flexible working hours. Empirical evidence indicates that employees who are given flexible work schedules have greater levels of commitment. This aligns with the extensive body of research on flexible work arrangements, which often highlights the benefits of hybrid employment in terms of achieving a balance between work and personal life, fostering employee dedication, and enhancing job satisfaction.

Based on an analysis of survey findings, the commitment of KPMG Nigeria staff is enhanced by the implementation of hybrid work. Providing employees with the choice to work either at the workplace or from a remote location enhances their level of dedication, resulting in a more loyal and efficient workforce. This study highlights the need of implementing and maintaining hybrid work policies to enhance employee well-being and organisational effectiveness.

4.1.2 Research Question 4: What is the effect of part-time work on employee loyalty?

Table 4.5: Descriptive Statistics for Part-Time Work and Employee Loyalty

Variable	N	Mean	Standard Deviation
Part-Time Work	287	3.50	0.92
Employee Loyalty	287	4.10	0.79

The descriptive statistics for the variables "part-time work" and "employee loyalty" are presented in Table 4.5. These statistics show the mean, standard deviation, and total number of respondents (N).

Employees usually have a positive perception of part-time work arrangements, as seen by the average score of 3.50 for this sort of employment. The standard deviation of 0.92 quantifies the level of variability or diversity among the answers. The mean employee loyalty score is 4.5, suggesting a high level of staff dedication. The 0.79 standard deviation suggests that there is a considerable amount of variability in employee loyalty levels. The objective of the study was to ascertain the sentiments of employees on part-time work and its impact on their loyalty. The study utilised Likert scale ratings to evaluate the replies, with the primary goals being to determine the mean scores and examine the distribution of the responses.

Table 4.6: Distribution of Responses for Part-Time Work and Employee Loyalty

Response Category	Part-Time Work (Frequency, %)	Employee Loyalty (Frequency, %)
Strongly Disagree	21 (7.3%)	11 (3.8%)
Disagree	37 (12.9%)	18 (6.3%)
Neutral	63 (21.9%)	41 (14.3%)
Agree	105 (36.6%)	129 (44.9%)
Strongly Agree	61 (21.3%)	88 (30.7%)

Based on the data shown in Table 4.6, a significant majority of respondents (57.9%) expressed a strong agreement or agreement with the possibility of working part-time. Similarly, a significant portion of the workforce (75.6%) shown substantial loyalty, and the majority strongly agreed or agreed with the loyalty statements. The descriptive statistics and response distribution of Table 4.5 indicate a positive perception of part-time employment among employees of KPMG Nigeria. The high mean scores for part-time work (3.50) and employee loyalty (4.10) suggest that workers generally feel loyal and value the availability of part-time job opportunities. Research indicates that employees who have the opportunity to work part-time demonstrate higher levels of loyalty. This aligns with the extensive body of research on flexible work schedules, which often highlights the potential of part-time employment to increase worker loyalty, job satisfaction, and overall work-life balance. Based on an analysis of survey data, it has been shown that the loyalty of KPMG Nigeria workers is positively influenced by engaging in part-time employment. Part-time job alternatives have the potential to enhance employee loyalty, leading to a more dedicated and efficient staff. This study highlights the importance of implementing and maintaining part-time employment policies to enhance worker well-being and organisational efficiency.

4.2 Test of Hypotheses

The idea was evaluated using SEM (Structural Equation Modelling). Structural Equation Modelling (SEM) is a comprehensive statistical technique used to assess the relationship between latent components and observable variables. The objective of this study is to examine the impact of flexible work schedules on the behavioural outcomes of KPMG Nigeria employees.

4.2.1 Sampling Adequacy

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were employed to ensure that the sample size was sufficient for conducting factor analysis. Kilangi (2012) states that the Bartlett's test result is considered significant when the p-value is less than 0.05. Additionally, the KMO test recommends a value of 0.7 or above. The results, presented in Table 4.7, indicate that the KMO test of the research yielded a value of 0.846, suggesting that the data is suitable for further analysis.

4.2.2 Common Method Bias (CMB)

Table 4.7: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.846
Bartlett's Test of Sphericity	Approx. Chi-Square	4068.634
	Df	465
	Sig.	.000

Harman's single-factor test was conducted to test for common method bias (Podsakoff et al., 2003).

The 31 items were expressed as a single factor. The analysis showed no common method bias in presenting the data as the largest variance was clarified (31.351%), which is less than the threshold value of 50% as shown in Table 4.8.

Table 4.8: Common Method Bias Test

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.719	31.351	31.351	9.719	31.351	31.351
2	2.113	6.817	38.167			
3	1.683	5.430	43.598			
4	1.570	5.064	48.661			
5	1.384	4.466	53.127			
6	1.238	3.994	57.121			
7	1.183	3.817	60.939			
8	1.010	3.257	64.195			
9	.955	3.081	67.276			
10	.894	2.883	70.160			
11	.824	2.658	72.817			
12	.719	2.319	75.137			
13	.644	2.078	77.215			
14	.636	2.052	79.266			
15	.608	1.962	81.228			
16	.588	1.897	83.126			
17	.557	1.796	84.921			
18	.505	1.627	86.549			
19	.471	1.518	88.067			
20	.462	1.491	89.558			
21	.423	1.366	90.923			
22	.406	1.310	92.233			
23	.391	1.260	93.493			
24	.372	1.199	94.692			
25	.325	1.047	95.739			
26	.302	.974	96.713			
27	.261	.841	97.555			
28	.237	.766	98.320			
29	.209	.675	98.996			
30	.186	.600	99.595			
31	.126	.405	100.000			
Extraction Method: Principal Component Analysis.						

4.3.3 Measurement Model Assessment

Conducting an assessment of convergent validity is essential to ensure that the measurement validity of each variable is upheld. The assessment of convergent validity involves examining loadings, composite reliability (CR), average variance extracted (AVE), Cronbach's Alpha (CA), and loadings. If the AVE value is more than 0.5, it is expected that the loading will also be higher than 0.5. Cronbach Alpha values ranging from 0.7 to 0.9 are considered outstanding, with a forecasted value over 0.6. It is expected that the Average Variance Extracted (AVE) will be more than 0.50, while the Composite Reliability (CR) would range between 0.7 and 0.9. After adjustment, all components of the research exhibited Cronbach's Alpha (CA) values ranging from 0.7 to 0.9, suggesting a satisfactory level of satisfaction (Table 4.9). Items with loadings below 0.6 were deleted. The item with the lowest loading was eliminated, resulting in an increase in the AVE from 0.526 to 0.608. Therefore, any AVE values that are more than 0.5 are met, as shown in Table 4.9. The variables' constructions exhibited AVE and CR values of 0.805 and 0.861, respectively. These findings indicate that all of the CR requirements have been fulfilled. Table 4.9 presents the metrics for the reliability and validity of the notions.

Discriminant validity refers to the extent to which a construct deviates from other constructs based on empirical criteria (Avkiran & Ringle, 2018; Ringle et al., 2020). Heterotrait-Monotrait (HTMT) ratio, cross-loadings, and Fornell-Larcker criteria are quantitative methods used to assess the extent to which different constructs in a study are distinct from each other. The assessment ensures that each variable inside the model is distinct. The loadings across and within the build should be smaller than one another. The cross-loadings in this study are satisfactory because each indicator's loadings are greatest for the structures they are meant for. Based on Fornell-Larcker's criterion, the square root of a construct's average variance extracted (AVE) should exceed the correlation it has with the other constructs in the model. According to Table 4.10, the Fornell-Larcker requirements have been satisfied. In order to satisfy the stringent requirement of the HTMT (Kline, 2011), the HTMT value should be below 0.85. As all HTMT results are below 0.85, the HTMT requirements are satisfied (Table 4.11). Discriminant validity has been confirmed.

4.2.3 Structural Model Assessment

Table 4.9: Validity and Reliability

Latent variable	Factor loading	Cronbach alpha	Composite Reliability	Average Variance Extracted (AVE)	VIF
Hybrid work	0.913	0.740	0.823	0.701	1.214
	0.754				1.214
Part time work	0.755	0.700	0.759	0.523	1.274
	0.513				1.056
	0.858				1.269
Employee Commitment	0.687	0.701	0.817	0.529	1.272
	0.811				1.487
	0.763				1.380
	0.636				1.256
Employee Loyalty	0.727	0.757	0.846	0.578	1.335
	0.757				1.516
	0.786				1.473
	0.770				1.506

Table 4.10: Fornell-Larcker Criterion

Fornell-Larcker Criterion		
	Employee Commitment	Hybrid work
Employee Commitment	0.727	
Hybrid work	0.399	0.837
	Employee Loyalty	Part time work
Employee Loyalty	0.760	
Part time work	0.373	0.723

Table 4.11: Heterotrait-Monotrait Ratio (HTMT)

Heterotrait-Monotrait Ratio (HTMT)		
	Employee Commitment	Hybrid work
Employee Commitment		
Hybrid work	0.590	
	Employee Loyalty	Part time work
Employee Loyalty		
Part time work	0.559	

After the initial stage verifies the validity and reliability of all variable indicators, a structural model review becomes necessary. The next step involves assessing the structural model. In PLS-SEM, the algorithms use an iterative technique for multiple regression series. The path coefficient represents the variance inflation factor (VIF) and coefficient of determination (R2) in PLS-SEM. The VIF values demonstrate the collinearity between the associations of exogenous and endogenous constructs (Avkiran & Ringle, 2018; Ringle et al., 2020). The same multiple regression metric is utilised, and it is considered acceptable for all variable predictors in the model to have predicted VIF values below 3.3 or 5 (Avkiran & Ringle, 2018; Ringle et al., 2020). The data shown in Table 4.9 indicates that all Variance Inflation Factor (VIF) values are below 5, indicating the absence of any collinearity issues that might potentially impact our conclusions.

The coefficient of determination (R2) is the amount of variance in the endogenous construct that can be described by all of the related exogenous constructs. It serves as a measure of how accurately the model can predict outcomes (Ringle et al., 2020). The R2 values indicating the strength of the relationship are 0.75 for significant, 0.50 for moderate, and 0.25 for poor (Avkiran & Ringle, 2018; Ringle et al., 2020). Previously, R2 values of 0.02, 0.13, and 0.26 were categorised as small, medium, and large, respectively, according to Cohen (2013). Chin (1998) recommended R2 values of 0.19, 0.33, and 0.67 to represent weak, moderate, and large levels of correlation. The predictor variable of flexible work arrangements in this study has an R2 value of 0.262, indicating its potential to explain employee engagement (Table 4.12).

The predictor variable for flexible work arrangements may explain 21.5% of the variation in employee satisfaction, as indicated by an R2 value of 0.215 (Table 4.12). The predictor variable for flexible work arrangements may explain employee commitment, as indicated by an R2 value of 0.160 (Table 4.12). The predictor variable for flexible work arrangements has a low R2 value of 0.139, indicating that it can only explain a small portion of the variance in employee loyalty (Table 4.12). These numerical data indicate that the association possesses sufficient resilience. In some domains, a coefficient of determination beyond 0.20 may be considered high; nonetheless, values within the range of 0.25 to 0.50 are considered acceptable.

Table 4.12: R-squared Values

R Square	
Employee Commitment	0.160
Employee Loyalty	0.139

Test of Hypothesis One: Hybrid Work and Employee Commitment

Hypothesis:

i. H_1: Hybrid work positively influences employee commitment at KPMG Nigeria.

Table 4.13: Path coefficients for Hybrid work on employees' commitment

	Path value	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Hybrid work -> Employee Commitment	0.399	0.410	0.044	9.026	0.000

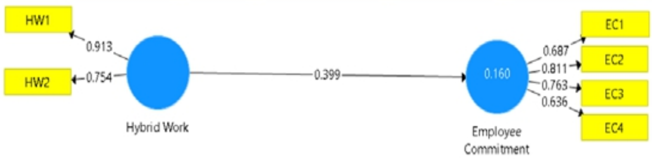

Figure 1: Path Analysis of Hybrid work and Employee Commitment

The study findings shown in Figure 1 demonstrate a robust and favourable association between employee devotion and hybrid work. The t-statistic of 9.026 and the p-value of 0.399 suggest that hybrid work arrangements have a significant positive impact on employee commitment. The p-value of 0.000 confirms the statistical significance of the link, indicating that employees who participate in hybrid work arrangements exhibit a greater degree of organisational commitment.

The significant positive link shown at KPMG Nigeria between hybrid work and employee commitment is consistent with the existing research on flexible work schedules. Research has shown that hybrid work, which combines remote and in-office work, enhances employee engagement by providing flexibility and autonomy while maintaining a sense of connection with colleagues and the organisation (Braenden & Alstad, 2023; Naysmith & Samuelsson, 2024). In their study, Beckel and Fisher (2022) found a positive association between job satisfaction, organisational commitment, and telecommuting, which is a form of hybrid employment. Hybrid work arrangements provide flexibility, enabling workers to effectively manage their personal and professional lives, therefore boosting their level of commitment to the organisation. Employee loyalty to KPMG Nigeria can be enhanced by providing hybrid work arrangements that allow them to work remotely and in the office. Due to this arrangement, employees may derive advantages from both on-site and remote work, leading to heightened levels of dedication (Wang et al., 2021). The study's findings suggest that KPMG Nigeria should consider using hybrid work arrangements as a key component of its human resource management strategy. Advocating for hybrid work may lead to increased employee dedication and productivity, ultimately benefiting both the organisation and its people.

Test of Hypothesis Two: Part-Time Work and Employee Loyalty
Hypothesis:

i. **H_2: Part-time work positively influences employee loyalty at KPMG Nigeria.**

Table 4.14: Path coefficients for Part-time work on employee loyalty

	Path value	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Part time work -> Employee Loyalty	0.373	0.385	0.055	6.831	0.000

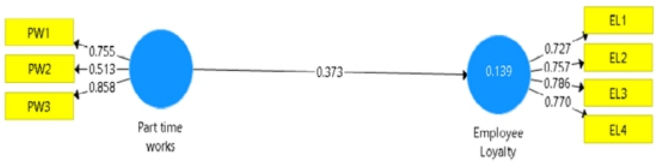

Figure 2: Path Analysis of Part time work and Employee Loyalty

Figure 2 research findings show a strong positive correlation between part-time employment and worker loyalty. Employee loyalty is greatly increased by part-time work arrangements, according to a t-statistic of 6.831 and a path value of 0.373. The statistical significance of this association is confirmed by the p-value of 0.000, which suggests that employees who engage in part-time work arrangements exhibit higher levels of organisational loyalty.

The strong positive link shown at KPMG Nigeria between part-time employment and employee loyalty aligns with the existing research on flexible work hours. Part-time employment promotes employee loyalty by providing greater flexibility and a more favourable work-life balance, enabling people to maintain employment while working less hours (Rodríguez-Sánchez et al., 2020). In addition, Nwekpa (2020) found that implementing reduced and flexible workweek patterns, such as part-time employment, is associated with higher levels of organisational commitment and job satisfaction. The flexibility of part-time employment enables workers to effectively manage personal responsibilities, hence fostering increased employee loyalty towards the organisation. KPMG Nigeria offers part-time employment choices to its staff members, allowing them to achieve a better work-life balance and ultimately enhancing their level of commitment to the organisation. This flexibility enhances employee loyalty and engagement to KPMG Nigeria, particularly benefiting those with personal or family responsibilities (Cornelius, Ojo & Ololade Adedoyin, 2022; Idowu, 2020). The study's outcomes suggest that KPMG Nigeria should consider promoting part-time work arrangements as a component of its human resource management strategy. Advocating for part-time employment may lead to a higher level of dedication and involvement from workers, thus enhancing the overall performance of the organisation.

Discussion of Results

The study findings demonstrate a robust association between various forms of flexible work arrangements and the behavioural outcomes of workers at KPMG Nigeria. Studies have demonstrated a substantial correlation between employee engagement and the implementation of flexible working hours.

Hybrid work arrangements have been found to significantly enhance employee commitment. Employee commitment exhibited a 16% fluctuation attributed to a combination of factors in the workplace, and this variation was statistically significant with a p-value of 0.000. The practical significance of the path coefficient is clear, demonstrated by its result of 0.399 and a t-statistic of 9.026. The alternative hypothesis was accepted and the null hypothesis was rejected based on the model's significance level of 0.000. Employees that engage in both on-site and remote work benefit from a more comprehensive work experience, leading to heightened loyalty towards the organisation. Implementing hybrid work arrangements at KPMG Nigeria can enhance employee dedication by providing staff members the opportunity to benefit from both traditional office-based work and remote work environments.

Part-time work has been shown to significantly enhance employee loyalty. Given that there was a 26% difference in employee loyalty attributed to part-time work and the significance level was 0.000. The practical use of the route coefficient is apparent, demonstrated by its value of 0.373 and t-statistic of 6.831. The alternative hypothesis was accepted and the null hypothesis was rejected based on the model's significance level of 0.000. This outcome confirms the conclusions of Giovanis (2019), who found that providing greater flexibility and a more favourable work-life balance through part-time job arrangements can enhance loyalty. Employees who are adept at effectively balancing their personal and professional commitments are more inclined to remain loyal to their organisation. Implementing part-time work schedules can enhance employee loyalty for KPMG Nigeria by addressing workers' needs and reducing attrition rates. The conclusions of this investigation have both theoretical and practical implications. The study provides empirical evidence of the positive impact of flexible work arrangements on employee behavioural outcomes, therefore contributing to the existing knowledge on the issue. Research suggests that human resource managers and organisational leaders should consider implementing flexible work schedules to cultivate a work environment that promotes flexibility and motivation, leading to increased employee commitment, loyalty, engagement, and satisfaction. These acts may lead to an increase in both organisational performance and job pleasure.

Conclusions and Recommendations

The study's findings corroborate prior research and theoretical frameworks by highlighting the significance of adaptable work environments for contemporary enterprises. Implementing flexible work schedules can greatly improve both organisational performance and worker well-being. Flexible work arrangements have the potential to enhance employee commitment, loyalty, engagement, and satisfaction. Implementing flexible work arrangements at KPMG Nigeria can lead to heightened employee engagement, reduced staff turnover, and enhanced organisational performance. Enabling employees to maintain a healthy equilibrium between their personal and professional commitments enhances the positive and energetic work environment at KPMG. This study proposes that the establishment and implementation of effective flexible work policies are crucial for enhancing employee happiness and promoting organisational achievement. Organisations should implement flexible work arrangements since they offer compelling evidence of heightened employee engagement, satisfaction, commitment, and loyalty. Organisations may enhance their ongoing performance by establishing flexible work arrangements, which provide a supportive, efficient, and enduring work environment.

Employees are more likely to respond with increased commitment and allegiance when they perceive encouragement from their employer. The findings indicate that:

i. Employee commitment is enhanced by hybrid work, which blends the autonomy of remote work with in-person interactions in the office.
ii. Part-time employment facilitates a harmonious equilibrium between work and personal life, therefore cultivating heightened employee allegiance to the organisation.

Recommendations

i. Recent findings have revealed that the implementation of hybrid work, which combines remote and in-office work, significantly enhances employee dedication. Organisations must to establish comprehensive guidelines for hybrid work that include provisions for employee assistance and clear-cut criteria. In order to ensure that employees remain connected and engaged, it is necessary for these rules to include regular communication, activities to foster team cohesion, and resources for remote work
ii. Part-time work has a favourable influence on employee loyalty. Companies have to offer opportunities for part-time work and ensure that these roles are supported by enough resources and opportunities for professional advancement. Enhancing the loyalty and engagement of part-time employees can be achieved by providing them equal access to training and benefits as their full-time counterparts
iii. This entails providing training to supervisors and managers on how to effectively supervise and facilitate flexible work hours. By integrating flexibility into the organisational culture, it is feasible to ensure consistent adherence and respect for these processes across the organisation.

Limitations/Further Study

Some of the major limitations faced while doing this research are:

i. This study's purview was restricted to KPMG Nigeria, a particular organisation operating in a particular industry. As such, the findings might not apply to different industries or geographical areas.
ii. This study employed structured questionnaires as the primary instrument for collecting quantitative data. While this approach yielded valuable quantitative

data, it may not comprehensively capture the range of viewpoints and experiences that employees have on flexible work hours.

Despite exerting diligent attempts, the researcher was unable to discover any information about the influence of flexible work arrangements on employee behavioural outcomes in Nigerian accounting organisations. It is imperative to comprehend that there are several study chances and that the field of information is extensive. Therefore, further research is necessary in this field.

Potential areas of investigation for future investigations may include:

i. Subsequent research should broaden its scope to include a greater number of businesses from other industries and geographical regions. This update will enhance the generalisability of the findings and provide a more comprehensive understanding of how flexible work arrangements impact employee outcomes in different contexts.

ii. Future research efforts can enhance understanding of the impacts of flexible work arrangements by including both qualitative and quantitative methods of data collection. Qualitative strategies such as focus groups and interviews may effectively capture employers' viewpoints and experiences, providing additional insight to complement the numerical data obtained through quantitative approaches.

iii. To assess the lasting impacts of flexible work arrangements, future studies should employ longitudinal methodologies. Tracking changes over time would provide insight into the impact of flexible work arrangements on employee engagement, satisfaction, commitment, and loyalty in a sustainable manner.

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Data Availability Statement

Data sharing is not applicable to this article.

Conflicts of Interest

The authors declare no conflict of interest.

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LEADERSHIP ROLE IN AFRICA AND THE LIBERATION MOVEMENT (A REVIEW OF POLITICS OF DEVELOPMENT AND THE QUEST FOR EMANCIPATION)

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Abstract

Given the challenges of the contemporary African state in relation to leadership roles in the fight for civil and human right have been of great concern. Considering the African paradox of underdevelopment is also an inevitable variable for total sovereignty. Looking at the general minimal level of success and manner upon which this success was achieved by the African people as a continent through their various leaders in a quest for political emancipation is an issue for thought. It is an expression of a symbol of concern that calls for immediate/effective change in the various approaches and methods earlier employed in the fight for her liberation movement. It only shows that African political independence and their involvements and associations with all international organizations have only granted a little opportunity for success within and outside the state. This paper then sees Africa with a clear vision of commonly shared goals, with similar accepted rules and empirical beliefs, as a continent that needs to exploit new avenues of opportunity to achieve their general goals. Focus is therefore on the review of transformation and systematic political, economic and social development which is a practical emancipation. This paper evaluation the reasons accounted for the retard level of development and suggestion by which this dream of general success can be achieved. It evaluates the various means of intensifying efforts to achieve a better life for the African people by way of eradicating all neo-colonialism and post-colonialism through rational policies. Finally, its suggests that the entire motivating variable upon which the spirit of the African are rested and built upon can only be achieved through various responsible world representatives' leaders. However, the use of qualitative design method is employed.

Keywords: *Development, emancipation, neo-colonialism, Leadership and Poverty*

Background of the Study

The struggle for liberation and sustainable development has been a defining feature of Africa's political landscape since independence. Central to this struggle is leadership both as a driver of emancipation and as a determinant of the continent's developmental trajectory. Africa's history reflects colonial exploitation, post-colonial disillusionment, and structural underdevelopment, all tied to the quality of political leadership. Liberation movements from the 1950s to the 1990s signified not only a quest for political freedom but also an ideological vision of self-determination, social justice, and economic transformation. Yet, decades later, many African states remain entangled in neocolonial dependencies, leadership crises, and developmental stagnation, raising critical questions about the orientation and effectiveness of African leadership.

Liberation movements, rooted in nationalist and Pan-Africanist ideologies, sought to dismantle colonial systems and establish governance grounded in equality, justice, and indigenous institutions. Leaders such as Kwame Nkrumah, Julius Nyerere, Amílcar Cabral, Patrice Lumumba, and Nelson Mandela symbolized resistance to imperial domination and the potential for African-led transformation. As Ake (1996) notes, independence was envisioned as the foundation for socio-economic advancement. However, over sixty years later, the continent still faces poverty, weak institutions, civil conflict, and corruption, challenges often linked to governance failures (Mkandawire, 2001).

Leadership in this context goes beyond holding office it involves inspiring collective action, articulating developmental visions, and implementing policies that improve societal welfare. Many post-independence leaders failed to transcend colonial political structures, replicating authoritarianism, patrimonialism, and exclusionary governance. Mamdani (1996) argues that the African state retained colonial-era centralized and repressive systems, alienating citizens and widening the gap between rulers and the ruled. This leadership crisis has hindered the fulfillment of liberation goals.

Africa's development politics has also been shaped by global economic forces. International financial institutions such as the IMF and World Bank introduced structural adjustment programs (SAPs) in the 1980s and 1990s, which, while aimed at macroeconomic stability, often undermined sovereignty and deepened inequality. These reforms reduced public spending, eroded social services, and reinforced dependence on Western donors (Adesina, 2006). Such neoliberal constraints limited leaders' capacity to design endogenous development strategies aligned with local realities, partially derailing liberation ideals.

Despite this, leadership in Africa is not uniformly deficient. Botswana under Seretse Khama and post-genocide Rwanda under Paul Kagame illustrate how committed leadership can drive development through accountability, unity, and strategic planning (Rotberg, 2004). However, these remain exceptions, with leadership deficits persisting as a central obstacle to continental progress.

Contemporary African political discourse increasingly emphasizes democratic accountability, human rights, and youth participation. Events such as the Arab Spring and pro-democracy protests across sub-Saharan Africa demonstrate growing popular consciousness and demands for transformative leadership. Civil society and grassroots movements are challenging authoritarian regimes and advocating for governance based on participation, transparency, and justice (Abrahamsen, 2000).

The meaning of "liberation" has also evolved. Today, it includes confronting internal oppression, neocolonial economic structures, and systemic marginalization. Struggles for gender equality, environmental justice, indigenous rights, and equitable resource access are integral to Africa's emancipation agenda. Achieving these goals requires leadership that is inclusive, intersectional, and grounded in the lived realities of African communities. The role of leadership in Africa's liberation is complex, shaped by historical legacies, ideological shifts, and global structures. The incomplete realization of liberation's promise underscores the need to critically reassess leadership's nature and its impact on development. This calls for governance that is visionary, people-centered, and accountable capable of navigating both domestic challenges and international pressures.

Understanding post-colonial leadership experiences provides insight into the structural and ideological barriers to development. Revitalizing liberation's ethos requires ethical leadership committed to continental transformation. As Africa faces 21st-century challenges globalization, climate change, and technological disruption effective leadership will be pivotal to achieving both development and emancipation.

The objectives of this study is to; interrogating the role of Leadership in Africa's Liberation Movements ii) Leadership and the Politics of Development in Africa iii) Leadership and Africa's Transformation Agenda and iv) Lessons from Past Leadership for Future Governance and Policymaking in Africa.

The Nexus between Leadership, Liberation, and Development in Africa

The relationship between leadership, liberation, and development in Africa has been a central focus of post-independence scholarship. Analysts have explored how leadership shaped Africa's political trajectories, the failures of postcolonial states, and the unfulfilled promises of liberation movements. This review synthesizes literature on the ideological roots of African liberation, post-independence governance, development politics, and the quest for socio-economic emancipation.

African liberation thought was shaped by nationalist and Pan-Africanist leaders who saw political independence as inseparable from economic freedom. Nkrumah (1963) stressed that independence without economic emancipation was meaningless, introducing the concept of neocolonialism, where former colonial powers-maintained influence over African states. Postcolonial theorists like Fanon (1963) argued that nationalist elites replicated colonial structures rather than dismantling them, betraying liberation ideals. Mamdani (1996) similarly noted that postcolonial states retained colonial-era governance systems, fostering unresponsive leadership.

While African leaders were pivotal in securing independence, many failed to deliver on nation-building. Ake (1996) observed that politics prioritized elite power consolidation over citizen empowerment, with public office often serving as a vehicle for patronage. Bayart (1993) described governance as embedded in clientelism and rent-seeking, leading to institutional decay. Others, like Mkandawire (2001), stressed the structural constraints leaders faced, including commodity price volatility, Cold War geopolitics, and structural adjustment programs, which limited policy autonomy.

Liberation movements varied ideologically, with some like the ANC, ZANU, and MPLA adopting Marxist-Leninist principles and armed struggle. Initially committed to socialism and resource redistribution (Saul & Leys, 1999), many shifted toward neoliberal reforms under global financial pressures (Southall, 2003). Cabral (1980) warned against leaders succumbing to personal power, advocating “class suicide” among nationalist elites to remain aligned with the masses. Leadership plays a pivotal role in Africa's developmental outcomes. Rotberg (2004) categorized leaders as transformational, transactional, or weak only the first producing long-term growth. Botswana's Seretse Khama fostered prudent economic management and democratic accountability (Acemoglu, Johnson, & Robinson, 2003), while Kagame's Rwanda pursued infrastructure and equity-focused reforms, albeit amid concerns about political freedoms (Reyntjens, 2011). Conversely, poor leadership in the Democratic Republic of Congo and South Sudan has perpetuated crises (van de Walle, 2001).

Neocolonialism, as articulated by Nkrumah (1965), describes the indirect domination of African states through economic and political mechanisms. Structural Adjustment Programs in the 1980s–1990s reduced public spending, privatized assets, and liberalized markets, often deepening poverty (Adesina, 2006). Stiglitz (2002) critiqued these policies for prioritizing macroeconomic stability over social needs. In response, scholars call for renewed Pan-Africanist leadership and South-South cooperation to reclaim the development agenda (Adesina, 2006).

Recent years have seen rising demands for inclusive and accountable leadership, driven by youth activism, feminist movements, and digital mobilization (Branch & Mampilly, 2015). Movements like the Arab Spring and #EndSARS highlight the transformative potential of mass mobilization. Achebe's (1983) assertion that Nigeria's primary challenge is leadership failure remains pertinent. Efforts such as the African Leadership

Initiative and the Mandela Washington Fellowship aim to cultivate ethical, visionary leaders, though their long-term impacts require further evaluation. African leadership since independence has been shaped by the tensions between liberation ideals, domestic political cultures, and global economic structures. Transformational leadership rooted in accountability, inclusivity, and developmental vision remains essential for realizing the continent's long-delayed promise of socio-economic emancipation.

Methodology

This study adopts a qualitative research design rooted in a critical interpretivist paradigm to explore the role of leadership in Africa's liberation movements and the politics of development and emancipation. The qualitative approach is particularly suitable for a study of this nature, as it allows for the nuanced interpretation of ideological, historical, and socio-political processes that cannot be adequately captured through quantitative methods (Creswell, 2014). By engaging critically with existing literature and historical records, this study examines how leadership ideologies, practices, and transformations have influenced Africa's development trajectories and the enduring struggle for emancipation.

The primary sources for this research include scholarly books, peer-reviewed journal articles, archival speeches, and manifestos of African liberation leaders such as Kwame Nkrumah, Julius Nyerere, Amílcar Cabral, and Nelson Mandela. Secondary sources include political science and development studies literature that critically assess postcolonial African leadership and governance. These sources were accessed through academic databases such as JSTOR, Scopus, and Google Scholar, as well as libraries hosting African Studies collections. The inclusion criteria for selecting materials were their relevance to themes of leadership, liberation, neocolonialism, and development, and their scholarly credibility.

Discussion on Findings

Research objectives 1: Interrogating the Role of Leadership in Africa's Liberation Movements: A Historical and Contemporary Analysis

Leadership has been central to Africa's liberation movements, both in resisting colonial rule and in shaping post-independence trajectories. From the early 20th century anti-colonial struggles to present-day governance challenges, African leaders have been instrumental in either catalyzing or constraining transformative agendas.

The emergence of nationalist movements across Africa during the 20th century was largely driven by indigenous leadership committed to political emancipation, self-determination, and decolonization. Figures such as Kwame Nkrumah in Ghana, Julius Nyerere in Tanzania, Patrice Lumumba in the Congo, and Amílcar Cabral in Guinea-Bissau not only articulated a vision of freedom but mobilized mass movements against colonial domination (Adi, 2012). These leaders positioned themselves as both political revolutionaries and cultural renaissance figures, arguing that liberation was not merely the transfer of power from colonial rulers to African elites, but the complete overhaul of exploitative structures and mentalities (Nkrumah, 1965).

Kwame Nkrumah's vision of Pan-Africanism exemplifies how leadership in the liberation era was deeply ideological and continentally focused. He believed that Africa's political liberation was inseparable from its economic and cultural emancipation and championed the idea of a united Africa as the foundation for true independence (Nkrumah, 1963). His leadership, however, also illustrated the tensions between democratic participation and revolutionary urgency, as his administration gradually became authoritarian, justified in part by the need to defend the revolution from internal and external threats.

While liberation movements achieved formal independence across most of Africa by the 1970s, the postcolonial era revealed significant challenges in leadership continuity and transformation. Many former liberation leaders transitioned into heads of state but struggled to deliver on their promises of equity, development, and sovereignty. According to Ake (1996), the colonial legacy left behind weak institutions, economic dependency, and ethnic fragmentation, but the failure of post-independence leadership to address these systematically exacerbated the crisis of governance. In countries such as Zimbabwe and Angola, liberation leaders like Robert Mugabe and José Eduardo dos Santos respectively maintained power for decades under increasingly autocratic rule, undermining the ideals they once fought for (Meredith, 2011). These developments suggest a paradox in African leadership: while the struggle for liberation was often inclusive and visionary, the exercise of power post-independence frequently became exclusionary and personalized. Some analysts attribute this shift to the absence of institutionalized political cultures, as well as external pressures including Cold War alignments and economic globalization (Bayart, 1993). Others argue that liberation movements, due to their militarized and hierarchical structures, were ill-prepared to transition into participatory democratic governments. The emphasis on loyalty, ideological purity, and centralized command during the liberation era often translated into authoritarian governance in peacetime (Southall, 2003).

In the 21st century, Africa continues to grapple with issues that echo the liberation era: poverty, inequality, foreign domination (in new forms), and governance crises. The legacy of liberation leadership still looms large, particularly in nations where ruling parties evolved from liberation movements such as the African National Congress (ANC) in South Africa and Chama Cha Mapinduzi (CCM) in Tanzania.

Contemporary African leadership faces the challenge of redefining emancipation beyond political independence. As Ndlovu-Gatsheni (2013) argues, the struggle has shifted toward “decolonial liberation” a broader attempt to dismantle epistemic, economic, and institutional structures inherited from colonialism. This includes confronting issues like debt dependency, exploitative trade relations, and neoliberal policy impositions by international financial institutions. However, this second wave of emancipation requires a different kind of leadership one that is visionary, accountable, and rooted in Pan-African solidarity. Unfortunately, in many contexts, leadership has been compromised by corruption, ethnic clientelism, and constitutional manipulations for term extensions

(Gyimah-Boadi, 2015). These practices undermine public trust and reproduce the colonial logic of elite domination and popular exclusion.

The 2011 Arab Spring uprisings in North Africa, youth-led movements like #EndSARS in Nigeria, and democratic transitions in countries like Zambia and Ghana suggest that African populations are increasingly demanding a new kind of leadership. These movements call for leaders who are not only anti-colonial in rhetoric but also democratic in practice and committed to inclusive development. The interrogation of African leadership within both historical and contemporary frameworks reveals a complex, contradictory, and evolving picture. Leadership was central to achieving formal liberation but has been uneven in delivering substantive emancipation. While some leaders continue to evoke liberation credentials as legitimacy, the contemporary reality demands accountability, transparency, and responsiveness. Moreover, the role of leadership must be understood within structural constraints. Neocolonial influences, global capitalism, and geopolitical marginalization continue to shape the context in which African leaders operate (Rodney, 1972). Therefore, a complete assessment of leadership must include both individual agency and systemic pressures.

Research objective 2: Leadership and the Politics of Development in Africa: Between Emancipatory Rhetoric and Structural Reality

The politics of development in Africa cannot be divorced from the question of leadership and the continent's long-standing aspiration for emancipation. From colonial domination to post-independence reconstruction and contemporary globalization, Africa's development discourse has been shaped by both internal political dynamics and external structural pressures. Leadership has often stood at the center of this discourse, portrayed either as the driving force behind developmental transformation or the primary obstacle to achieving it (Ake, 1996). This section critically reviews the interplay between leadership and development politics in Africa, exploring how political decision-making, institutional choices, and ideological orientations have shaped and, at times, undermined the quest for emancipation.

At independence, African leaders inherited colonial economies characterized by extractive institutions, mono-crop or mono-resource dependency, and infrastructural underdevelopment. These colonial arrangements were designed to serve metropolitan interests and left newly sovereign states with fragile economies and weak governance structures (Rodney, 1972). The early postcolonial leaders were faced with the dual task of nation-building and economic transformation. Figures like Nkrumah, Nyerere, and Senghor recognized that true emancipation required more than political independence it necessitated economic sovereignty and social development. Nkrumah (1965) famously warned of “neocolonialism,” the persistence of imperial control through economic and financial mechanisms, arguing that development without control over production and distribution would render African states nominally free but substantively dependent. This view influenced many post-independence leaders to adopt state-led development models, centralized planning, and import-substitution industrialization strategies.

However, these efforts often faltered due to poor institutional capacity, patronage politics, and weak accountability mechanisms. Furthermore, many leaders prioritized regime survival over broad-based development, diverting resources toward elite consolidation rather than emancipatory growth (Bayart, 1993). The politics of development thus became deeply entangled with personalistic rule and neopatrimonial practices. Leadership in Africa has historically oscillated between ideologically driven developmentalism and pragmatic clientelism. The 1960s and 1970s were characterized by ambitious development plans rooted in African socialism, Pan-Africanism, and nationalist ideologies. Leaders such as Julius Nyerere in Tanzania advocated for Ujamaa an indigenous form of socialism premised on self-reliance and communal development (Nyerere, 1968). While noble in intent, such policies often failed due to poor implementation, lack of economic diversification, and external shocks such as the oil crisis.

The failure of early development models, compounded by corruption and authoritarian governance, paved the way for the rise of neoliberal structural adjustment programs (SAPs) in the 1980s and 1990s. Imposed by the International Monetary Fund and World Bank, these programs promoted privatization, deregulation, and austerity in the name of macroeconomic stability. While they sought to reduce state inefficiencies, SAPs had devastating effects on social services, employment, and inequality, weakening the emancipatory promise of development (Mkandawire, 2001).

Ironically, many African leaders embraced these policies, not necessarily out of ideological conviction, but as a survival strategy in a donor-driven international system. This externalization of development policymaking contributed to the erosion of sovereignty and further alienated leadership from grassroots realities. The wave of democratization in the 1990s introduced new dynamics into the politics of development. Electoral competition and civil society activism reconfigured leadership accountability in some states, creating a window for participatory development and policy responsiveness. Countries such as Botswana, Ghana, and Rwanda began to exhibit stronger developmental performance linked to stable governance, institutional reforms, and strategic leadership (Fosu, 2013).

However, democratization did not uniformly translate into developmental transformation across the continent. In many cases, multiparty elections merely masked continued elite dominance and rent-seeking behavior. Developmental politics remained constrained by weak institutions, ethno-regional contestation, and foreign aid dependency. Leadership in this context became performative adopting the language of reform and empowerment while maintaining entrenched systems of exclusion and inequality (van de Walle, 2001). Thus, the central tension in Africa's development politics lies in the disconnect between emancipatory rhetoric and material outcomes. While leaders often invoke Pan-African solidarity, decolonization, and grassroots development, actual policy choices frequently align with elite interests and global capitalist imperatives.

To reorient development politics toward genuine emancipation, African leadership must confront both internal governance failures and external structural constraints. This involves rethinking development not merely as economic growth, but as a multidimensional process that includes social justice, ecological sustainability, cultural dignity, and collective autonomy (Zeleza, 2006).

Some contemporary initiatives, such as the African Continental Free Trade Area (AfCFTA), signal a renewed effort to assert African agency in the global economy. Similarly, the rise of youth movements and feminist leadership across the continent points to a new generation challenging traditional power hierarchies and advocating for inclusive development. However, for these trends to produce substantive change, leadership must shift from the politics of patronage and dependency to one of accountability, strategic vision, and popular empowerment. This means building robust institutions, strengthening policy coherence, investing in human capital, and ensuring that development serves the broader goals of emancipation rather than elite entrenchment.

Research Objective 3: Leadership and Africa's Transformation Agenda: Influence, Facilitation, and Hindrance

Leadership plays a decisive role in determining the trajectory of Africa's transformation agenda. Transformation in this context implies not merely economic growth but also structural change, social justice, institutional reform, and sustainable development. Leadership can serve either as a catalyst or as a constraint to these aims, depending on its vision, ethics, policy orientation, and engagement with institutions and citizens. This section explores the multifaceted role of leadership in influencing Africa's transformation, highlighting both progressive instances of leadership facilitation and regressive patterns that have hindered transformational outcomes. Africa has witnessed instances of transformative leadership that have driven significant socio-economic and political progress. Such leadership has often emerged in contexts where individuals or coalitions have demonstrated vision, commitment to reform, and the ability to harness state capacity for public benefit. Countries like Rwanda, Ghana, and Botswana have often been cited as examples of such cases.

In Rwanda, under the leadership of Paul Kagame, the government has made remarkable strides in areas such as health care, education, infrastructure, and ICT development (Ansoms & Rostagno, 2012). Rwanda's post-genocide recovery has been driven by a leadership model that emphasizes centralized planning, zero tolerance for corruption, and the mobilization of collective effort. Although Kagame's regime has been criticized for authoritarian tendencies, it demonstrates how focused leadership can yield developmental outcomes, particularly when state institutions are aligned with transformation goals (Booth & Golooba-Mutebi, 2012).

Similarly, Ghana's democratic transitions and relatively stable governance over the past two decades have fostered an environment where leadership has enabled public policy experimentation, economic reforms, and citizen participation. Ghana's adherence to constitutionalism and peaceful political transitions has been viewed as a model in West Africa, showing how political leadership that respects democratic norms can foster a conducive environment for transformation (Gyimah-Boadi & Prempeh, 2012).

In Botswana, successive leaderships since independence have maintained macroeconomic stability, prudently managed natural resources (notably diamonds), and invested in public services. The leadership of Sir Seretse Khama laid the foundation for a meritocratic civil service and sound governance practices, illustrating how leadership with integrity can set the tone for long-term development (Acemoglu, Johnson, & Robinson, 2003). While pockets of progress exist, many African countries have experienced leadership that has actively hindered transformation through corruption, repression, and short-termism. In numerous contexts, leadership has prioritized personal and elite interests over national development, undermining public institutions and eroding trust in governance.

Nigeria offers a potent example of how leadership failures can stall transformation. Despite vast oil wealth, Nigeria has struggled with widespread corruption, weak institutions, and poor public service delivery. The "resource curse" has been exacerbated by rent-seeking leadership, which has diverted public revenues into private hands, weakened accountability, and stifled industrial diversification (Ibeanu, 2008). Political leaders have often lacked the vision or will to implement transformative reforms, choosing instead to maintain patronage networks that reinforce their political survival.

Similarly, Zimbabwe under Robert Mugabe exemplifies leadership's capacity to derail a nation's developmental prospects. While Mugabe initially championed liberation and education reforms, his later years were marked by authoritarianism, land seizures, and economic collapse. The Fast-Track Land Reform Program, implemented without compensation or planning, triggered hyperinflation and international isolation, showing how populist but poorly managed leadership initiatives can be economically and socially disastrous (Raftopoulos, 2009).

Leadership failures in transformation are also evident in the manipulation of constitutional provisions to extend term limits, weakening of judicial independence, and electoral malpractices. Leaders who centralize power and resist institutional checks often create unstable political environments, which deter investment, hamper innovation, and disrupt developmental planning (van de Walle, 2001).While leadership is critical, it must also be understood within broader structural and institutional contexts. Many African leaders operate in environments constrained by weak state institutions, limited fiscal capacity, and dependence on foreign aid or extractive industries. External factors, including international financial institutions and multinational corporations, often shape national policy choices, sometimes in ways that limit the autonomy of leaders to pursue transformative agendas (Mkandawire, 2001).

Moreover, the legacy of colonialism has left behind fragmented political units, artificial borders, and ethnicized governance structures. These inherited challenges complicate efforts at building national cohesion and executing long-term development plans. Thus, while leadership matters, it is not omnipotent; it operates within historical, institutional, and global constraints. Nonetheless, capable and ethical leadership can mitigate these challenges by strengthening institutions, promoting national unity, and advocating for fairer global economic relations. Transformation requires leaders who understand and strategically navigate these constraints while remaining accountable to their populations.

The pathway to meaningful transformation in Africa requires a reimagining of leadership. This means moving from charismatic or authoritarian models to institutionalized, participatory, and accountable governance. Leadership must be oriented toward inclusive development, gender equity, youth empowerment, and ecological sustainability. Emerging social movements, digital activism, and youth engagement across Africa signal a growing demand for such reimagined leadership. Initiatives such as the African Union's Agenda 2063 articulate a shared continental vision, but their success depends largely on the commitment and integrity of national leaders to translate these ideals into policies and actions. Leadership training, civic education, and intergenerational dialogue are critical in cultivating a new cadre of African leaders who are equipped to manage complexity, foster collaboration, and promote transformational change.

Research Objective 4: Lessons from Past Leadership for Future Governance and Policymaking in Africa

The history of Africa's political and developmental journey reveals a tapestry of leadership experiences, ranging from the inspiring to the catastrophic. From anti-colonial liberation leaders to post-independence reformists and autocrats, the continent has seen a spectrum of leadership styles and governance outcomes. Analyzing these experiences offers critical insights into what has worked, what has failed, and what can inform future governance and policymaking in Africa. The importance of drawing lessons from these past experiences lies not only in avoiding historical pitfalls but also in shaping new trajectories for democratic governance, inclusive development, and sustainable peace.

Many early African leaders, particularly those involved in liberation movements, embodied a strong sense of vision and ideological commitment to Pan-Africanism, self-determination, and collective progress. Leaders such as Kwame Nkrumah of Ghana, Julius Nyerere of Tanzania, and Patrice Lumumba of the Democratic Republic of Congo emphasized continental unity, economic independence, and the need to build indigenous governance systems. Although their ambitions were often curtailed by internal and external challenges, their ideological clarity remains a valuable lesson for future leadership (Adi, 2018).

Nkrumah's emphasis on economic self-reliance and African unity highlighted the dangers of political fragmentation and dependency on former colonial powers. While his policies, such as import substitution industrialization, faced practical implementation challenges, his vision was grounded in an emancipatory politics of transformation. Future African leaders can draw from Nkrumah's foresight by embedding governance and policy frameworks within a long-term developmental vision that goes beyond electoral cycles (Zeleza, 2006).

One of the most enduring failures in African leadership has been the personalization of power and the erosion of state institutions. Many post-independence leaders created political systems centered around their personalities rather than building resilient institutions. This tendency weakened checks and balances, allowed for corruption, and undermined state capacity. For instance, leaders like Mobutu Sese Seko in Zaire (now DRC) and Idi Amin in Uganda exemplified autocratic regimes that enriched elites while leaving public institutions dysfunctional (Young & Turner, 1985).

The collapse of institutional governance under such regimes underscores the necessity of building strong, independent institutions that can endure beyond individual leaders. Effective governance in the future requires the depersonalization of power, constitutional rule, and the empowerment of democratic institutions such as parliaments, judiciaries, and civil societies. The lack of accountability in many African regimes has perpetuated poor governance and policy failure. The practice of authoritarian rule, often justified by national security or development goals, marginalized civil society and silenced dissent. In contrast, where leadership has promoted citizen engagement and transparency, governance outcomes have improved.

For example, post-apartheid South Africa under Nelson Mandela emphasized reconciliation, constitutional democracy, and participatory governance. Although the ANC-led government has since faced criticisms over corruption and inefficiency, Mandela's leadership model remains a benchmark for inclusive governance and transitional justice (Suttner, 2004). Future African leadership must institutionalize mechanisms of accountability, including independent oversight bodies, anti-corruption commissions, and freedom of the press. Additionally, engaging citizens in policymaking through participatory budgeting, town hall meetings, and digital platforms can enhance policy legitimacy and responsiveness.

One of the persistent challenges in African governance is managing ethnic diversity within colonial-drawn borders. Past leadership experiences show that mishandling ethnic pluralism often leads to conflict, marginalization, and civil unrest. Leaders, who embraced ethnic favoritism and clientelism, such as in Kenya under Daniel arap Moi or in Nigeria during various military regimes, exacerbated divisions and undermined national cohesion (Ibrahim, 2000). Conversely, leaders like Julius Nyerere promoted national integration through policies such as Ujamaa and the adoption of Kiswahili as a national language, fostering a sense of collective identity in Tanzania. The lesson here is that future governance must prioritize inclusive nationalism, equitable resource distribution, and policies that celebrate rather than suppress ethnic diversity.

The failure to ensure democratic succession has triggered numerous political crises across the continent. Leaders who overstayed their mandates, such as Robert Mugabe in Zimbabwe or Yoweri Museveni in Uganda, weakened democratic institutions and fueled instability. Leadership without succession planning tends to foster autocracy, insecurity, and economic stagnation (van de Walle, 2003). In contrast, countries like Ghana and Senegal have demonstrated the importance of peaceful transitions of power, reinforcing public trust and democratic continuity. The institutionalization of term limits, credible electoral commissions, and intra-party democracy are vital lessons for building stable governance framework

Another critical lesson from past leadership is the importance of effective policy implementation. Many African leaders have articulated ambitious development plans such as Nigeria's Vision 20:2020 or Kenya's Vision 2030 but these have often faltered due to poor coordination, lack of political will, or mismanagement. The failure to translate policy into practice reveals a gap between rhetoric and action (Mkandawire, 2001). Future leaders must enhance the technical capacity of public administration, ensure continuity in policy across political cycles, and foster evidence-based planning. Development must be anchored in national priorities, but also responsive to changing global dynamics, including climate change, technology, and migration.

Conclusion

The role of leadership in Africa's liberation movement both past and present is fundamental to understanding the continent's struggles and aspirations. As the continent faces new forms of imperialism and internal contradictions, the challenge remains to cultivate leaders who are transformative, ethical, and aligned with the emancipatory aspirations of the people. The politics of development in Africa has been shaped by complex interactions between leadership decisions, ideological orientations, and global structural forces. While leadership has played a crucial role in articulating visions of emancipation, the translation of these visions into effective development policies has been uneven and contested. The challenge moving forward is to cultivate a new political ethos one that reclaims development as a people-centered, sovereignty-affirming process rooted in Africa's historical struggle for liberation and its future aspirations for dignity and justice.

Leadership in Africa has played a pivotal role in shaping the continent's transformation agenda. Where leadership has been visionary, accountable, and reform-oriented, it has facilitated progress and fostered hope. Conversely, where leadership has been authoritarian, corrupt, or self-serving, it has undermined the very foundations of transformation. While structural challenges remain significant, the agency of African leaders remains central to defining and advancing an emancipatory and inclusive development path. The future of Africa's transformation lies in nurturing leadership that is responsive, innovative, and deeply committed to the welfare of its people. Africa's leadership history offers a wealth of lessons for future governance and policymaking. From the ideological clarity of the liberation era to the pitfalls of personalist rule and the promise of democratic consolidation, the past reveals both aspirations and cautions. Future leadership must commit to visionary and accountable governance, institution-building, and inclusive policymaking. By learning from the successes and failures of previous generations, African leaders can forge a transformative path rooted in dignity, equity, and sustainable development.

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REIMAGINING NATIONAL SECURITY IN FRAGILE STATES: AI GOVERNANCE, MISINFORMATION, AND COUNTER-TERRORISM IN NIGERIA

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Abstract

National security in fragile states is no longer defined solely by control of territory or armed force; it is increasingly shaped by the management of information and the use of emerging technologies. In Nigeria, a country marked by persistent institutional weaknesses and violent extremism, the interplay between technological governance, misinformation, and counter-terrorism has transformed both the nature of threats and the state's responses. This paper examines how unregulated technological tools and widespread misinformation intersect to create new challenges for security and governance. Using securitization theory as the analytical lens, the study explores how the Nigerian government frames these issues as existential threats, justifying expansive security measures that often deepen public mistrust and institutional fragility. Through qualitative analysis of policy frameworks, security practices, and digital narratives, the paper reveals a paradox: efforts to secure the nation sometimes exacerbate social divisions and undermine democratic accountability. It calls for a reimagined national security approach that transcends militarized paradigms by emphasizing transparent governance, ethical oversight, and inclusive civic engagement. Nigeria's experience reflects broader dilemmas faced by fragile democracies navigating the complexities of security in the digital age where challenges are not only technical or territorial but also political, ethical, and societal.

Keywords: *Fragile States, National Security, Misinformation, Nigeria, Securitization Theory*

Introduction

State fragility has long been a defining characteristic of many developing nations, particularly within the Global South, where weak institutions, contested legitimacy, and uneven development combine to erode public trust in governance. Rotberg (2004) identifies fragile states as those unable to provide basic political goods security, rule of law, and economic opportunity leaving them vulnerable to both internal disorder and external manipulation. In such contexts, the decay of political stability and public order often undermines democratic resilience, heightening the appeal of authoritarian consolidation. Roberts (2024) observes that for democracies to survive in moments of protracted crisis, they must adapt without succumbing to the centralization of authority, which historically accelerates institutional decay. Similarly, Call (2011) emphasizes that fragility is not a singular condition but a spectrum of vulnerabilities, often intensified by poor governance, elite fragmentation, and socio-economic exclusion.

Nigeria exemplifies these tensions. Despite sustained investment in diplomatic strategies and local defense capabilities, the country's security architecture is deeply undermined by endemic governance failures and the weaponization of information (Ohwo, 2025; Solomon, 2025). Insurgent movements, including Boko Haram and the Islamic State's West Africa Province (ISWAP), have expanded their operational reach by exploiting digital technologies, disinformation networks, and algorithmic visibility to manipulate public consciousness and disrupt counter-terrorism efforts (Onuoha, 2022). Parallel to this, state institutions often operating without robust oversight have deployed artificial intelligence tools in surveillance, predictive policing, and data profiling, raising ethical concerns and further alienating segments of the population (Adegbola, 2023).

The convergence of artificial intelligence, misinformation, and counter-terrorism thus constitutes a new frontier in Nigeria's national security landscape. This study interrogates how unregulated AI systems and disinformation ecosystems intersect to reshape threat perception, governance responses, and civic trust in a fragile state context. Nigeria's experience is significant not merely for its domestic implications but for what it reveals about the strategic dilemmas confronting other fragile democracies navigating the digital century.

It is against this backdrop that the study raised the following questions;

i. How has AI governance been framed and implemented as a national security measure in Nigeria's fragile state context?
ii. In what ways has misinformation been securitized, and how has these shaped counter-terrorism strategies in Nigeria?
iii. How has AI-driven counter-terrorism approaches affected the overall national security architecture in Nigeria?

The following objectives guided this study;

1. To examine the securitization of AI governance as a tool for strengthening national security in Nigeria.

2. To analyze the role of misinformation framing in shaping Nigeria's counter-terrorism policies and strategies.
3. To evaluate the impact of AI-based counter-terrorism measures on Nigeria's broader national security framework.

Following this introduction, Section Two situates the study within securitization theory and the emerging field of techno-politics, critically reviewing existing literature on AI, misinformation, and fragile state security. Section Three outlines Nigeria's political and digital security context, highlighting key institutional and technological developments. Section Four details the methodological approach, emphasizing the qualitative case analysis of policy frameworks, digital behavior patterns, and institutional responses. Section Five presents the empirical analysis of how AI and misinformation intersect in Nigeria's counter-terrorism landscape. Section Six discusses the broader implications for national security in fragile states, while Section Seven advances a governance framework and targeted policy recommendations. The paper concludes in Section Eight by synthesizing the findings and suggesting avenues for future research.

Theoretical Framework

Securitization Theory

The concept of security, traditionally confined to military and territorial dimensions, has evolved significantly to encompass social, political, and technological realms. Securitization Theory, developed by Buzan, Wæver, and de Wilde (1998), offers a critical analytical lens to understand this evolution by shifting focus from objective threats to the processes by which issues are framed as existential threats demanding extraordinary responses. According to this framework, security is a speech act: an actor articulates a threat, convincing an audience that extraordinary measures are justified to counter it. This process of "securitizing" an issue transforms it from a routine political problem into a matter of survival, thus suspending normal democratic procedures (Buzan, Wæver & de Wilde, 1998).

The utility of securitization theory in fragile states is pronounced due to the institutional weaknesses and legitimacy crises that characterize these contexts. Fragile states like Nigeria often suffer from fragmented governance structures, weak rule of law, and limited public trust, conditions that create fertile ground for securitizing moves that expand executive power under the guise of emergency (Call, 2011; Rotberg, 2004). The resulting securitization can generate a paradox wherein efforts to manage insecurity through exceptional policies inadvertently undermine democratic governance and deepen fragility (Call, 2011). This dynamic is critical for understanding how Nigeria negotiates the complex challenges posed by emerging technologies and digital misinformation.

A crucial clarification in the application of securitization theory comes from Taureck (2006), who argues that moral or ethical critiques often misinterpret the analytical purpose of the theory. Taureck contends that securitization theory should be understood as a tool for practical security analysis, not as a normative framework prescribing what should or should not be securitized. This perspective allows scholars to investigate how securitizing moves unfold and what consequences they produce without conflating analysis with ethical judgment (Taureck, 2006). In this study, Taureck's insight underpins an empirical examination of Nigeria's securitization of AI governance and misinformation within the counter-terrorism domain.

In Nigeria, securitization manifests vividly in the framing of AI-driven surveillance and digital misinformation as existential threats to national security. The government's rhetoric around terrorism increasingly incorporates references to algorithmic "visibility" and the weaponization of information platforms, justifying expanded surveillance measures, internet restrictions, and predictive policing technologies (Onuoha, 2022; Adegbola, 2023). These securitizing acts often bypass standard institutional oversight, reinforcing executive authority while risking the alienation of civil society actors and eroding democratic accountability (Solomon, 2025). Simultaneously, non-state actors such as Boko Haram and other insurgent groups engage in counter-securitization narratives through disinformation campaigns, exploiting digital platforms to undermine the legitimacy of the state and mobilize support (Onuoha, 2022; Onigbinde et al., 2024). This contestation over the "security narrative" complicates Nigeria's counter-terrorism efforts and illustrates the epistemological struggles at the heart of modern national security in fragile contexts.

The opaque nature of AI technologies further exacerbates this dynamic. Predictive policing algorithms and surveillance systems operate as black boxes with limited transparency, which in a fragile state context can magnify governance deficits, including lack of accountability and biased enforcement (Brookings Institution, 2021). This creates a feedback loop where securitized technological interventions simultaneously attempt to address security challenges while introducing new vulnerabilities to rights and governance. Securitization theory provides a robust conceptual framework to analyze Nigeria's digital security challenges. It elucidates how the framing of AI and misinformation as existential threats reshapes national security practices in fragile states, highlighting tensions between emergency governance and democratic resilience. This study leverages this theoretical lens to critically examine the interplay of AI governance, misinformation, and counter-terrorism in Nigeria, offering insights relevant for similar fragile democracies navigating the digital age.

Literature Review

AI Governance in Fragile States

Artificial Intelligence (AI) is increasingly deployed worldwide as a tool for governance and security. In fragile states, such as Nigeria, the intersection of AI and state security mechanisms presents unique challenges. Globally, scholars recognize AI as a double-edged sword: while it offers novel capacities for surveillance and threat detection, it also exacerbates existing governance gaps, particularly in contexts characterized by weak institutions and limited regulatory oversight (Raji et al., 2020). For example, Birhane and Prabhu (2021) critically interrogate the deployment of large-scale AI systems, exposing their biases and systemic failures that risk perpetuating inequalities and marginalization. These insights are crucial for fragile states, where socio-political cleavages often intersect with technological deployment.

The global technological landscape itself is undergoing a profound transformation driven by AI, a development with far-reaching implications for international power structures, economies, and societal norms. Bhandari and Bhandari (2024) draw a historical parallel with U.S. leadership during the atomic weapons era, arguing that the United States must assume a proactive and responsible role in AI governance to preserve democratic values and global stability. Without such stewardship, AI capabilities could be appropriated by authoritarian regimes such as China and Russia for purposes including mass surveillance, censorship, disinformation, and military expansion, thereby destabilizing international norms. This view situates AI governance not merely as a domestic challenge, but as a matter of geopolitical leadership and ethical responsibility.

Dafoe (2018) conceptualizes AI governance as the set of institutions, incentives, and contextual factors that shape how AI is developed and deployed. Effective governance ensures that actors building and implementing AI systems have the goals, resources, training, and organizational culture to prioritize societal benefit. In fragile states, where governance structures are already under strain, this alignment is difficult to achieve, increasing the risk of harmful applications. Within Africa, research highlights that AI adoption remains uneven and often operates within weak legal frameworks. Mutsvairo and Ronning (2020) identify a trend of digital authoritarianism, where states use AI-powered surveillance to consolidate power, sometimes at the expense of civil liberties. Nigeria epitomizes this tension: Adewale and Adebiyi (2021) document the Nigerian government's increasing reliance on digital surveillance to counter violent extremism, yet they emphasize the country's lack of comprehensive AI-specific legislation to regulate such technologies. This regulatory vacuum contributes to unchecked power accumulation and risks the erosion of democratic norms.

More specifically, Ndubuisi et al. (2022) explore Nigeria's infrastructural and institutional challenges in managing AI governance. They argue that while Nigeria shows technological enthusiasm, the regulatory frameworks, technical capacity, and ethical guidelines remain underdeveloped. Such gaps undermine accountability and transparency in state use of AI, particularly in security contexts. Ezeani and Okoye (2022) similarly emphasize that the existing Nigeria Data Protection Regulation (NDPR), though progressive in data privacy terms, does not sufficiently cover AI governance aspects such as algorithmic accountability or surveillance ethics. This lacuna leaves room for potential abuses, including disproportionate targeting of marginalized groups and lack of recourse for rights violations. Taken together, these insights demonstrate that while AI offers substantial opportunities for enhancing security in fragile states, the absence of robust governance structures significantly amplifies the risks to democratic accountability, human rights, and geopolitical stability. In the Nigerian context, these vulnerabilities are not isolated technical gaps, but part of a broader governance crisis that demands both domestic reform and engagement with international norms of ethical AI stewardship.

Misinformation and Counter-Terrorism in Nigeria

Misinformation is a pervasive destabilizing factor in fragile states, and Nigeria exemplifies the depth of this challenge. The nexus between misinformation, public trust, and counter-terrorism is well documented in Nigerian security scholarship. Onuoha (2014) provides a foundational analysis of Boko Haram's strategic use of social media misinformation to undermine state narratives, recruit fighters, and instill fear. His work demonstrates how insurgent groups weaponize digital platforms to disrupt official counter-terrorism communication and complicate strategic messaging. Akinola (2018) extends this discussion by showing how rumor and fake news intensify communal conflicts in Nigeria's Middle Belt, revealing that misinformation not only undermines state security but also exacerbates deep-seated ethno-religious tensions. Dada and Ekwealor (2020) similarly contend that these campaigns significantly erode public trust in security agencies, a vital element for counter-terrorism operations that rely on community cooperation and intelligence sharing. In their view, the corrosive effect of misinformation on citizen–state relations create exploitable blind spots that insurgents can manipulate.

Nigeria's official counterterrorism and military statements have also been implicated in the misinformation problem. Iwuoha (2020) observes that government communication often fails to achieve its intended objectives of improving the military's image, highlighting counter-terrorism successes, or attracting international support. Instead, it has sometimes relied on “fake news” and “half-truths” to obscure operational weaknesses in the fight against Boko Haram. Iwuoha proposes a broad counterinsurgency information analysis model designed to develop investigative techniques capable of disentangling false information intricately embedded within factual narratives a critical skill for modern security institutions.

The intentional spread of false or misleading information to cause harm commonly referred to as disinformation poses unprecedented challenges in the digital age. As Demuynck and Brief (2025) note, the danger intensifies when such tactics are systematically deployed by violent extremist actors to disseminate hateful narratives, incite violence, and recruit followers. While both disinformation and violent extremism are widely recognized as critical threats, the intersection of these phenomena remains underexplored in both academic literature and policy discourse.

Onigbinde et al. (2022) add that the Nigerian social media space increasingly fosters digital echo chambers, where polarizing narratives gain reinforcement and hinder conflict resolution. These echo chambers weaken the collective social fabric necessary for resilient governance and counter-terrorism effectiveness. Taken together, the compounding effects of misinformation, state communication deficits, and the weaponization of disinformation by extremist actors create a formidable barrier to national security in fragile states like Nigeria.

Despite a growing corpus of scholarship on AI governance and a parallel body of work on misinformation, the convergence of these domains within the unique security architecture of fragile states such as Nigeria remains markedly underexplored. Current research tends to silo AI governance as a predominantly technical, regulatory, or ethical challenge, while relegating misinformation to the realm of media literacy, electoral integrity, or public communication. Such compartmentalization obscures the reality that in fragile security environments, the governance of AI systems and the proliferation of misinformation are not merely adjacent phenomena but mutually reinforcing dynamics that can reshape the trajectory of national security. Notably, there is a paucity of empirical and theoretical studies in the Nigerian context that deploy securitization theory to interrogate how AI-enabled technologies and information disorder interact to construct threats, influence public perception, and legitimise extraordinary state measures. Existing analyses rarely capture how these interactions embed within Nigeria's socio-political fault lines ethnic, religious, and regional divisions thus amplifying their destabilising potential.

This paper seeks to close this lacuna by applying securitization theory to the intertwined governance of AI and the strategic use and weaponisation of misinformation in Nigeria's national security discourse. In doing so, it advances an integrated analytical framework that situates technological governance within the broader communicative acts through which threats are socially constructed, contested, and institutionalised. This approach not only extends securitization theory to encompass emergent digital and algorithmic threats but also offers critical insights into the political economy of security governance in fragile states, illuminating both the risks and governance imperatives that arise at the nexus of AI and information disorder.

AI Governance in Nigeria's Fragile Security Terrain

Nigeria's governance ecosystem is deeply fragile characterized by endemic corruption, institutional fragmentation, and pervasive public mistrust. Scholars point to structural failures such as patronage networks, weak judicial oversight, and underfunded public services that have rendered anti-corruption institutions largely ineffective, despite courses established to address graft (Onyeji, 2003; Transparency International, 2023; Fatile, 2012). This entrenched dysfunction severely undermines public legitimacy and constrains the effective deployment of innovative security tools, including AI.

Layered onto this fragility is Nigeria's long-standing security crisis. Boko Haram and the Islamic State's West Africa Province (ISWAP) continue to pose potent threats in the northeast, while kidnapping, banditry, and communal violence plague the northwest and central regions. Institutional response remains uneven, intelligence coordination remains weak, and public trust in security actors is precarious forging an environment where technological solutions may be pursued more as salves than as sustainable strategies (Idris, 2012; Okoh, 2024). Amid these challenges, Nigeria has embraced AI-enhanced security tools with both ambition and caution. Machine learning and computer vision systems have been deployed for crime prediction and facial recognition in cities such as Lagos and Abuja, signaling the state's experimental engagement with digital surveillance. Meanwhile, predictive policing models are being piloted in efforts to forestall violent crime (Nsude, 2022). Yet infrastructural limitations, data fragmentation, and privacy uncertainties within the context of fragile institutional oversight expose AI implementations to bias, opacity, and accountability deficits.

Complicating this terrain is Nigeria's fraught digital environment. The explosive rise of social media now engaging over 80 million users has transformed public discourse but unleashed powerful disinformation vectors (FactCheckAfrica, 2024). During pivotal moments such as elections, digital platforms become conduits for misinformation, deepfakes, and algorithmic echo chambers that amplify polarization, undermine public trust, and distort security communication (Inobemhe et al., 2024; ODI, 2023). The uneven reach of digital access further deepens the divide: marginalized communities especially in rural areas remain underrepresented in digital literacy and access, tempering the potential benefits of technology in inclusive security governance (Commonwealth Roundtable, 2025; USPF).

On the policy front, the emergence of the 2019 Nigeria Data Protection Regulation (NDPR) marks progress in data privacy. Meanwhile, NITDA's early AI strategy consultations and rural ICT initiatives like the Digital States program show institutional interest. Yet regulatory frameworks specifically addressing AI governance lag behind, and the legal and enforcement mechanisms required to oversee surveillance and automated decision tools are still nascent (Awwal-Bolanta, 2024; NITDA, 2019). Interagency coordination remains weak security bodies including the DSS, NPF, and ONSA frequently operate in silos, weakening oversight and exacerbating trust attrition.

The confluence of deep-seated governance weaknesses, mounting security crises, nascent AI experiments, digital disinformation, and regulatory fragmentation all paint a complex picture. Nigeria stands poised at the intersection of opportunity and risk (Nsude, 2022). Without institutional reinforcement and democratic safeguards, AI and digital tools may become amplifiers not correctives of fragility. This grounded understanding paves the way for the empirical analysis to come, where we will trace how securitizing narratives around AI and misinformation shape national security policy and reveal the democratic vulnerabilities such framing perpetuates.

Methodology

This study adopts a qualitative research design, drawing primarily on secondary sources to explore the nexus between AI governance, misinformation, and counter-terrorism within Nigeria's fragile security landscape. Data is obtained from an extensive review of peer-reviewed journal articles, policy briefs, government reports, international agency publications, reputable news sources, and analytical commentaries that directly engage with Nigeria's security realities and the emerging role of artificial intelligence. By employing thematic analysis, the study identifies recurring patterns and underlying linkages between AI adoption, the spread of misinformation, and counter-terrorism efforts, situating these within the broader context of Nigeria's socio-political fragility. Sources are purposively selected based on their credibility, relevance, and depth of insight, ensuring a balanced representation of both local and global perspectives. The analytical approach is interpretive rather than merely descriptive, seeking to uncover how AI governance frameworks can be strategically deployed to strengthen national security, curb misinformation, and enhance counter-terrorism strategies without undermining democratic values or civil liberties. This methodology allows for a grounded, context-sensitive examination that is both academically rigorous and practically relevant to Nigeria's current security challenges.

Findings

Securitization of AI Governance in Nigeria's Fragile Security Terrain

In Nigeria's perpetual struggle with insurgency, communal violence, and state fragility, artificial intelligence has emerged not just as a technological promise but as a pillar of national security strategy. This section examines how AI is securitized transformed into a bulwark against instability and what that means in practice for governance, rights, and institutional resilience. Nigeria's formal embrace of AI began with its National Artificial Intelligence Strategy (NAIS) unveiled in August 2024 by the Federal Ministry of Communications, Innovation and Digital Economy. The strategy weaves together ambition of economic transformation, social inclusion, and national security, anchored in the values of transparency, ethical integrity, and human rights (Federal Ministry of Communications, 2024). NITDA's subsequent roll-out of the 3 Million Technical Talent (3MTT) programme (2023) sought to train a critical mass of Nigerians in AI, data science, and cybersecurity, underscoring the belief that technological resilience must be anchored in local capacity (NITDA, 2023).

Yet, articulating AI's national importance is one thing; enacting it is another. On the ground, AI deployment such as biometric systems and predictive policing tools is hindered by underdeveloped infrastructure, fragmented data systems, and weak inter-authority coordination (Okoh, 2024). Metrics confirm this: Nigeria ranks 106th out of 136 countries on the Network Readiness Index, trailing behind peers in Africa, signaling structural deficits in readiness for digital security innovation (Agora Policy Institute, 2024).

More troubling are reports of surveillance technologies deployed without appropriate oversight. In 2022, Human Rights Watch revealed that Nigeria's Defence Intelligence Agency acquired advanced mobile-targeting surveillance tools capable of covertly intercepting communications, raising serious concerns around unchecked executive power and civil liberties (Human Rights Watch, 2022). These developments underscore securitization logic: when AI is cast as vital to national survival, it often fast-tracks tools ahead of safeguards.

Woven through policy speeches, budget allocations, and strategic frameworks is a consistent narrative: AI is framed as a protector of the state, a response to existential threats. This framing becomes self-reinforcing; once technology is cast in this light, its expansion is deemed urgent and necessary—sometimes bypassing democratic governance norms. Securitization theory helps us understand this dynamic: AI in Nigeria is not merely a tool—it is a politically legitimized response, constructed through discourse, endowed with urgency, and difficult to contest. The securitization of AI in Nigeria's security architecture reflects both strategic ambition and implementation gaps. The state projects its AI investments as essential for security and stability, yet lacks the infrastructure, coordination, and legal scaffolding to ensure those tools serve democratic resilience rather than deepen systemic fragility. This duality hope and hazard is emblematic of fragile states wrestling with high-tech solutions to intractable problems.

Misinformation as a Securitized Threat in Nigeria's Counter-Terrorism Policy

In Nigeria, misinformation and disinformation have become central concerns within national security discourse, especially in counter-terrorism efforts. Defined as the spread of false information whether intentionally or unintentionally misinformation poses direct challenges to public trust and the legitimacy of state institutions. This erosion of trust, in turn, affects the state's capacity to mobilize effective community cooperation, which is vital for intelligence gathering and counter-terrorism success (Onuoha, 2014). Boko Haram and its splinter groups strategically exploit misinformation to amplify their insurgency. They disseminate false reports about military defeats, use doctored videos and images to project strength, and spread narratives aimed at demoralizing both the civilian population and security forces (Ogbondah & Agbese, 2017). This weaponization of information serves multiple purposes: it fosters fear, undermines government credibility, and aids recruitment by painting the state as weak and untrustworthy.

The Nigerian government, recognizing these challenges, has attempted various countermeasures. On the positive side, civil society organizations like Dubawa and fact-checking coalitions have partnered with government agencies to combat false narratives during elections and health crises (Adewale & Adebiyi, 2021). Moreover, official communication channels seek to correct misinformation swiftly through press briefings and social media outreach (Dada & Ekwealor, 2020).

However, the state's approach also reveals a securitized tendency toward information control. Iwuoha (2020) critically notes that official counter-terrorism communications often employ 'half-truths' and selectively release information to obscure military setbacks, a practice that risks alienating the public and fostering cynicism. Furthermore, Nigerian security agencies have acquired sophisticated surveillance and telecommunications interception technologies, which, while instrumental in tracking extremist networks, raise concerns about civil liberties and the potential abuse of power in the absence of robust oversight (Human Rights Watch, 2022).

This securitization of misinformation introduces a delicate balance between national security and democratic freedoms. Overzealous control of information may stifle press freedom and reduce transparency, undermining the legitimacy of counter-terrorism efforts (Dada & Ekwealor, 2020). The Nigerian experience reflects the paradox described by scholars like Taureck (2006), where securitization processes while aimed at addressing real threats may inadvertently exacerbate fragility by undermining trust and social cohesion.

Table 1: Misinformation Dynamics and Impacts in Nigeria's Counter-Terrorism Context

Dimension	Observed Patterns	Security Implications	Key Source
Violent Extremist Groups	Use of social media to spread false military casualty reports and propaganda	Erodes public trust, fuels recruitment, spreads fear	Ogbondah & Agbese (2017)
State Countermeasures	Fact-checking initiatives, public information campaigns, official briefings	Helps combat falsehoods but sometimes seen as censorship	Adewale & Adebiyi (2021); Dada & Ekwealor (2020)
Official Information Control	'Half-truths' and selective disclosure to manage public perception	Risks public distrust and diminished transparency	Iwuoha (2020)
Surveillance Technology	Deployment of telecommunications interception and monitoring tools	Raises human rights concerns; may chill civic reporting and engagement	Human Rights Watch (2022)
Public Perception	Growing skepticism toward both insurgents and government narratives	Weakens community cooperation essential for counter-terrorism	Onuoha (2014); Dada & Ekwealor (2020)

The securitization of misinformation in Nigeria's counter-terrorism landscape underscores the complex interplay between communication, technology, and power. While addressing misinformation is essential to security, the manner of its management must be carefully calibrated to avoid further erosion of democratic norms and public trust. This dynamic tension highlights the need for transparent governance frameworks that balance effective counter-terrorism with civil liberties a challenge common to fragile states confronting hybrid information threats.

Impact of AI-Driven Counter-Terrorism on Nigeria's National Security Architecture

Artificial intelligence (AI) has rapidly become a pivotal component of Nigeria's national security framework, especially within counter-terrorism efforts. The Nigerian government, facing persistent threats from Boko Haram, ISWAP (Islamic State West Africa Province), and other violent actors, has increasingly integrated AI-powered surveillance, data analytics, and predictive policing into its security operations. This infusion of technology promises enhanced threat detection and rapid response capabilities. However, the practical impacts of AI deployment reveal a complex and often contradictory reality shaped by governance challenges, societal dynamics, and digital misinformation environments.

Nigeria's institutional fragility – characterized by weak governance structures, endemic corruption, and a pervasive trust deficit between citizens and the state (Rotberg, 2014; Omede, 2020) – significantly affects the effectiveness and ethical application of AI in counter-terrorism. According to Omede (2020), the operationalization of AI in Nigerian security agencies is frequently hampered by inadequate regulatory frameworks and limited technical capacity, resulting in uneven application and oversight. This creates opportunities for surveillance overreach, where AI-powered tools extend beyond legitimate security needs to monitor and intimidate political opponents or marginalized communities, eroding democratic accountability (Human Rights Watch, 2022).

Empirical data further underscores the contradictions inherent in AI's deployment. A 2023 report by the Open Society Initiative for West Africa (OSIWA) highlights cases where AI-assisted surveillance was used to disproportionately target ethnic minorities in Northern Nigeria under the guise of counter-terrorism, exacerbating existing grievances and potentially fueling cycles of violence (OSIWA, 2023). This exemplifies how algorithmic bias – a well-documented phenomenon globally (Buolamwini & Gebru, 2018) – manifests in fragile state contexts with exacerbated consequences for social cohesion and human rights.

Moreover, the interaction between AI-driven surveillance and misinformation ecosystems complicates Nigeria's security landscape. AI tools are employed not only to track physical threats but also to monitor digital spaces where misinformation and extremist propaganda proliferate (Onuoha, 2014; Ogbondah & Agbese, 2017). While this dual function can strengthen counter-terrorism by disrupting recruitment and radicalization online, it also risks reinforcing state narratives that suppress dissent and limit free expression. The securitization of misinformation justifies intrusive surveillance practices, which can alienate the public and weaken the social contract essential for effective governance (Dada & Ekwealor, 2020; Iwuoha, 2020).

Such dynamics illustrate a paradox identified in recent scholarship: AI technologies intended to fortify national security can simultaneously exacerbate the very fragilities they aim to mitigate (Dafoe, 2018; Raji et al., 2020). The opacity of algorithmic decision-making processes limits public oversight and accountability, leading to potential abuses that undermine citizen trust. As Mutsvairo and Ronning (2020) argue, in many African contexts including Nigeria, AI governance remains nascent, and the absence of comprehensive legal frameworks leaves significant gaps in protecting rights and ensuring ethical AI use.

In practical terms, the Nigerian government's AI-driven counter-terrorism initiatives have yielded mixed results. On one hand, AI-enabled data analysis has enhanced operational intelligence, improving the interception of terrorist communications and identification of networks (Adeola, 2022). On the other hand, reports by Human Rights Watch (2022) document cases where excessive surveillance and lack of transparency have led to arbitrary detentions and violations of privacy rights. These outcomes not only challenge democratic principles but also potentially hinder cooperation between security forces and local communities, which is vital for sustainable peacebuilding.

Table 2:

Dimension	Positive Impacts	Challenges and Risks	Source
Security Intelligence	Improved threat detection and network analysis	Risk of targeting innocent civilians and ethnic profiling	Adeola (2022); OSIWA (2023)
Surveillance Practices	Enhanced monitoring of online misinformation and extremist content	Surveillance overreach and privacy infringements	Human Rights Watch (2022); Onuoha (2014)
Governance and Accountability	Potential for data -driven decision-making	Lack of transparency and oversight; weakened democratic accountability	Mutsvairo & Ronning (2020); Iwuoha (2020)
Public Trust and Social Cohesion	Increased operational efficiency	Alienation of communities and erosion of trust	Rotberg (2014); Dada & Ekwealor (2020)

Nigeria's experience with AI-driven counter-terrorism epitomizes the complex interplay between technological innovation and fragile state governance. While AI offers critical tools for enhancing security, its deployment within weak institutional contexts risks reinforcing existing societal fractures and undermining democratic accountability. Future efforts must emphasize robust legal frameworks, transparency, and inclusive governance to ensure that AI strengthens rather than destabilizes Nigeria's national security architecture.

Discussion

Reimagining National Security in Nigeria through the Lens of Securitization Theory

Securitization theory, as developed by Ole Wæver (1995) and further refined by scholars such as Buzan, Wæver, and de Wilde (1998), provides a powerful analytical framework for understanding how national security threats are socially constructed through "speech acts" and political practices that elevate issues to existential threats demanding extraordinary measures. In the Nigerian context, this theoretical lens unveils the complex processes through which AI governance and misinformation are framed, legitimized, and enacted within the fragile security environment. Our findings reveal that Nigeria's state actors have engaged in a securitizing move that frames both AI technologies and misinformation as critical existential threats to national stability. This framing functions to justify the rapid and often unregulated deployment of AI-driven surveillance and counter-terrorism measures. However, consistent with Taureck's (2006) critique, the securitization of AI and misinformation must be seen not merely through moralistic criticism but as an analytical tool illuminating how Nigeria's security landscape is being reshaped by technological and communicative practices.

The securitization of AI governance has enabled the Nigerian state to deploy algorithmic surveillance as a necessary response to violent extremism. Yet, as the empirical analysis showed, this securitizing move simultaneously produces unintended consequences surveillance overreach, algorithmic bias, and civic alienation—that exacerbate the country's institutional fragility rather than remedy it. The use of AI thus oscillates between the promise of enhanced security and the paradox of reinforcing distrust in state institutions, a central dilemma in fragile states (Rotberg, 2014). Similarly, misinformation as a securitized threat exemplifies how the Nigerian government's counter-terrorism strategy extends beyond physical security to encompass control over information flows.

The state's framing of misinformation as an existential security risk legitimizes intrusive digital monitoring and aggressive narrative control. While such actions align with securitization's core logic mobilizing extraordinary measures against perceived threats they risk undermining democratic norms by conflating legitimate dissent or criticism with security threats (Iwuoha, 2020; Dada & Ekwealor, 2020). Furthermore, the interplay of AI governance and misinformation securitization in Nigeria demonstrates the co-construction of security threats and technological solutions. This aligns with the concept of technopolitics, which frames security as inseparable from technological infrastructures and discourses (Aouragh & Chakravartty, 2016). The Nigerian state's securitization of AI and misinformation produces a political environment where technology is both a tool and an arena for power struggles, impacting the state-society relationship in fragile contexts.

Importantly, our analysis highlights the limitations of securitization theory when applied in fragile state contexts, where the boundaries between legitimate security concerns and political expediency blur. The absence of robust institutional checks amplifies the risks of securitizing speech acts being weaponized for authoritarian consolidation under the guise of counter-terrorism (Mutsvairo & Ronning, 2020). Thus, Nigeria's case underscores Taureck's (2006) argument that securitization should be understood pragmatically as a tool for analyzing political security strategies rather than as a normative indictment. Securitization theory helps unpack how Nigeria's national security architecture is being reimagined in the digital era where AI governance and misinformation are not just tools or phenomena but integral to how security threats are socially constructed and politically managed. This reimagining reveals a fragile balance between security imperatives and democratic accountability, with profound implications for governance, public trust, and human rights in Nigeria and similar fragile states.

Conclusion and Recommendations

This study has shown how new technologies and the spread of false information have become central to Nigeria's fragile national security challenges, reshaping how the country fights terrorism and manages security. While these tools offer fresh ways to address violent extremism, their use without strong laws and clear rules risks worsening existing problems weak institutions, mistrust among citizens, and the erosion of democratic values. There is a difficult balance to strike between protecting the country and safeguarding the rights and freedoms of its people. To move forward, Nigeria must build clear and fair rules that guide the use of technology in security work, ensuring openness and accountability. These rules should create space for public involvement and provide ways for people to hold authorities responsible when abuses occur. At the same time, fighting misinformation requires more than just blocking false messages; it needs active efforts to involve communities, improve understanding of information, and strengthen honest and trustworthy communication. This will help restore trust and stop violent groups from twisting stories to their advantage. Security measures must be regularly reviewed to avoid abuse and discrimination, with strong institutions watching over these efforts to protect the democratic principles Nigeria holds dear. Nigeria's experience highlights a bigger challenge many fragile countries face today: how to use new tools to keep people safe without losing the democratic freedoms that make lasting peace possible. This study adds to important conversations by showing that the future of national security depends on leadership that values transparency, ethical use of technology, and genuine participation from the people. Tackling these challenges is crucial not only for Nigeria but also for other countries struggling with the impact of misinformation and modern technology on security.

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ENSURING THE SAFETY OF WORKERS IN THE BUILDING INDUSTRY

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Abstract

Workers, safety is the process of protecting employees in the building industry from work related illness and injury. Safety could be physical, emotional or financial, but all is aimed at improving or protecting the well been of the employees. However, in most parts of Africa and Nigeria precisely these safety measures are not always taken into consideration hence resulting to injuries and sometimes death of workers. The research work is aimed at sensitizing the society on some personal protective equipment [PPE] which can act as a barrier between the worker and the potential danger, hence protecting their body from harm. At the end of this research work we would understand some safety measures necessary to protect our employees/ workers from injuries and even death hence improving the welfare of the workers and inhabitant of the community at large.

Keywords: *Safety, Physical, Financial, Protective equipment*

Introduction

Occupational Safety and Health (OSH), is commonly defined as the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupation. Personal Protective Equipment, commonly known as PPE, is special gear that construction workers wear to protect themselves from various hazards. PPE is really important because it helps keep workers safe and healthy while they do their jobs. In the Health, Safety, and Environment (HSE) domain, using PPE is a key part of making sure that everyone goes home safe at the end of the day. Let's dive into why PPE is so crucial, the different types of PPE, and how it helps in keeping construction workers safe.

Objective of the Study

The research work is aimed at sensitizing the society on some personal protective equipment [PPE] which can act as a barrier between the worker and the potential danger, hence protecting their body from harm.

Basic principles of worker's safety

Despite this variety of concerns and interests, certain basic principles can be identified, including the following:

All workers have rights. Workers, as well as employers and governments, must ensure that these rights are protected and must strive to establish and maintain decent working conditions and a decent working environment. More specifically;

i. Work should take place in a safe and healthy working environment;
ii. Conditions of work should be consistent with workers' well-being and human dignity
iii. Work should offer real possibilities for personal achievement, self fulfilment and service to society (ILO, 1984).

Occupational safety and health policies must be established. Such policies must be implemented at both the national (governmental) and enterprise levels. They must be effectively communicated to all parties concerned. A national system for occupational safety and health must be established. Such a system must include all the mechanisms and elements necessary to build and maintain a preventive safety and health culture. The national system must be maintained, progressively developed and periodically reviewed.

A national program on occupational safety and health must be formulated. Once formulated, it must be implemented, monitored, evaluated and periodically reviewed. Social partners (that is, employers and workers) and another stakeholder's must be consulted. This should be done during formulation, implementation and review of all policies, systems and programs.

Continuous improvement of occupational safety and health must be promoted. This is necessary to ensure that national laws, regulations and technical standards to prevent occupational injuries, diseases and deaths are adapted periodically to social, technical and scientific progress and other changes in the world of work. It is best done by the development and implementation of a national policy, national system and national program.

Policies must be enforced: A system of inspection must be in place to secure compliance with occupational safety and health measures and other labour legislation.

The role of government authority or authorities in ensuring the safety of workers includes:

i. Review from time to time the OSH legislation and any other related provisions issued or approved, e.g. regulations or codes of practice, in the light of experience and advances in science and technology
ii. Issue or approve regulations, codes of practice or other suitable provisions on occupational safety and health, taking account of the links existing between safety and health on the one hand, and hours of work and rest breaks, on the other
iii. Undertake or promote studies and research to identify hazards and find means of overcoming them
iv. Provide specific measures to prevent catastrophes, ensuring that action is coordinated and coherent at all levels, with particular attention to areas of potentially high risk for workers and the population at large
v. Provide information and advice, in an appropriate manner, to employers and workers, and promote or facilitate cooperation between them and their organizations, with a view to eliminating hazards or reducing them as far as practicable
vi. Ensure that national laws and regulations, and other approved provisions (for example, guidelines developed by national organizations), are clear, consistent and comprehensive, and reflect national conditions
vii. Verify that national legislation takes into account the applicable provisions of international labour standards.
viii. Ensure that hazards are avoided or controlled when operations begin, or when major alterations or changes are made
ix. Verify the safety of technical equipment used at work
x. See to it that the procedures defined by the competent authority are enforced
xi. Identify work processes, substances and agents which are to be prohibited, limited or made subject to authorization or control, taking into consideration the possibility of simultaneous exposure to several substances or agents
xii. Establish and apply procedures for the notification of occupational accidents and diseases by employers and, when appropriate, insurance institutions and others directly concerned, and produce annual statistics on occupational accidents and diseases
xiii. Hold inquiries in cases of accidents, diseases or any other injuries which arise in the course of or in connection with work and appear to reflect a serious situation
xiv. Publish information on measures taken in pursuance of the national OSH policy, and on accidents, diseases and injuries which arise in the course of or in connection with work;

Personal Protective Equipment (PPE)

The construction industry has extremely high numbers of accidents reported each year, a lot of these could be minimized with the use of correct PPE. Personal Protective Equipment (PPE) refers to all equipment (e.g. devices, appliances and associated accessories) that is worn by an individual, in order to provide protection against one or more health or safety risks, whilst at work.

The definition includes:

i. Any equipment that is either worn or held by the individual (e.g. a fall protection rope may be held, whilst a harness is worn).
ii. A number of devices or appliances, that have been combined by the manufacturer, in order to protect an individual against one or more potential risks occurring at the same time (e.g. an air-fed respirator could have an in-built visor, protecting the eyes against flying objects).
iii. A protective device or appliance, which has the option to be combined with personal non-protective equipment, that is worn or held by an individual, to carry out a specific activity (e.g. a high visibility waistcoat can be worn over ordinary work clothes, when required, such as when operating in a designated forklift handling area).
iv. Interchangeable components which are essential for a protective device or appliance to properly function, and which is specifically designed for that equipment (e.g. branded filters fitted to half-mark respirator).

According to the HSE around 9,000 PPE-related accidents are reported each year.

The reasons behind PPE

It is important that these areas of the body are protected. Personal protective equipment (PPE) provides protection from health risks, which can enter the body, via these routes of exposure.

i. The skin (e.g. contact with corrosive chemicals)
ii. The respiratory system, such as the lungs (e.g. inhalation of hazardous dust)
iii. The eyes (e.g. irritating substances).

The respiratory system and eyes are particularly sensitive areas, and serious damage can be caused, particularly when exposed to very hazardous substances e.g.

I. If the skin comes into contact with a sensitizer, then the effect could be long-term and re-occurring (dermatitis).
ii. If a corrosive substance came into contact with the eyes, then an individual could become permanently blind.
iii. If silica dust is inhales regularly, then an individual could get lung cancer, and the result could be fatal.

All of these incidents would not only influence any work that the individual may be able to carry out, but it would have a major negative effect on other aspects of their life.

Protection against Health and Safety Risks
Personal protective equipment (PPE) protects individual persons, from risks, which they are exposed to. Persons include;

i. Employees, agency workers, trainees and work experience personnel
ii. Self-employed persons
iii. Non-employees, such as visitors and contractors.

It provides protection from health risks, which can enter the body, via various routes of exposure –

i. The skin (e.g. contact with corrosive chemicals)
ii. The eyes (e.g. irritating substances)
iii. The respiratory system, such as the lungs (e.g. inhalation of hazardous dust)
iv. The hearing canal (e.g. loud noises could cause damage)
v. The whole body (e.g. could suffer if exposed to extremes of temperature).

It provides protection, from safety risks coming into contact with the body, and causing a physical injury, e.g.

i. Cuts, abrasions and punctures through the skin.
ii. Flying particles entering the eyes.
iii. Physical impact or puncture damaging internal organs.
iv. Falling objects crushing lower limbs.

Although it is seen as a last resort (i.e. to be implemented after other controls), PPE is often necessary in order to reduce the (low and high) risks to health and safety, and it may form a vital part of a health and safety system in the workplace.

Requirements of PPE in construction
In order for equipment to fall within the definition of personal protective equipment (PPE), it must satisfy certain requirements.

The device, appliance or accessory must be worn or held, for the purpose or work, e.g.

i. Vehicle helmets (normally covered under other legislation), must be worn, if a vehicle is being operated, for the purpose of work (e.g. farm workers riding motorcycles or All-Terrain Vehicles (ATVs) should wear crash helmets).
ii. Sports equipment (not necessarily worn in other circumstances), must be worn, if for the purposes of work (e.g. life jackets must be worn by professional canoeing instructors, riding helmets must be worn by stable staff, and climbing helmets must be worn by steeplejacks who climb and repair chimneys and steeples).

It also includes;

i. PPE, which protect against the risk of physical violence (e.g. helmets or body amour).
ii. Uniforms or clothing, which protects against a specific risk to health and safety (e.g. high visibility clothing worn by the emergency services).

iii. Weatherproof or insulated clothing, which is necessary to protect employees against risks to their health or safety (e.g. rain, cold).

What are the different types of PPE in construction?
There are various types of personal protective equipment (PPE), each designed to protect a particular part of the body, against a particular hazard.
Risk assessment should be used to identify the hazards, and determine the different types of PPE that may be required.

The following type of PPE for construction is available –
i. Skin protection (e.g. protective clothing)
ii. Respiratory protective equipment (RPE)
iii. Eye protection (e.g. goggles)
iv. Head protection (e.g. safety helmets)
v. Ear protection (e.g. earplugs)
vi. Foot protection (e.g. steel toecap boots)
vii. Hand and arm protection (e.g. gloves)
viii. Body protection (e.g. high-visibility clothing)
ix. Fall protection (e.g. safety harnesses).

We will cover in detail the different types of PPE. If the risk assessment has deemed the risk to be insignificant, then PPE is not necessary. If there is no significant risk to be managed, then wearing PPE may be inappropriate (e.g. for the individual, or task being carried out), increasing the overall risk to those involved.

Respiratory protection
The respiratory system consists of internal areas, such as the; Inside of the mouth, throat, esophagus and lungs. Respiratory protective equipment (RPE) may be required to protect the respiratory system against these hazards –
i. Inhalation of dusts (e.g. nuisance and hazardous dust).
ii. Inhalation of gases.
iii. Inhalation of vapours and mists.
It is important to protect the respiratory system, because the lungs are a major organ, required to sustain life.

RPE may also be necessary to protect the user against oxygen-deficient atmospheres. In this case, the result would definitely be fatal, of a user was not wearing the correct type of RPE (i.e. breathing apparatus). It is important to protect the respiratory system, because the lungs are a major organ, required to sustain life.

RPE may also be necessary to protect the user against oxygen-deficient atmospheres. In this case, the result would definitely be fatal, of a user was not wearing the correct type of RPE (i.e. breathing apparatus) –
i. A risk assessment would determine if an atmosphere is potentially oxygen-deficient.

ii. Testing would confirm any suspicions.
iii. The atmosphere may be permanently, or temporarily oxygen-deficient.
iv. Emergency procedures and rescue equipment would be required.
v. Rescue personnel would also need suitable RPE.

Types of respiratory protection
They consist of either a
i. Thin metal plate, which holds a gauze over the nose and mouth (normally attached to a single head strap).
ii. Lightweight filter (similar to a disposable dust respirator).

The latter could be easily mistaken for a protective respirator. Therefore, the specification must be checked, if RPE is being purchased in this way.

Eye protection
Eye protection may be required to protect the eyes against certain hazards.

Hazards to eye safety and health include –
i. Projectiles such as; flying or ejected particles, chippings, debris, material or objects (e.g. due to working with machinery, hand tools or abrasive materials).
ii. Dust, gas, vapour or liquid mist entering eyes (e.g. from machines, high-pressure cleaning, or using substances under pressure).
iii. Dangerous substances (e.g. liquid or chemical splashes) entering eyes, as a result of handling them.
iv. Heat or hot materials entering or damaging eyes (e.g. radiant heat, molten metal, hot solids, sparks or hot liquid splash from working in hot conditions), due to hot work (e.g. welding), or working near hot environments (e.g. ovens, furnaces).
v. Radiation (e.g. intense light or other optical radiation emitted at levels that could cause an injury, e.g. arc welding, lasers), damaging eyes.

It is important to protect the eyes because they are required to function in all aspects of life.

Types of eye protection
This involves
i. Ensuring that the eye or face protection fits the user (e.g. if it is too big, it could fall off).
ii. Consider the risk of eyewear steaming up, and where necessary, use; ventilated eye protection, or anti-mist or de-fogging sprays.
iii. Keep eyewear clean and protect from scratches, which could reduce visibility.
iv. Use antistatic fluids where required.
v. Replace when required (e.g. following damage that can affect the fit or visibility).
vi. It is vital that eyewear protects against the hazards (e.g. the correct level of protection against; impact, dust or liquid splashes).

Foot protection

Footwear may be required to protect the feet and lower limbs against certain hazards

Physical hazards to lower limbs include

i. Falling objects could crush the feet and toes (e.g. when handling heavy loads, either by hand, or equipment).
ii. Impact, causing cuts and abrasions.
iii. Punctures (e.g. standing on pointed or sharp objects on the ground, which pierce the shoe, causing cuts and wounds to the sole of the foot).

Types of foot protection

Safety boots or shoes

i. These are the most common type of safety footwear.
ii. They may be secured by laces, or by other means (e.g. Velcro straps, or simply elasticated) if the laces could pose a risk.

Wellington boots

These are suitable for working in wet conditions. Wellington boots are usually made of rubber. They are useful in jobs where the footwear needs to be - Washed to reduce risks (e.g. boots worn in quarries need to be washed, to avoid the dirt from becoming dry, and spreading silica dust around internal areas). Disinfected for hygiene reasons (e.g. in the food industry and the chemical industry).

Most safety shoes and boots (waterproof and not) normally have protective toecaps, and may also have other safety features built-in, including, such as

i. Slip-resistant soles.
ii. Penetration-resistant midsoles.
iii. Insulation against extremes of heat and cold.
iv. Metatarsal protection built-in (metatarsal shields covers can be attached to this footwear afterwards, but they are not as effective).

Clogs and specialist footwear

There are two less common types of foot protection, which are suitable for certain applications.

Clogs

i. These can also be used as safety footwear.
ii. They are commonly used in kitchen environments, for gardening, and in medical surgeries.
iii. They are traditionally made from beech wood and can be fitted with steel toecaps and thin rubber soles for quieter tread. However, more lightweight materials are now available.

Specialist footwear

i. This is footwear, which has been designed to protect against the hazards associated with specific tasks.
ii. These protect against hazards such as; boots for working in foundries, and boots for chainsaw use).

Other accessories include

i. **Gaiters** – Which protect the shins.
ii. **Spats** – Which cover the ankle.
iii. **Leggings**.

Hand and arm: Hand and arm protection are required to protect against certain hazards.

Physical hazards include

i. Cuts and abrasions, from handling sharp objects.
ii. Impact injuries.
iii. Punctures, from handling pointed objects.
iv. Cold environments, due to working in cold workplace, or outside in cold weather (e.g. on a building site). Hands must be kept warm, in order to maintain manual dexterity.
v. Hand arm vibration (e.g. when operating pneumatic hand tools). Hands must be kept warm, in order to reduce the risk of vibration white finger, as this can occur more often and more severely when the hands and fingers are cold.
vi. Electrical hazards.
vii. Contact with dangerous chemicals or substances, due to handling them.
viii. Radioactive materials, due to handling them.
ix. Contact extreme temperatures (e.g. due to handling hot or cold materials).
x. Skin infection and disease, due to contamination or biological agents.
xi. Prolonged immersion in water.

Main types of hand and arm protection

It is important to protect the hands and arms, because users are likely to rely on them to carry out their work, as we as in other aspects of their life.

There are four main types of hand and arm protection –

i. **Gloves** – These protect the hands only.
ii. **Gloves with a cuff** – These protect the hands and the wrists.
iii. **Gauntlets, sleeves and long gloves** – These are longer, and provide protection for the hands, wrists and part of forearms.
iv. **Sleeves and arm protection** – These provide protection for either part of the arms, or the whole of forearms and/or upper arm.

Other types of protection for the upper limbs include: Mittens, Armlets, Wrist-cuffs
Body protection: There are three classes of high visibility clothing –

i. **Class 1** – This is the least conspicuous (e.g. waistcoats and most trousers), and therefore provides the lowest level of protection.
ii. **Class 2** – This is more conspicuous than class 1 (e.g. waistcoats, jackets and some trousers).
iii. **Class 3** – This is the most conspicuous (e.g. jackets and coveralls), and therefore provides the highest level of protection.

For high visibility clothing to be effective –

i. The class of high visibility clothing must be suitable for the task, and the level of risk.
ii. The bright coloured, and the reflective parts must be kept clean, in order to remain clearly visible at all times.
iii. Choosing dual-purpose clothing is beneficial because it protects against other hazards present (e.g. cold weather), since many types of clothing are also available with a high visibility option.
iv. Suitable cleaning materials must be used, to avoid damaging the reflective part.

Personal protection systems
The two types of personal protection systems are –
Rescue systems –

i. This allows a person to rescue either themselves or others, by pulling, lifting or lowering.

Fall arrest systems –

i. These allow a fall to be arrested, preventing the user from colliding with the ground or structure.
ii. The system absorbs the energy of a fall, whilst minimizing the forces exerted on the human body, to a maximum of than 6 kilonewtons (kN).
iii. Examples of Fall arrest systems include; energy absorbing lanyards and inertia reel devices secured to an anchor point directly above the user, or lead climbing using dynamic rope.

Selection and safe use

When selecting equipment, the following elements must be considered, in order to ensure that it is suitable –

i. The maximum descent height and load required.
ii. A sufficient number of suitably located anchor point, which are safe and secure.
iii. A sufficient number of ropes and lanyards, of suitable length and type.
iv. Ascender/descender devices with suitable specifications.
v. A system for recovery after a fall.

Safe use: It is vital that the individual is suitably trained and instructed. If they are not, then a fatal or very serious accident could occur.

Safe equipment: For fall protection and personal protection systems must be safe, in order to be effective.

Equipment used for lifting or lowering people must be safe.

I. This is legal requirement under Regulation 5 of the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

The equipment must be inspected at regular intervals.

i. This is legal requirement under Regulation 9 of the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).
ii. If it is exposed to conditions which could cause it to deteriorate, with the potential to result in a dangerous situation (i.e. is utilized), then it must be examined every six months, by a competent person.
iii. Special care should be taken when inspecting components made from webbing and rope because these materials deteriorate.

Emergency Preparedness Related to Personal Protective Equipment (PPE) for Construction Workers: Being prepared for emergencies is critical on a construction site. Here are some steps to ensure readiness:

i. Emergency drills: Conduct regular drills to practice evacuation and response procedures.
ii. First aid training: Ensure workers are trained in basic first aid and know how to use emergency equipment.
iii. Emergency kits: Keep well-stocked first aid kits and PPE readily available.

Conclusion

In conclusion, Personal Protective Equipment (PPE) is vital for construction workers to maintain their health and safety on the job. By understanding the importance of PPE, recognizing potential hazards, and following safety precautions, construction workers can significantly reduce the risk of injuries and accidents. Adhering to regulations and standards, using the right tools and equipment, and receiving proper training and education are all essential components of effective PPE usage. Additionally, being prepared for emergencies ensures that workers can respond quickly and efficiently when accidents occur. By prioritizing PPE, construction workers can create a safer and healthier work environment for all.

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GLOBAL PERSPECTIVES ON ENTREPRENEURSHIP EDUCATION AND ITS IMPACT ON BUSINESS SKILLS: EVIDENCE FROM COVENANT UNIVERSITY, NIGERIA

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Abstract

In the context of increasing globalization and evolving market demands, entrepreneurship education has emerged as a critical driver for equipping students with essential business development skills. This study investigates how entrepreneurship education influences the acquisition of business skills, specifically financial and marketing, among students in Nigerian tertiary institutions using Covenant University as a case study. The purpose of the research is to evaluate the impact of curriculum content and teaching methods on students' entrepreneurial capabilities. The study adopted a theoretical approach supported by the Resource-Based View Theory, and as such is grounded in extensive conceptual and empirical literature. Through a critical review of existing educational practices, the research identifies significant gaps between academic instruction and real-world business application, particularly the limited use of experiential learning, outdated curricula, and insufficient industry exposure among faculty. The findings reveal that entrepreneurship education in Nigeria, when properly structured and delivered, can significantly enhance business development skills and better prepare students for global economic participation. The study concludes by recommending curriculum reforms, interactive teaching methodologies, and strategic resource investment as essential measures to improve the quality and relevance of entrepreneurship education in emerging economies like Nigeria.

Keywords: *Curriculum Content, Entrepreneurship Education, Globalization, Faculty expertise, Resource Availability, Teaching Methods*

Introduction

In recent years, numerous scholars have asserted that entrepreneurship promotes economic progress. A multitude of politicians and scholars have concentrated on entrepreneurial education and training, leading to a variety of educational programs and empirical studies (Galvão, Marques, Ferreira, & Braga, 2020). Nevertheless, numerous researchers have concentrated primarily on the implementation or methodology of entrepreneurial education and training programs, rather than on the engagement of local stakeholders and the contributions these groups might make to program success. In emerging economies such as Nigeria, where young unemployment is a major issue, entrepreneurial education has been recognized as a means to provide students with the necessary skills and mind-set to generate employment and maintain enterprises (Achounye & Diseph, 2020).

Entrepreneurship education is a form of teaching that involves imbibing skills and tools in students necessary for entrepreneurial success. This form of education extends standard classroom teaching by incorporating practical, experience learning methodologies such as internships, mentorship programs, business simulations, and start up incubation (Adel, Mahrous, & Hammad, 2020). The ultimate objective is to produce graduates who are not just employable but also capable of becoming entrepreneurs and catalysts for economic progress. According to Bell and Bell (2020) entrepreneurship educators can establish connections to practical applications that seem beneficial to learners, hence nurturing skill acquisition and entrepreneurial development. Additionally, there is increased advocacy for experiential learning activities within group or network contexts. But even if entrepreneurship education is increasing swiftly, robust theoretical and methodological underpinnings are still necessary to help instructors in taking a more constructivist view on the topic (Moses et al., 2015).

Business development skills encompass a spectrum of talents such as opportunity spotting, market analysis, financial planning, strategic networking, and the capacity to adapt to changing market dynamics. For any business to survive in the long run, it must have personnel and management staff which possess proper business development skills such as marketing skills, financial skills, operational skills and leadership skills (Muktar, Bashari, Ailemen, & Olubiyi, 2025). The skills necessary for an entrepreneur may be taught, schooled, and nurtured. Such traits are crucial as entrepreneurship is for a unique individual with the aptitude to take advantage of chances and the tenacity to face risks.

Curriculum content at tertiary institutions significantly affects what students learn and retain, therefore affecting their academic performance and future paths of employment. Among these establishments, the university is usually acknowledged as a hub of advanced learning and a wealth of in-depth information source (Schultz, 2021). It is one of the key knowledge citadels, where students get specialised education, participate in intellectual exploration, and acquire critical thinking skills (Cui, 2021). A university's fundamental objective extends beyond teaching; it is to stimulate intellectual curiosity, produce, preserve, and transmit specialised knowledge, sophisticated competence, and a high degree of cultural and ethical conduct.

The way in which information is transmitted is often as crucial as the issue itself. This idea is particularly true in education, since lecturers' teaching techniques have a substantial effect on whether students learn crucial abilities, such as marketing knowledge (Khalil & Semono-Eke, 2020). Unfortunately, many colleges' teaching approaches employ a linear, one-size-fits-all approach. While this strategy may be adequate for certain disciplines, it falls short of generating the diversified and practical competences essential for organizations such as marketing (Bauman & Lucy, 2019). Role-playing, business simulations, and case studies are examples of interactive teaching approaches that assist students to build and enhance their marketing talents. These tactics inspire active engagement, critical thinking, and problem-solving ability, all of which are key components of a great marketing skill set.

2.0 Literature review

2.1 Curriculum Content

The specific information, skills, and attitudes that are taught within a certain curriculum are referred to as curricular content. It outlines the materials that students should learn in each academic subject and is frequently broken up into sections or modules. These resources dictate how the instructional and educational activities are conducted (Iwu et al., 2019). In some research, the phrase "entrepreneurship curriculum" is frequently used to discuss curriculum content in connection with entrepreneurship and alludes to the idea of curriculum material that reflects the teachings or pedagogical approaches used to integrate entrepreneurship into the classroom to improve students' capabilities, mind-sets, skills, and understanding (Cui, 2021). The nature of the teaching methods particular to a topic, course materials, content, and methods of assessment and criticism that schools use to help students develop their entrepreneurial skills, behaviours, attitudes, and abilities is what Iqbal, Asghar, Asghar, and Waqar (2022) in their study defines as entrepreneurial curriculum. It refers to the variety of theoretical and practical subjects covered as well as the materials needed to offer a particular curriculum that supports students' growth in entrepreneurial abilities.

2.2 Teaching Method

These are the strategies and processes utilized by professors to deliver their course information to pupils. There are several alternative approaches that may be employed ranging from normal lectures to more interactive strategies including group projects, debates, and work (Balan & Metcalfe, 2012). The topic material, the learning goals, and the requirements of the students frequently impact the teaching method selection. According to Khalil and Semono-Eke (2020) numerous teaching strategies exist for educators to employ to convey information to pupils. These include the Grammar Translation Method (GTM) which translates passages into and out of a mother tongue using the literature and linguistics of a target language. It is a teacher-centred method where the instructor is the authority in the classroom. GTM focuses primarily on reading and writing skills, and it does not encourage communication or improve verbal skills in the target language, Audio-Lingual Method (ALM), Communicative Language Teaching (CLT) which involves learning through communicative experience in real life for academic needs or social interaction (Irkinovich and Izatullaevna, 2022).

2.3 Financial Skills

The concept of financial skills is displayed and evidenced by an individual with financial literacy. The skills displayed in a business pertaining to financial decision-making stems from a major aspect of financial literacy. Financial literacy as defined by Muñoz-Murillo, Álvarez-Franco, and Restrepo-Tobón (2019) as a financial commitment in human capital, and the time and money needed to acquire more financial knowledge comes at a cost. Without a proper knowledge about the essential financial concepts, business owners and managers would not be adequately prepared to make choices related to financial management. Financial skills are the ability to lower risk and the chance of encountering financial troubles when making financial decisions. Financial troubles can result from an absence of fundamental financial understanding when setting budgets and from a failure to comprehend credit, investments, and other financial goods (Dewi, Febrian, Effendi, & Anwar, 2020). Financial skills matter on many levels both globally, domestically, industry wise and even individually as money is a general although unique commodity, proper management of funds is essential for any party as the possible advantages of having financial literacy are manifold.

2.4 Marketing Skills

Marketing skills refer to the ability to sell products or services to a consumer. This includes identifying target markets, formulating effective marketing plans, and analysing market trends. It includes the abilities required for planning, segmentation, and targeting three crucial marketing procedures in businesses. Businesses that have strong marketing abilities are better able to draw in and retain customers. Khan and Khan (2021) in their study point out that marketing responsiveness which refers to the as well as marketing capabilities are strong evidence of proper marketing skills. According to their hypothesis, marketing expertise aids in providing customers with items that are valued more highly than competing goods. Marketing skills useful for developing a business as an entrepreneur or business owner are taught as entrepreneurial marketing education. Entrepreneurial marketing is a form of marketing which relates to profitably satisfying client demands. It consists of the quest for a product market in the future and market creation (Gilmore, McAuley, Miles, & Pattinson, 2018). The proactive, permissible risk-taking, and creative process of creating value that is jointly developed for stakeholders and customers is known as entrepreneurial marketing. The marketing skills relating to entrepreneurship are not just the traditional marketing skills as used and practised in larger organisations, but rather refer to entrepreneurial marketing in relation to small and medium enterprises. As explained by Amjad, Rani, and Sa'atar (2020) in their research found that, large organizations with substantial financial resources are the primary users of traditional marketing, which takes a top-down approach. This means that formal market research is conducted first, followed by target market segmentation and selection, and then the product or service is positioned using communication tools. In contrast, entrepreneurial marketing takes a bottom-up strategy, meaning that entrepreneurs first identify their target market or sector, then use personal relationships to learn about their wants and desires before providing the best possible service.

3.0 Methodology

3.1 Research Design

The descriptive research design was relevant to this study as it was used to identify characteristics, frequencies, and trends in data, and it also makes allowances for the use of different survey research instruments. It is to answer the "what," "when," and "why" questions of the research problem. The quantitative method of research survey was used in this study because it allowed for the utilisation of different forms of data to provide an understanding of the issues at hand.

3.2 Population and Sample Size Determination

The population of the research was based on the students in Covenant University who are taught Entrepreneurship and Development Studies (EDS). The institution offers theoretical and practical studies on entrepreneurship and development studies. The population sample contained individuals from 100 level to 500 level, with a population of six thousand four hundred and ninety-six students.

This study employed the simple random sampling techniques as its methodology. This approach was utilised because it enabled the focus of data collection from a large group, given the size of the university. The study made use of the Yamane formula to determine the sample size which gave a result of 377 students as shown below.

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

Where: n = Sample size

N = Population

e = accepted error tolerance 0.05 (5%) with confidence level of 0.95 (95%)

N = 6496

$$n = \frac{6496}{\sum[1+6406(0.05^2)]}$$

$$n = \frac{6496}{1+6496(0.0025)}$$

$$n = 377$$

3.3 Research Instrument

A questionnaire was used as the research tool to collect data for the research, and the data used on the research was collected using a closed-ended questionnaire. The research questionnaire was organized into two sections: Section A and Section B. Section A contains the respondents' bio-data, while section B contains questions with an independent variable (Entrepreneurial Education) and a dependent variable (Business development skills). Six Likert-scale items were utilized in the study, ranging from strongly agree to strongly disagree (Strongly Agree-6, agree-5, Partially Agree-4, Partially Disagree-3, Disagree-2, Strongly Disagree-1).

3.4 Method of Data Analysis

This section of the study, explains the method that was used to analyse the data collected from the population through questionnaires. Data gotten from the questionnaire was organised, coded and analysed using the statistical package for social science (SPSS). Hypothesis testing was carried out using regression analysis to examine the effect between the independent variable and the dependent variable. The data analysis process was conducted using IBM SPSS version 26 software.

4.0 Results

4.1 Hypothesis one

H_{01} = Curriculum content has no significant influence on the development of financial skills in students in tertiary institutions

This hypothesis consists of one independent variable (Curriculum Content) and one dependent variable (Financial Skills) The data analysis gave us useful information at both the organizational and model levels. The linear regression analysis was used to see how well the curriculum content could predict financial skills. The resulting R^2 value revealed that a considerable percentage of the variance in financial skills may be explained by changes in curriculum content. The regression coefficients were statistically significant, and the t-statistic values showed how strong this association was. Also, effect size (f^2) estimates showed that curriculum content is a useful predictor variable by displaying a moderate to high influence based on Cohen's (1988) guidelines.

These findings support the relevance of adequate curriculum content in fostering financial skills in the students, giving them the necessary skills needed to develop a business that would last into the foreseeable future.

Regression Analysis

Table 4.1.1 Model Summary – Curriculum Content and Financial Skills

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	0.678[a]	.460	0.423	0.26346	0.423	10.884	1

Model Summary - Continued		
Model	Change Statistics	
	df2	Sig. F Change
1	375	.001

a. Predictors: (Constant), Curriculum Content

Table 4.1.2 ANOVA Table – Curriculum Content and Financial Skills

ANOVA [a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.755	1	.755	10.884	.001[b]
	Residual	16.029	375	.069		
	Total	26.785	376			

a. Dependent Variable: Financial Skills
b. Predictors: (Constant), Curriculum Content

Table 4.1.3 Coefficient table – Curriculum Content and Financial Skills

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.799	.238		20.165	.000
	Curriculum Content	.377	.0563	.678	6.299	.001

Coefficients[a]			
Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	4.331	5.267
	Curriculum Content	0.287	0.415

a. Dependent Variable: Financial Skills

The regression analysis output suggests that Curriculum Content is a statistically significant predictor of Financial Skills, but the effect is small. The model summary shows a correlation coefficient (R) of 0.678 and a R Square of 0.460, implying that only 46% of the variance in Financial Skills is explained by Curriculum Content. The ANOVA table verifies the model's statistical significance, with a F value of 10.884 and a p-value of 0.001, indicating that the link seen is unlikely to be attributable to chance. The coefficients table demonstrates a positive relationship: the unstandardized coefficient for Curriculum Content is 0.377 ($p = 0.001$), meaning that when Curriculum Content increases by one-unit, Operation Skills increases by 0.377 units. The 95% confidence interval for this coefficient is above zero (ranging from 0.287 to 0.415), indicating the importance of the positive correlation. This relationship is of statistical significance and its practical impact is moderate, with Curriculum Content accounting for a moderate portion of the variance in Financial skills amongst other factors. Since the significance threshold is less than 0.05. As a result, the null hypothesis must be rejected.

4.2.2 Hypothesis two

H_{02} = Teaching methods have no significant effect on the marketing skills of students in tertiary institutions.

This hypothesis consists of one independent variable (Teaching Methods) and one dependent variable (Marketing Skills) The data analysis gave us useful information at both the organizational and model levels. The linear regression analysis was used to see how well the teaching methods could predict financial skills. The resulting R^2 value revealed that a considerable percentage of the variance in marketing skills may be explained by changes in teaching methods. The regression coefficients were statistically significant, and the t-statistic values showed how strong this association was. Also, effect size (f^2) estimates showed that teaching methods used by lecturers is a useful predictor variable by displaying a moderate to high influence based on Cohen's (1988) guidelines. These findings support the relevance of adequate teaching methods in fostering marketing skills in the students, giving them the necessary skills needed to develop a business that would last into the foreseeable future.

Regression Analysis

Table 4.2.1 Model Summary – Teaching Methods and Marketing Skills

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.263ᵃ	.069	.067	.36095	.069	27.805	1

Model Summary - Continued		
Model	Change Statistics	
	df2	Sig. F Change
1	375	.000

a. Predictors: (Constant), Teaching Method

Table 4.2.2 ANOVA Table – Teaching Methods and Marketing Skills

ANOVA [a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.623	1	3.623	27.805	.000[b]
	Residual	48.857	375	.130		
	Total	52.480	376			

a. Dependent Variable: Marketing Skills
b. Predictors: (Constant), Teaching Method

Table 4.2.3 Coefficient table – Teaching Methods and Marketing Skills

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.156	.269		15.471	.000
	Teaching Method	.257	.049	.263	4.273	.000

Coefficients[a] - Continued			
Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	3.627	4.684
	Teaching Method	.161	.353

a. Dependent Variable: Marketing Skills

The regression analysis output suggests that Teaching Method is a statistically significant predictor of Marketing Skills, but the effect is small. The model summary shows a correlation coefficient (R) of 0.263 and a R Square of 0.069, implying that only 6.9% of the variance in Marketing Skills is explained by Teaching Methods. The ANOVA table verifies the model's statistical significance, with a F value of 27.805 and a p-value of 0.000, indicating that the link seen is unlikely to be attributable to chance. The coefficients table demonstrates a positive relationship: the unstandardized coefficient for Teaching Methods is 0.257 (p = 0.000), meaning that when Teaching Methods increases by one-unit, Marketing Skills increases by 0.257 units. The 95% confidence interval for this coefficient is above zero (ranging from 0.161 to 0.353), indicating the importance of the positive correlation. This relationship is of statistical significance and its practical impact is relatively weak, with Teaching Methods accounting for a small portion of the variance in Marketing skills amongst other factors. Since the significance threshold is less than 0.05. As a result, the null hypothesis must be rejected.

Conclusion

The research findings suggest many significant implications about the implementation of entrepreneurship education and its influence on students' business development skills at tertiary institutions focusing on Covenant University Ota, Ogun State. The study clearly demonstrates that financial competencies are significantly enhanced by curriculum content. Students' comprehension of budgeting, financial forecasting, and investment strategies essential competencies for successful entrepreneurship are greatly improved when realistic financial concepts and corporate planning exercises are integrated into the curriculum. In order to promote students' financial literacy, educational institutions must pay top emphasis to producing complete and adequate curriculum content.

Secondly, the research indicates that teaching methods tactics significantly enhance marketing competencies. The implementation of interactive, student-centred teaching methodologies, such as case studies, simulations, and project-based learning, was proven to boost students' creativity, customer orientation, and market analysis abilities. The finding suggests that students marketing competencies can be cultivated through innovative and experiential teaching methods employed by the educators.

Recommendations

This study's findings suggest that tertiary institutions should emphasise strategic resource investment in innovation as well as the incorporation of technology in entrepreneurship education. Focusing on digital technologies and modern teaching methods would lead to interactive teaching methodologies, which would help students understand how business development works and give them the skills they need to succeed in a world that is becoming more globalised. Also, schools should set up robust support systems to make sure that entrepreneurship instruction is carried out effectively. In order to make sure that relevant and high-quality entrepreneurship training is given, these systems should have defined policy frameworks, regular curriculum reforms, ongoing development of faculty, and involvement of stakeholders.

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GLOBALISATION AND ITS IMPACT ON LOCAL GOVERNANCE IN NIGERIA: CHALLENGES AND ADAPTIVE STRATEGIES

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Abstract

Globalisation, a multidimensional process characterized by increasing interconnectedness, liberalisation, and the diffusion of ideas, has reshaped governance structures globally. In Nigeria, local governance, being the closest tier of administration to the populace, has not been immune to the ripple effects of global change. This paper examines the impact of globalisation on the structures, functions, and autonomy of local governance in Nigeria. It critically examines the economic, political, and socio-cultural challenges posed by globalisation, including policy dependency, fiscal strain, erosion of traditional institutions, and governance fragmentation. Furthermore, the paper identifies adaptive strategies such as decentralisation reforms, capacity building, digital transformation, and localisation of development frameworks as necessary tools to reposition local governments for responsive governance in an era of global flux. The study adopts a qualitative methodological orientation, drawing insights from secondary data, policy reviews, and theoretical frameworks, including glocalisation and institutional adaptation. It concludes that while globalisation presents daunting challenges to local governance in Nigeria, it also offers a window of opportunity, provided reforms are contextually embedded and locally driven.

Introduction

The phenomenon of globalisation has become one of the most significant and transformative forces in contemporary governance discourse. Over the past few decades, the intensification of transnational flows of capital, labour, information, goods, services, ideologies, and institutional models has profoundly reshaped the architecture and functioning of governance across scales (Held et al., 1999; Sassen, 2006). While much of the scholarly attention has concentrated on the implications of globalisation at the national and supranational levels, such as state sovereignty, economic liberalisation, and multilateral governance, its impact on subnational and especially local governance structures has often received insufficient attention (Pierre & Peters, 2000; Cheema & Rondinelli, 2007).

Local governance, commonly understood as the lowest tier of government with jurisdiction closest to the people, plays a pivotal role in the delivery of basic services, community development, political inclusion, and local-level accountability. However, globalisation has increasingly penetrated these subnational spaces, influencing how local governments operate, finance their activities, interact with external actors, and engage with their constituents (Stoker, 1998; Devas, 2004). This incursion is not merely technical but profoundly political, as it shapes norms of participation, reconfigures authority relations, and introduces new expectations regarding transparency, efficiency, and responsiveness.

In the Nigerian context, the dynamics are even more complex. Nigeria's federal structure, marked by historical patterns of centralisation, political clientelism, and institutional fragmentation, has created systemic constraints on the autonomy and performance of local governments (Agagu, 2004; Olowu & Wunsch, 2004). The 1999 Constitution of the Federal Republic of Nigeria provides for a three-tier governance system, yet in practice, local governments remain administratively weak, fiscally dependent, and politically subordinated to state governments (Eboh & Oduh, 2021). Against this backdrop, the entry of globalisation has introduced new pressures, such as market-oriented reforms, donor-driven development templates, migration flows, and digital technologies, that both challenge and reshape the local governance landscape.

This paper investigates the interplay between globalisation and local governance in Nigeria. It seeks to answer the following core research questions:

i. How has globalisation influenced the administrative structures, decision-making processes, and service delivery capacities of local governments in Nigeria?
ii. What specific challenges has globalisation imposed on local governance institutions?
iii. Which adaptive strategies are currently being deployed or could be developed to help local governments respond effectively to these challenges?

The central thesis of this paper is that globalisation, while often framed as an exogenous force, is increasingly becoming embedded in the routines and structures of local governance. It reshapes governance not simply by altering rules and practices, but also by shifting the very expectations of citizens and stakeholders regarding what local governments should deliver and how. This is particularly salient in Nigeria, where questions of legitimacy, fiscal sustainability, and policy relevance remain unresolved at the local level.

The study is situated within a growing body of scholarship that seeks to reconceptualise globalisation not just as a top-down imposition but as a multidirectional process that is interpreted, resisted, and adapted at the local level, a phenomenon sometimes captured through the lens of "glocalisation" (Robertson, 1995; Swyngedouw, 2004). By focusing on Nigeria, the paper contributes to a more nuanced understanding of how global pressures interface with domestic political institutions, subnational asymmetries, and everyday governance challenges. The remainder of the paper is structured as follows: Section 2 clarifies the key concepts and theoretical frameworks underpinning the study; Section 3 outlines the methodological approach; Section 4 discusses the main intersections between globalisation and local governance in Nigeria; Section 5 highlights the challenges that emerge from this interaction; Section 6 proposes a set of adaptive strategies; and Section 7 concludes with key policy implications and recommendations for future research.

Conceptual Clarifications and Theoretical Anchors

Understanding the interface between globalisation and local governance requires conceptual clarity and a firm grounding in relevant theoretical perspectives. This section defines the core concepts and introduces the analytical frameworks that underpin the study.

2.1 Globalisation

Globalisation has been widely theorised across disciplines, yet it remains a complex and multi-dimensional phenomenon. At its core, globalisation refers to the increasing interconnectedness and interdependence of countries, institutions, and people across national boundaries. It encompasses the movement of capital, goods, services, information, technologies, and even ideologies, on a scale and intensity that compresses time and space (Harvey, 1989; Scholte, 2005).

Giddens (1990) famously defines globalisation as "the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa." This relational nature implies that globalisation is not simply a flow of goods or people, but a transformation in the way distance and proximity are experienced and organised socially and politically. Globalisation thus affects state sovereignty, policy autonomy, and the scope of institutional authority, often bypassing or reconfiguring the structures of governance at national and subnational levels (Sassen, 2006; Castells, 2000).

Economic globalisation, through neoliberal policies, international financial institutions, and free market ideologies, has been particularly significant in Africa, driving reforms that have constrained local fiscal autonomy and encouraged public-private partnerships (Mkandawire, 2001). Likewise, political globalisation promotes the diffusion of democratic norms, transparency standards, and governance templates through aid conditionalities and international advocacy (Keohane & Nye, 2000). In Nigeria, globalisation manifests through rising foreign direct investment (FDI), technological penetration, diaspora remittances, development aid, and exposure to international trade regimes. Yet, it also amplifies vulnerability to external shocks, such as fluctuations in oil prices and global financial instability (Onuoha, 2015).

2.2 Local Governance

Local governance refers to the mechanisms, institutions, and processes through which local populations articulate their interests, exercise their rights and responsibilities, and mediate their differences within a framework of decentralised government (UN-HABITAT, 2004). Unlike "local government," which is a formal institution established by statute, "local governance" is broader. It encompasses not only local government councils but also civil society organisations, community-based structures, traditional authorities, and private sector actors that influence decision-making at the local level (Shah & Shah, 2006).

In the Nigerian context, local governance is constitutionally recognised as the third tier of government, comprising 774 Local Government Areas (LGAs), as provided in the 1999 Constitution (Section 7). These LGAs are tasked with functions ranging from primary healthcare and education to markets, roads, waste management, and community development. However, in practice, local governments have been historically subordinated to state-level control, with limited financial and political autonomy (Olowu, 2003; Eboh & Oduh, 2021). Moreover, local governance in Nigeria operates in a hybrid institutional environment, where formal governmental structures coexist with traditional rulers, religious institutions, and informal community networks. This duality creates both opportunities and tensions in delivering public goods and managing plural identities (Ekeh, 1975; Meagher, 2012). The quality of local governance is crucial for development, as it is at this level that citizens interact most directly with the state. Effective local governance promotes inclusion, responsiveness, downward accountability, and context-sensitive policymaking—attributes that are increasingly under strain in a globalised era.

2.3 Theoretical Framework: Glocalisation and Institutional Adaptation

This *study draws on two complementary theoretical frameworks: glocalisation and institutional adaptation.*

Glocalisation, a concept popularised by Robertson (1995), describes the process by which global phenomena are localised, that is, they are interpreted, adapted, or resisted within particular social and institutional contexts. Rather than viewing globalisation as a top-down, homogenising force, glocalisation emphasises the agency of local actors in reshaping global influences to suit local realities (Khondker, 2004). In the Nigerian context, for instance, externally introduced reforms such as decentralisation or e-governance are frequently reinterpreted through the lens of ethnic politics, bureaucratic cultures, or customary norms. Glocalisation thus highlights the dynamic interaction between global processes and local institutional arrangements.

Institutional adaptation theory, as elaborated by North (1990) and later by Helmke and Levitsky (2004), focuses on how institutions, defined as the formal and informal rules governing behaviour, evolve in response to external and internal pressures. Institutions do not change overnight; instead, they exhibit path dependence, incremental reform, or even resistance. In Nigeria, local government institutions are shaped by a legacy of colonial rule, military centralisation, and political patronage, which complicates the implementation of globally inspired reforms. Understanding how these institutions adapt or fail to adapt to global pressures is essential for evaluating the prospects of effective local governance. These theories collectively enable a nuanced understanding of how globalisation is experienced at the local level in Nigeria, not as a uniform process, but as a negotiated and often contested set of interactions. They also provide a framework for analysing why some local governments are more successful than others in navigating global change, and what institutional features support or hinder that capacity.

3. Methodology

This study adopts a qualitative-descriptive research design, appropriate for exploring complex social and political phenomena that are contextually embedded and not readily quantifiable. Given the paper's focus on understanding how globalisation shapes the structures, practices, and adaptive responses of local governance in Nigeria, a qualitative approach enables a more nuanced interrogation of institutional processes, actor behaviours, and normative shifts. The descriptive orientation ensures that the multifaceted nature of the interaction between global forces and local governance institutions is adequately captured and contextualised.

3.1 Research Design and Rationale

Qualitative research is especially suitable for examining governance systems where multiple layers of meaning, historical, institutional, and socio-political, intersect (Mason, 2002; Denzin & Lincoln, 2018). The descriptive design enables the systematic mapping of trends, tensions, and adaptations without necessarily testing a specific hypothesis. This aligns with the study's aim to explore “what” and “how” globalisation interacts with and impacts local governance in Nigeria.

The research is interpretivist in orientation, acknowledging that governance phenomena are socially constructed and understood differently across contexts and actors (Bryman, 2016). Rather than seeking universal laws, the goal is to build context-sensitive insights that reflect the particularities of the Nigerian federal structure, local political economy, and institutional legacies.

3.2 Data Sources

The study relies entirely on secondary data, gathered from a wide range of credible and triangulated sources. These include:

i. Government Reports and Policy Documents: Federal Ministry of Finance, Budget and National Planning; National Bureau of Statistics (NBS); Office of the Auditor-General of the Federation; and State-level Local Government Audit Reports.
ii. International Development Publications: Reports from the World Bank, United Nations Development Programme (UNDP), UN-HABITAT, African Development Bank (AfDB), and International Monetary Fund (IMF) on decentralisation, local governance, and globalisation.
iii. Academic Literature: Peer-reviewed journal articles, conference proceedings, and scholarly books focusing on local governance, decentralisation, institutional theory, and globalisation in Nigeria and Africa.
iv. Legal Instruments and Constitutional Texts: The 1999 Constitution of the Federal Republic of Nigeria (as amended), Local Government Acts, and fiscal allocation frameworks.
v. Media and Grey Literature: Think-tank briefs, civil society reports, and investigative journalism offering insights into real-world governance practices and public debates.

The documents were selected purposively to reflect a diversity of perspectives, geographies (urban vs rural LGAs), and scales (local, national, global). Emphasis was placed on documents produced between 2000 and 2024, given the intensification of globalisation during this period and the implementation of several decentralisation reforms in Nigeria.

3.3 Analytical Approach: Content-Based Thematic Analysis

The core analytic technique employed is content-based thematic analysis, which enables the systematic identification, organisation, and interpretation of patterns of meaning (themes) within qualitative data (Braun & Clarke, 2006). This method was chosen for its flexibility in handling a heterogeneous corpus of text while maintaining analytic rigour.
The analysis followed a six-stage procedure:

i. **Familiarisation**: Reading and re-reading documents to become immersed in the data.
ii. **Coding:** Initial line-by-line coding of relevant sections of text using NVivo software to identify references to key constructs such as 'local autonomy', 'global norms', 'policy diffusion', 'institutional adaptation', and 'fiscal decentralisation'.
iii. **Theme Development**: Grouping similar codes into overarching themes, e.g., 'external policy imposition', 'erosion of traditional authority', 'technology-driven transformation', and 'institutional resistance'.
iv. **Theme Review:** Cross-referencing themes across data sources to ensure consistency, relevance, and internal coherence.

v. **Theme Definition:** Refining theme boundaries and articulating the narrative around each theme in relation to the research questions and theoretical framework.
vi. **Synthesis and Interpretation:** Integrating themes into broader explanatory categories and situating them within the analytical lenses of glocalisation and institutional adaptation.

3.4 Methodological Limitations

Several limitations should be acknowledged. First, the exclusive reliance on secondary data precluded direct engagement with local government officials or communities, which could have provided firsthand perspectives. Second, some documents, especially subnational audit reports were either unavailable or incomplete, creating potential gaps in comparative coverage. Third, while thematic analysis provides interpretive depth, it may be subject to researcher bias in theme identification and narrative construction. These limitations were mitigated through source triangulation and peer debriefing to enhance credibility and analytical validity.

3.5 Ethical Considerations

Although the study is based on publicly available secondary sources and does not involve human subjects, ethical research standards were maintained. Sources were appropriately cited, and documents were interpreted in good faith, avoiding misrepresentation or selective bias. Where data were drawn from politically sensitive contexts, appropriate caution was applied in framing interpretations.

4. Globalisation and Local Governance in Nigeria: Intersections and Tensions

Globalisation is not a singular force but a complex web of economic, technological, political, cultural, and demographic processes that manifest unevenly across national and subnational contexts. In Nigeria, the local government system, constitutionally recognised as the third tier of governance, has been significantly shaped by global pressures. These pressures interact with domestic institutional structures to generate a range of tensions, trade-offs, and adaptation dynamics at the local level. This section unpacks these intersections across five critical impact dimensions, as summarised in Table 1, and presents an analytical equation that quantifies fiscal dependency.

Table 1: Dimensions of Globalisation and Their Manifestation in Nigerian Local Governance

Impact Dimension	Manifestation	Example in Nigeria
Economic	Fiscal dependency on oil revenues and international financial institution (IFI) loans	LGAs' heavy reliance on FAAC allocations, which fluctuate with global oil prices
Technological	Digital divide in e -governance adoption	ICT integration is limited to wealthier, urban LGAs like Lagos, Abuja, and Port Harcourt
Political	External pressure for decentralisation reforms	World Bank and EU-funded projects encouraging participatory budgeting and inclusion
Cultural	Erosion of traditional norms and indigenous governance frameworks	Declining influence of traditional councils in favour of modern administrative structures
Demographic	Migration and urbanisation pressures on infrastructure and services	Rapid urban growth in Lagos, Kano, and Abuja overburdens local service delivery systems

4.1 Economic Intersections: Fiscal Dependency and Market Exposure

One of the most visible impacts of globalisation on Nigerian local governance is fiscal dependency. The liberalisation of global markets and Nigeria's integration into international commodity value chains have tethered local government revenues to external market conditions, particularly oil prices. Over 80% of LGAs rely almost entirely on statutory allocations from the Federation Account Allocation Committee (FAAC), which are subject to international oil price volatility and exchange rate fluctuations (Eboh & Oduh, 2021).

This dependency is further compounded by structural adjustment programmes (SAPs) and donor conditionalities from the 1980s onwards, which limited fiscal space for subnational entities and encouraged privatisation, often at the expense of local developmental priorities (Mkandawire, 2001). Most LGAs lack the institutional capacity to generate substantial internally generated revenue (IGR), making them susceptible to federal fiscal decisions and global market cycles.

Equation 1: Dependency Ratio on Federal Allocations

Let

F_i = Federal allocation to LGA i
R_i = Total revenue of LGA i
D_i = Dependency ratio of LGA i

$$D_i = \frac{F_i}{R_i}$$

In most Nigerian LGAs, D_1=0.80 indicating that 80% or more of their revenues come from federal transfers, an unsustainable position that undermines fiscal autonomy and resilience to external shocks (NBS, 2020). This ratio is particularly acute in rural LGAs, where economic activity is sparse and revenue mobilisation is minimal.

4.2 Technological Intersections: Digital Governance and the Urban-Rural Divide

Globalisation has facilitated the diffusion of digital governance tools, including geographic information systems (GIS), e-payment systems, and online service portals. However, adoption has been uneven. While cities like Lagos, Abuja, and Kano have experimented with e-governance initiatives, such as online tax platforms and electronic waste reporting systems, the vast majority of LGAs lack the infrastructure, skilled personnel, or internet connectivity to implement similar reforms (Ayo & Ekong, 2021). This digital divide exacerbates inequalities in service delivery and administrative efficiency, limiting citizen engagement and data-driven decision-making in less urbanised or poorer localities. Moreover, donor-driven ICT projects often fail to consider the operational realities of rural LGAs, leading to underutilisation or project abandonment after donor exit.

4.3 Political Intersections: Global Norms and Local Institutional Resistance

International organisations and donors have long promoted decentralisation as a pathway to improved governance, citizen participation, and local development. In Nigeria, these pressures have resulted in various programmes such as the World Bank-supported State and Local Governance Reform (SLOGOR) Project and the EU-funded Support to Reforming Institutions Programme (SRIP), which aim to institutionalise transparency and participatory governance at the subnational level.

However, while these initiatives introduce global governance norms, such as participatory budgeting, gender inclusion, and fiscal transparency, they often confront resistance from entrenched political elites. State governors frequently subvert local autonomy by appointing caretaker committees instead of holding elections, undermining democratic principles and donor expectations (Ibrahim & Egwu, 2015).

4.4 Cultural Intersections: Traditional Institutions under Threat

Global cultural flows, via media, education, and donor discourse, have contributed to the gradual erosion of traditional governance institutions, such as chieftaincies, elders' councils, and lineage-based conflict resolution systems. These institutions historically played a vital role in land allocation, security, and dispute resolution at the grassroots level (Ekeh, 1975). In contemporary Nigeria, their influence is waning, especially in urban centres, as formal government structures displace customary systems. Yet, in many rural areas, traditional leaders remain more trusted than elected officials (Udo & Nwogu, 2021). The tension between global modernity and indigenous authority creates governance fragmentation and legitimacy crises at the local level.

4.5 Demographic Intersections: Urbanisation and Service Delivery Strain

Global economic integration and rising internal migration have intensified demographic pressures in Nigerian cities. Urban LGAs in Lagos, Abuja, Port Harcourt, and Kano have experienced exponential population growth due to rural-urban migration, exacerbating stress on housing, water, sanitation, education, and transportation services (UN-Habitat, 2016). Most urban LGAs are ill-equipped to respond to this growth, lacking the fiscal space, planning autonomy, or infrastructural investment necessary to scale services proportionally. As a result, slums proliferate, informal settlements expand, and governance capacity weakens—making these LGAs increasingly vulnerable to both domestic unrest and international scrutiny over urban inequality. In sum, globalisation introduces both opportunities and challenges for Nigerian local governments. The promise of efficiency, innovation, and global best practices is often tempered by structural constraints, institutional inertia, and socio-cultural contestations. Without strategic adaptation and reform, the very forces meant to modernise local governance risk deepening existing vulnerabilities.

5. Challenges Facing Local Governance Under Globalisation

Globalisation has amplified both the opportunities and vulnerabilities of local governance systems in Nigeria. While it fosters transnational flows of capital, information, and innovation, it also exposes subnational institutions to intensified scrutiny, structural inequalities, and policy shocks. This section unpacks the multifaceted challenges confronting local governance in Nigeria under the pressures of globalisation.

5.1 Weak Institutional Capacity

A core challenge of local governance in Nigeria is the persistent deficit in institutional and human capacity. Many Local Government Areas (LGAs) lack the administrative competence, technological infrastructure, and bureaucratic professionalism required to deliver efficient public services or respond to global pressures. A 2023 audit by the Office of the Auditor-General for the Federation (OAuGF) reported that only 18% of LGAs in Nigeria had fully computerised their budget preparation and implementation systems, with most still reliant on manual records susceptible to errors, fraud, and inefficiency (OAuGF, 2023). Furthermore, recruitment into LGAs is often politicised, with limited investment in staff training and professional development (Agba et al., 2013). This administrative fragility hampers the ability of LGAs to absorb or adapt to global innovations, such as e-governance or decentralised development frameworks.

5.2 Fiscal Centralisation and Revenue Fragility

Fiscal constraints remain one of the most visible bottlenecks in Nigeria's local governance architecture. Despite constitutional recognition, LGAs remain heavily dependent on the federal statutory allocation disbursed through the Federation Account Allocation Committee (FAAC).

Using Nigeria's Revenue Allocation Formula, LGAs receive just 20.6% of the national revenue pool, while the Federal Government takes 52.68% and States 26.72% (RMAFC, 2022). This skewed distribution limits the fiscal autonomy of LGAs and their ability to initiate or sustain developmental programmes independent of higher tiers of government. Moreover, most LGAs lack a robust internally generated revenue (IGR) base due to a narrow tax net, weak administrative systems, and socio-political resistance to taxation. This is captured mathematically through the LGA Dependency Ratio (DR), as illustrated in Equation 1.

In most LGAs, D_1 = 0.70, indicating that over 75% of their revenue is externally sourced, raising sustainability concerns. This dependency makes local governance highly susceptible to global oil price shocks, foreign aid volatility, and federal fiscal decisions.

5.3 Political Interference and Undermined Autonomy

Political interference from state governments significantly undermines the autonomy of local governments. Although the 1999 Constitution (Section 7) provides for democratically elected local government councils, in practice, state governors frequently delay local elections and appoint caretaker committees, thereby subverting democratic accountability (Oviasuyi, Idada & Isiraojie, 2010). In addition, Joint State-Local Government Accounts (JSLGAs) have often been used by state governors to control LGA funds, leading to allegations of fund diversion and arbitrary deductions. These practices erode the institutional legitimacy of LGAs and diminish citizens' trust in local governance structures (Adeyemi, 2013).

5.4 Legal and Constitutional Ambiguities

Nigeria's constitutional framework creates legal grey areas that inhibit the clarity and operational effectiveness of local governance. Section 7(1) of the 1999 Constitution guarantees the existence of local government councils but simultaneously permits state legislatures to determine their structure, composition, and functions, resulting in wide variations and conflicts across states.

This tension between constitutional guarantees and state-level discretion creates legal ambiguities that are often exploited for political gain. Furthermore, the absence of uniformity complicates the adoption of national reforms or donor-sponsored local development programmes, as legal interpretations and administrative arrangements differ from one state to another (Nabegu, 2010).

Table 2: Summary of Key Challenges Facing Local Governance

Challenge	Description	Implication
Institutional Capacity	Poor staffing, outdated processes, lack of training	Limits service delivery, digital adoption, and innovation
Fiscal Centralisation	20.6% allocation; high dependency on federal transfers	Weakens fiscal autonomy, vulnerability to global price shocks
Political Interference	Delayed elections, caretaker appointments, fund diversion	Erodes accountability and democratic legitimacy
Legal Ambiguity	Section 7 constitutional contradictions	Inconsistent governance structures across states

By foregrounding these challenges, the paper reveals how globalisation, while potentially beneficial, can exacerbate local governance vulnerabilities in the absence of robust institutional safeguards and policy autonomy.

6. Adaptive Strategies for Local Governments in Nigeria

In light of the institutional, fiscal, political, and legal challenges identified in the preceding section, it becomes imperative to explore viable strategies for strengthening local governance in Nigeria under conditions of globalisation. These strategies must not only respond to internal governance deficits but also position LGAs to effectively navigate global trends, donor expectations, and transnational policy frameworks such as the Sustainable Development Goals (SDGs). The following adaptive strategies offer practical, yet scalable, pathways for reform.

6.1 Decentralisation Reform

At the heart of local governance challenges lies the over-centralisation of fiscal and political authority. A constitutional amendment targeting Section 162 (revenue allocation) and Section 7(1) (LGA autonomy) is critical for strengthening fiscal independence and democratic legitimacy.

Mechanism: Revising the revenue allocation formula to give LGAs direct access to FAAC disbursements and legally prohibiting the operation of Joint State-LGA Accounts (JSLGAs) would reduce political manipulation of LGA finances. Additionally, entrenching a uniform electoral timetable for LGAs would enhance democratic representation.

Potential Impact: Such reforms would not only empower LGAs with greater resource control and policy discretion but also reduce vertical dependency, thereby increasing their ability to plan, prioritise, and respond to global development shifts.

6.2 Capacity Building and Civil Service Reform

A core element of institutional strengthening involves retraining local government staff to meet the administrative and technical demands of contemporary governance.

Mechanism: Targeted training in public financial management (PFM), procurement regulations, urban planning, and environmental policy can professionalise local bureaucracies. Capacity-building partnerships with institutions like the Nigerian Institute of Management (NIM) and donor bodies (e.g., UNDP, World Bank) could be scaled for all LGAs.

Potential Impact: Professionalising the civil service increases bureaucratic competence, reduces leakages, and supports a responsive administrative culture, all of which are essential for dealing with globalised governance expectations and reporting requirements (e.g., SDG localisation indicators, ESG reporting).

6.3 Digital Transformation and e-Governance

Digital technologies are pivotal in modernising local administration, improving transparency, and facilitating citizen engagement. The digitalisation of local governance can act as a counterweight to institutional weaknesses by streamlining decision-making and enhancing public trust.

Mechanism: Widespread adoption of Geographic Information Systems (GIS), Management Information Systems (MIS), e-budgeting platforms, and open data portals can improve service delivery and urban management. Capacity for cybersecurity and data privacy should accompany this shift.

Potential Impact: Digital governance reduces bureaucratic opacity and corruption while promoting e-participation. However, the success of such interventions is dependent on digital infrastructure and literacy, which remain uneven across LGAs.

This can be quantitatively assessed through an e-Governance Index (EGI):

Equation 2: e-Governance Index (EGI)

$$EGI_i = \frac{(ICT_i + DL_i + SA_i)}{3}$$

Where:

EGI_i = e-Governance Index of LGA i
ICT_i = ICT access and infrastructure availability (0–1 scale)
DL_i = Digital literacy rate in the population (0–1 scale)
SA_i = Degree of service automation (0–1 scale)

An LGA is classified as digitally lagging if $EGI_i = 0.4$ signalling the need for prioritised intervention in connectivity, digital skills training, and automation capacity.

6.4 Localisation of the Sustainable Development Goals (SDGs)
As a framework of global governance, the SDGs provide an opportunity for LGAs to align local development plans with globally recognised standards of accountability, equity, and sustainability.

Mechanism: Mainstreaming SDG indicators into local development plans and budget frameworks ensures global relevance. Establishing Local SDG Desks and Community Scorecards could facilitate progress monitoring.

Potential Impact: Aligning LGA policy cycles with SDG targets enhances visibility in global development networks, enabling LGAs to access international funding, technical assistance, and benchmarking tools for sustainable service delivery.

6.5 Traditional Authority Integration
Despite their marginalisation, traditional rulers retain significant moral legitimacy in many Nigerian communities. Incorporating traditional institutions into governance structures can enhance policy acceptance and local ownership of development initiatives.

Mechanism: Establishing Local Development Councils that integrate traditional leaders with elected representatives and technocrats could foster policy co-creation and accountability. This model has been piloted in states like Kano and Jigawa.

Potential Impact: Such integration promotes inclusive governance, reduces conflicts, and bridges the gap between customary systems and formal state structures, thereby enhancing trust and participation at the grassroots.

Table 3: Adaptive Strategies for Local Governance under Globalisation

Strategy	Mechanism	Potential Impact
Decentralisation Reform	Amend Section 162 and 7(1)	Enhances fiscal and political autonomy
Capacity Building	Civil service retraining and certification	Builds institutional competence and administrative efficiency
Digital Transformation	Adoption of GIS, MIS, e-budgeting tools	Increases transparency, data quality, and service responsiveness
Localisation of SDGs	Align local plans with SDG indicators	Strengthens global-local policy coherence and funding access
Traditional Authority Integration	Inclusion in development councils and planning boards	Enhances legitimacy, trust, and community engagement

Together, these strategies underscore the importance of institutional innovation, political reform, and digital transformation in repositioning Nigerian LGAs as effective agents of development in an increasingly interconnected world. However, their success will depend on political will, legal reform, and sustained investment in capacity-building and infrastructure.

7. Conclusion and Policy Recommendations

7.1 Conclusion

Globalisation, defined by increased economic integration, technological diffusion, and cross-border flows of capital, norms, and people, has had a complex and often contradictory impact on local governance in Nigeria. On one hand, it offers new frameworks for development, improved access to international expertise, and benchmarks such as the SDGs for enhancing service delivery. On the other hand, it intensifies existing governance weaknesses, particularly in the domains of fiscal autonomy, institutional capacity, and political accountability at the Local Government Area (LGA) level.

The study demonstrates that Nigerian LGAs operate within a structural environment characterised by over-centralised fiscal arrangements, ambiguous legal mandates, technological inequality, and limited local ownership of development processes. These tensions are further complicated by donor-driven reforms and policy prescriptions which often bypass local institutions or treat them as passive implementers rather than autonomous developmental actors.

Despite these challenges, this paper argues that adaptive governance is possible. LGAs can reposition themselves through constitutional reform, institutional restructuring, digital innovation, and inclusive governance models that integrate both formal and informal actors.

7.2 Policy Recommendations

To ensure local governance in Nigeria not only survives but thrives in the age of globalisation, a multi-level policy strategy is required. The following recommendations are made across four interconnected policy tiers:

7.2.1 Constitutional and Legal Reform

1. **Amend Sections 162 and 7(1) of the 1999 Constitution**
    a) Guarantee direct access of LGAs to FAAC allocations.
    b) Abolish State-LGA Joint Accounts and secure constitutional backing for democratically elected LGA councils.
2. **Establish a National Local Governance Commission (NLGC)**
    a) Similar to the INEC or National Population Commission, the NLGC would regulate and standardise LGA governance practices, budgets, and electoral timelines.

7.2.2 Fiscal and Institutional Autonomy

1. **Revise the Revenue Allocation Formula**
    a) Increase LGA share from 20.6% to at least 30%, with performance-based supplements tied to service delivery metrics.
2. **Introduce Results-Based Financing (RBF)**
    a) Tie part of federal allocations to local development outcomes, thereby incentivising innovation, transparency, and responsiveness.
3. **Strengthen Audit and Oversight Mechanisms**
    a) Mandate annual publication of LGA financial statements and make budget processes participatory through citizen townhalls and e-portals.

7.2.3 Technological and Human Capital Development

1. **Launch a National Local e-Governance Programme**
    a) Provide grants for the deployment of MIS, GIS, and biometric payroll systems across LGAs, with dedicated training hubs in each geo-political zone.
2. **Create Local Governance Academies**
    a) Establish state-wide training institutes focused on public financial management, planning, environmental governance, and digital transformation tailored for LGA staff.
3. **Integrate Performance Metrics (e.g., e-Governance Index)**
    a) Use indices like the EGI (Equation 2) to monitor and rank LGAs annually, fostering healthy competition and visibility.

7.2.4 Cultural and Community Anchoring

1. **Institutionalise Traditional Authority in Local Governance**
    a) Create hybrid planning councils where elected officials and traditional rulers co-develop and oversee local development priorities.
2. **Strengthen Community-Based Monitoring Systems**
    a) Leverage community associations, religious bodies, and women's cooperatives to evaluate the delivery of basic services, particularly in health, education, and sanitation.
3. **Localise SDGs and Climate Action Plans**
    a) Require LGAs to produce Local Voluntary Reviews (LVRs) aligned with Nigeria's national development plans and international commitments.

7.3 Final Reflection

Ultimately, globalisation will continue to shape the economic, technological, and political terrain within which local governments in Nigeria operate. But LGAs must not remain reactive recipients of these forces. With the right blend of reform, capacity, and innovation, local governments can become proactive architects of local development, acting as fulcrums between global aspirations and grassroots realities. For this to occur, however, political will at all levels, federal, state, and local, must converge around a single principle: effective local governance is not a luxury, but a precondition for national resilience in an interdependent world.

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HARNESSING SOCIAL INNOVATIONS TOWARDS SUSTAINABLE FLOOD MITIGATION IN NIGERIAN URBAN AREAS: A GLOBALISATION PERSPECTIVE

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Abstract

Flooding is a persistent challenge in urban areas of Nigeria that is exacerbated by rapid urbanization, poor drainage systems, and climate change. In an increasingly interconnected world, globalisation plays a dual role intensifying some of these challenges while also providing access to innovative tools, partnerships, and knowledge systems. Studies have shown that traditional flood mitigation strategies often fail due to inadequate infrastructure and limited government resources. However, this study seeks to explore how social innovations within the context of globalization can foster sustainable flood mitigation in Nigerian cities. This study employs a systematic literature review to analyze existing research on social innovations in flood risk management, focusing on community engagement, digital technologies, and public-private partnerships. The findings reveal that social innovations such as citizen-led early warning systems, mobile-based flood reporting, and community-based disaster response networks often influenced or inspired by global practices significantly enhance local resilience. However, challenges such as weak institutional frameworks, lack of funding, and inadequate policy integration have hindered the widespread adoption of innovation in Nigerian urban areas.

Keywords: *Globalization, social innovations, sustainable flood mitigation, sustainable development, Nigerian urban areas*

Introduction

The rapid urbanization of Africa in the last forty years has become the stamp of its development process. The cities around the continent have emerged as epicentre to national economic development and regional integration (Henderson & Turner, 2020). However, this celebrated urban expansion is unfolding largely without substantial industrialization, robust infrastructure, or inclusive planning frameworks. It is projected that by 2050, the urban population in Africa will be almost tripled to more than 1.5 billion, roughly 22 percent of the world urban population (United Nations, 2018). However, Orkpeh, and Adedire (2024) stated that the central challenges within African cities, such as widespread informality, inequality, poverty, unemployment, and shortages in public services, render the issue of sustainable urban development a fundamental one.

In Nigeria, areas such as Lagos, Port Harcourt, Kano and Ibadan have been growing very fast and in most cases in an unplanned and uncontrolled fashion they lack proper infrastructure and environmental management structures that will help support the large populations in an area. One of the more urgent outcomes of this unregulated expansion is urban flooding, which has transformed into a chronic urban problem; a fact that started off as seasonal menace (Ogbari, Ingomowei & Ogunnaike, 2025; Trejo-Rangel et al. 2023). According to Abdulrahim, Gulumbe, and Liman (2022) flooding has led to billions of naira worth of economic losses, destruction of property that displaced thousands of households, infrastructure destruction, and outbreaks of waterborne diseases. The root causes are complex and interrelated**: poorly maintained drainage systems, informal construction in flood-prone areas, uncollected waste clogging waterways, and increasingly unpredictable rainfall patterns due to climate change** (Ezeudu & Chukwudubem, 2024). Top-down, engineering-intensive flooding solutions such as flood channels and levees that have been deployed as traditional solutions to floods in Nigeria have been found to be unsatisfying, costly and socially whitewashed (Nwankwo, 2025). Such solutions in many cases do not take into consideration the social realities and informal structures that define the urban life. In addition, they do not address the conflict between state-initiated planning processes and local subsistence approaches, which is a fundamental theme in modern African cities. The conflict echoes a wider scholarly debate about the role of the state in African city-making, whether the presence or absence determines city-making outcomes, and aligns with recent thinking in the social innovation literature, which prioritizes bottom up, community-driven solutions to complex social challenges (Effiong, 2025; Mpigi, 2020; Raimi & Lukman, 2023).

Social innovation has been used and can act as a new and untapped avenue to mitigate floods (Trejo-Rangel, et al., 2023). According to Canwat (2025) social innovation refers to new ways, models, or bondings, which fulfill social needs in a better way, usually in a more inclusive and collaborative way. In contrast to traditional infrastructure-based approaches, social innovations are community led rather than community driven, they are based on co-creation of knowledge, native ownership, and adaptive governance frameworks. In the case of urban flood management, these may entail use of community-owned early warning systems, participatory mapping of flood risks, community-based waste disposal schemes, and urban agricultural methods used to mitigate floods as well as increase food security (Achuchaogu, Duru & Ikwuemesi, 2024; Anwana & Owojori, 2023). The initiatives are not just cost effective and scaleable, but are also firmly grounded in the realities that permeate the place of work/exist-in which the informal and resource-constrained environments are key features of most Nigerian cities.

Johnson (2024) stated that globalization has transformed the Nigerian cities as they are now involved in transnational avenues of technology, idea circulation, finances and skills. Globalization has a two-dimensional character as it can lead to unsustainable patterns of urban development based on speculative investment in real estates and externally driven development fixations, and on the other hand, it can provide access to global knowledge systems, on-demand technologies, mobile devices, and cross-border collaboration (Ajayi & Adediran, 2024). Effective social innovations in flood resilience have been replicated from global prototypes, -including mobile-based flood alert systems developed in South Asia or participatory planning practices made popular by UN-Habitat and civil society networks in the Global South (Bhanye, 2025; Raimi & Lukman, 2023). To create resilient, flexible urban systems, it is necessary to understand how those same global ideas become local and transformed in the hands of Nigerian actors. Thus, the study addresses the development of mechanisms through which cities in Nigeria could embrace social innovations, both locally and internationally, to develop sustainable approaches to mitigating floods. The study uses a systematic review of literature, case analysis, and theoretical framing to study the facilitating factors, institutional constraints, and the opportunities of scaling these kinds of innovations. Finally, it advocates a paradigm shift: out of the reactive, centralized approach to flood response with its concentration in selected autonomous cities with flood control measures to proactive, community-based, globally-informed flood responses that also build long-term resilience of cities. This approach of creating urban centers that are locally rooted in global resources, and where innovation becomes integrated within the social system instead of being isolated around it, will not only help the people of Nigerian centers overcome the current menace of flooding, but also mend the underlying social fragilities and structural failures that make disasters so devastating. The results not only apply to the Nigerian context, but to all other high-density leakage areas in Sub-Saharan Africa and the Global South more broadly, desiring to create climate resilience using inclusive and innovative methods.

1.2 Research Objectives

The general objective of this study is to explore the effect of social innovations towards sustainable flood mitigation in Nigerian urban areas: A globalisation perspective using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The specific objectives to be addressed in this study are as follows;

i. to examine the role of social innovations in promoting sustainable flood mitigation in Nigerian urban areas.

ii. to analyse how globalisation influences the adoption, adaptation, and implementation of social innovations for flood risk management in the Nigerian

2.0 Literature Review

2.1 Social Innovation in Flood Mitigation

Social innovation has increasingly become a landscape-altering method of alleviating multifaceted social problems, especially in locations where institutional enterprise is insufficient or languid. It goes beyond technological innovation to include participatory forms, new forms of governance, and solution-oriented values to shared problems (Echendu, 2022; Ogbari et al., 2024). Social innovation has been defined more broadly as a new approach to addressing social needs, which are more effective, efficient, and or equitable than the currently adopted approaches and crucially, that improve social relationships and contribute to collective empowerment (Canwat, 2025; Lu & Wang, 2024).

Social innovations in the context of urban flood protection have varied forms, including community-based early warning system and participatory risk mapping, environmental monitoring, and digital alerting solutions led by youth (Bier et al., 2023; Trejo-Rangel et al., 2023). Such innovations are focused on being inclusive, locally-focused, and co-created, providing bottom-up alternatives to the traditionally engineering-heavy approaches. As opposed to traditional flood control strategies associated with construction of levees and drainage canals that typically accomplish and avoid marginal urban dwellers and fail to respond to the changing environmental factors, the socially integrated methods display greater community ownership and sustainable resilience (Achuchaogu et al., 2024; Anwana & Owojori, 2023).

Nevertheless, as literature appreciates the increasing significance of social innovation, little empirical interest has been given to the localization and institutionalization attempts concerning these practices in Nigerian cities (Avelino, et al. 2019; Ezeudu & Chukwudubem, 2024; Ogbari, Ingomowei & Ogunnaike, 2025). The majority of the world literature focusses on either Western or South Asian settings, creating a gap in the interpretation of the development of community-based initiatives in African cities with scattered governance structures and increasingly informal growth. This research paper fills this gap as it specifically looks at the situation of urban areas in Nigeria where social innovation could be a source of viable and context specific solutions to the problem of urban flooding.

2.2 Flood Mitigation Strategy

Flood mitigation strategies have historically relied on structural engineering interventions dams, drainage networks, and levees as the default solutions to flood risk (Hansamali et al. 2025). Flood control measures have long been based on structural engineering solutions; the construction of dams, drainage systems, and levees as the de facto flood risk mitigation approach. This technocratic worldview based on post-war planning, which Gilbert White (1945) had criticized early in their orthodoxy on flood control, was strongly criticized as a failure to respond to the socio-ecological realities, particularly in urban slums and informal settlements (Castro-Arce & Vanclay, 2020; Kourtis et al., 2020; Oyebode, 2021). Recent literature has been turning sustainability competitive ways of integrating environmental stewardship, community involvement and adaptive risk governance (Adekunle et al. 2023; Alam & Islam, 2021; Sun, Bi & Yin, 2020). According to the definition given by Echendu (2022), sustainable flood mitigation focuses on operating with natural processes, i.e, using green infrastructure, nature-based solutions, and resilient land-use planning instead of controlling them. These kinds of strategies not only minimize the effects of floods but also produce co-benefits on biodiversity, urban liveability, and public health (Horsfall et al., 2023; Raimi & Lukman, 2023).

In Nigeria this paradigm shift has yet to be fully realized in practice. Although there is some evidence of grassroots low-cost, community-driven innovative solutions being developed (Ajumobi et al., 2023; Daukere et al., 2021), the institutional setting is still biasing toward the top-down and capital-intensive interventions. They fail to accommodate the majority of the urban population, which are both under-represented in the flood event and not part of the decision-making process. Consequently, it is critically important to know how sustainable flood mitigation can be developed based on locally-rooted, socially-innovative solutions guided by the global best practices practices but based on Nigeria urban realities.

2.3 Globalisation and the Diffusion of Social Innovation

Globalisation which has had a strong association with economic liberalization and dependency on the outside world has worked as a medium of trade in ideas, technologies and even social practices. When it comes to flood management, globalisation helps interest the transnational learning process, whereby local agencies in the Global South can learn, adapt, and adapt the models of innovations that have been tried in other locations (Ajayi & Adediran, 2024; Bhanye, 2025). According to Johnson (2024), cities in Nigeria are becoming defined by the flows of information, finance, and technology that flow globally. This situation allows it to present digital flood warning systems, GIS-centered risk mapping, and co agendas that have been widespread by the global institutions such as the development of UN-habitat. Nevertheless, the literature also cautions against uncritical application of global models to local settings without adapting them. Indicatively, participatory flood planning in particular has produced robust outcomes in metropolises such as Manila and Rio, though such achievements have been facilitated by governance environments and community formations that possibly vary substantially when compared to Lagos or Port Harcourt (Effiong, 2025; Sun et al. 2020; Ajayi & Adediran, 2024). Therefore, the more pertinent question is not whether globalisation can lead to greater innovation but how the international practices are domesticated and how they are reorganised in regard to certain cultural, political and space settings. This study contributes to this conversation by exploring how Nigerian actors engage with global knowledge to shape hybrid models of social innovation for flood resilience models that are neither wholly indigenous nor externally imposed.

2.4 Theoretical Framework: Diffusion of Innovation Theory (DOI)

This study uses the Diffusion of Innovation (DOI) theory proposed by Everett Rogers, (1962) to explain the mechanisms through which social innovations are adopted, adapted and scaled in the Nigerian urban contexts. According to DOI, as time elapses, new ideas, practices, or technologies diffuse within a social system through relative advantage, compatibility, complexity, trialability and observability factors (Mbatha, 2024). Sayginer, and Ercan (2020) stated that DOI is especially applicable to the situation of flood protection in Nigeria where systems innovation, be it community-based or technology-driven, has to operate through heterogeneous urban environments that are informal, unequal, and poorly covered by institutions. As an illustration, a flood alert app invented in Lagos can be rapidly transferred to tech-savvy young people living in towns and newly minted suburbs with middle-income levels, whereas in the slums, it can remain non-existent or unavailable due to physical infrastructural or literacy limitations. The establishment of globalisation adds another dimension of complexity in the diffusion process. It does not only intensify exposure to new practices but also creates attitudes of legitimacy, desirability, and feasibility (Buckley & Enderwick, 2025). Therefore, DOI theory offers a convenient perspective not only to question whether social innovation gets taken up in Nigerian cities or not, but how, by whom, and under which enabling or constraining circumstances.

2.5 Identified Gaps in the Literature

In spite of having considerable research on both social innovation and flood risk management, there is still a lot with gaps in it. First, to a large extent, literatures are not well integrated, especially in the urban African setting. The majority of works are restricted to technological or structural responses to flood risks, technical discussions of innovation in general, or neglect the critical analysis of how the emergence as well as interaction between community-led practices and formal systems operates. Second, globalisation as both driver of change and disruption has been under-theorised in the urban Nigerian context. Lastly, the systematic assessment of adoption and institutionalization of climate resilience innovations within the theoretical frameworks of DOI is relatively rare. This paper fills these gaps by conducting a systematic literature review of international and Nigerian experiences on flood-prone urban settings to adequately inform policy, practice, and the relevant research in flood prone urban settings.

3.0 Methodology

To promote transparency, rigor, and reproducibility of the review process, Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline was applied in this study. The systematic review adhered to best practices such as the formulation of a detailed search strategy, the use of clear inclusion and exclusion criteria as well as critical appraisal of selected studies. A set of literature sources was evaluated, including peer-reviews and journal articles, the grey literature, and institutional reports, representing a specific chosen time frame between 2019 and 2024. This review was narrowed down to retrieve the studies pertinent to social innovation, flood mitigation, community resilience, globalisation, urban adapting and disaster reduction risk, especially in the low- and middle-income regions like Nigeria. The search results were narrowed by using Boolean, keyword combinations, and database-specific filters on five main databases: Google Scholar, Scopus, ResearchGate, ScienceDirect, and JSTOR. A total of 34 high-quality studies were reviewed and evaluated according to the terms of their empirical relevance, conceptual contribution, methodological rigor, and direct compliance with the research aims to draw accurate conclusions. These studies provided a basis upon which the theme synthesis and discussion of findings in this review were developed.

Search Strategy

In line with PRISMA guidelines, literature was systematically searched using five major electronic databases: Google Scholar, Scopus, ResearchGate, ScienceDirect, and JSTOR. The search covered studies published within a 15-year time frame (2010–2024) to ensure the inclusion of recent and relevant research. Boolean operators, truncations, and filters were applied to refine the search results.

Inclusion and Exclusion Criteria

Studies were included if they met the following conditions:

i. Focused on social innovations, flood mitigation, urban resilience, or globalisation influences in the context of developing countries, particularly Nigeria.
ii. Published between 2010 and 2024.
iii. Written in English and accessible in full text.
iv. Provided empirical data or systematic reviews relevant to the research objectives.

Studies were excluded based on the following:

i. Published prior to 2010.
ii. Not written in English.
iii. Did not include relevant keywords or did not address the core themes of social innovation, flood risk management, or globalisation.
iv. Lacked methodological clarity or failed to present evidence-based findings.

Data Extraction

Selected articles were reviewed independently by the researcher to extract relevant information using a structured data extraction template. The following details were obtained from each study:

i. Author(s)
ii. Year of Publication
iii. Title
iv. Definitions of Key Concepts
v. Theoretical Framework
vi. Methodology
vii. Findings
viii. Conclusion

Data Synthesis

The extracted data were synthesized to uncover key insights, patterns, and variations across the reviewed studies. The synthesis focused on identifying:

i. The types and characteristics of social innovations relevant to urban flood mitigation.
ii. Mechanisms through which communities engage in flood risk management.
iii. The application of technologies such as mobile-based alert systems and participatory mapping tools.
iv. The role of global networks and partnerships in shaping local adaptation practices.

This integrative approach provided a comprehensive understanding of how social innovations contribute to sustainable flood mitigation in Nigerian urban areas, while also highlighting institutional factors, implementation challenges, and opportunities for future policy and research engagement. The overview of SLR is depicted on the Figure 1.

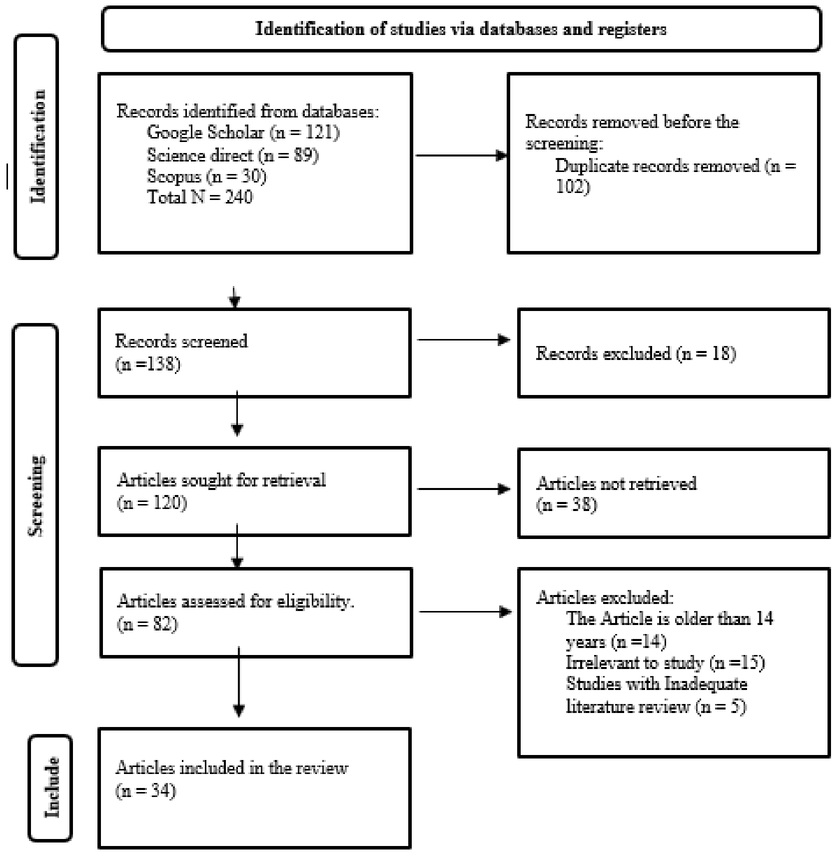

Figure 1: The overview of SLR process

4. Results and Discussion

4.1 Overview of Included Studies by Region and Innovation

34 studies were reviewed, most of them conducted in Nigeria (n=15), given the country

has acute flood vulnerabilities and a landscape terrain of emergent social innovation practices. The cases of the countries reviewed in the literature (summarized in Table 1) represent nine countries and merge into diverse innovation paths. Nigeria projected community-based alert systems, youth-led campaigns as well as integration of indigenous knowledge. Vietnam and Uganda promoted participatory approaches to planning and eco-resilience strategies whereas the Netherlands and UK focused on technological and institution models to adaptive flood governance.

Table 1: Summary of Included Studies Based on Region and Innovation Focus

S/N	Geographic Region	Number of Studies	Social Innovation Focus Areas
1	Nigeria	15	Community-based alert systems, local flood mapping, youth-led campaigns, NGO –government partnerships, nature-based drainage, indigenous knowledge integration
2	Vietnam	4	Participatory urban planning, flood-resilient architecture, community preparedness training
3	Uganda	3	Social learning systems, eco -based resilience strategies, local monitoring tools
4	Netherlands	3	Smart flood sensors, co -design frameworks, public innovation labs
5	India	2	Community radio, slum resilience mapping
6	Germany	2	Institutional innovation, policy frameworks
7	Bangladesh	2	Mobile flood alert systems, gender -sensitive adaptation strategies
8	United Kingdom (UK)	2	Risk dashboards, neighborhood -based flood response networks
9	Indonesia	1	Multi-stakeholder participatory zoning

4.2 Thematic Patterns of Social Innovation in Flood Mitigation

The following section introduces essential themes that were identified in the scrupulous review of 34 studies selected. These themes portray the adoption of social innovation in the mitigation strategies of floods, or in the context of floods in different urban settings especially in Nigeria. Every theme meets the objectives of the research, which aims at (i) examining the character of the social innovation strategies applied in the sustainable flood control, and (ii) discussing how globalisation has affected the creation and belief of the innovation. Such themes are also captured in Table 2, summarizing the major contributions of Nigerian-based research in regard to its focus, methodology, and its applicability to the theoretical set up of the review.

4.2.1 Community-Driven Solutions and Local Ownership

One finding that was dominant in almost all the studies was the application of grass roots community-based initiatives. These came in the form of establishing local early warning services, volunteer flood observing arms, and use of indigenous expertise in clearing of drains and temporary evacuation. In studies such as Michael (2024), Ede & Edem (2023), and Douglas et al. (2008), it was highlighted that a more active role of the community members in planning and response increased the resilience of the flood and possibly increased the sustainability of the project and social cohesion. This is in line with Objective One which puts emphasis on knowledge regarding embedded mechanisms of social values and trust.

4.2.2 Integration of Digital and Low-Cost Technologies

The other theme was that of using technology to use early warning, mapping, and disaster communication. Some of these are alerts that use mobile phones, geographic information systems (GIS), drones and community radio (Suleiman et al., 2019; Utsev et al., 2023; Canwat, 2025). Nevertheless, the majority of technologies were found to be adopted in a manner compatible to local situations- demonstrating the realm of digital innovation by learning through simplification and local applicability especially where ICT infrastructure is not well established. This is one of the effects of globalization in which models of technology present worldwide are transferred to a local setting (Objective Two).

4.2.3 Cross-Sector and Institutional Collaborations

A number of works reviewed focused on collaborative innovation, which took place between NGOs, academic institutions and government agencies. An example is that research by Echendu (2022), Dionisio et al. (2024), and Adomako et al. (2024) talked about the importance of international partnerships in terms of bringing funds, know-how and legitimacy to already existing local flood intervention efforts. These partnerships tended to become the source of institutional experimentation, and cities came up with adaptive plans that were developing a combination of the old and the new systems.

4.2.4 Cultural Alignment and Social Values

Effective social innovations were usually dependent on the nature of that which surrounds a society due to the social norms and belief system and even the social decision-making processes. Millard & Fucci (2023) as well as Michael (2024) observed that the use of local languages, social rituals and informal leadership led to elevated levels of trust and participation. This signals that social innovation is not a technical matter, and by it, he means a social meaning-making process, which is also strongly related to local identity.

4.2.5 Replication and Local Adaptation of Global Models

Numerous investigations demonstrated how such globally successful social innovations as participatory budgeting or nature-based solutions were exported into an area of local flood mitigation in Nigerian cities. Such a localization of ideas and processes is demonstrated by these globalized strategies (Eze & Ezeafulukwe, 2021; Akinyemi et al., 2024) which indicate that despite globalization encouraging ideas transfer, it is individuals on the ground who sieve, re-brand, and adapt ideas to work within their unique needs, environments, and available resources.

Table 2: Thematic Summary of Reviewed Studies on Social Innovation and Flood Mitigation in Nigeria

Author(s)	Year	Theme/Focus	Methodology	Key Contribution / Relevance to Study
Suleiman, G. et al.	2019	Nature-based flood mitigation via Sustainable Urban Drainage Systems (SUDS)	Experimental design and modeling	Introduced eco -friendly drainage systems (bio -swales, green roofs) as innovative solutions for recurrent urban flooding in Nigerian cities.
Echendu, A.J.	2022	Climate resilience in the Niger Delta	Critical literature review	Emphasized socially embedded, community-led responses as crucial to addressing oil -induced flooding and climate variability.
Akinbileje, T. & Adetola, B.O.	2023	Flood mitigation through citizen science in Ibadan	Participatory action research	Showed how community mapping, real-time flood alert systems, and local knowledge improve disaster preparedness.
Millard, J. & Fucci, A.	2023	Systems thinking and social innovation in disaster resilience	Qualitative meta - synthesis	Positioned systems thinking as foundational to enabling grassroots innovations that address urban flood vulnerability.
Adomako, S. et al.	2024	Entrepreneurial social innovation for flood resilience	Quantitative survey	Demonstrated that entrepreneurial competencies drive innovation adoption among youth-led NGOs for SDG -targeted flood solutions.
Michael, K.E.	2024	Cultural values and ethics in flood innovation	In-depth qualitative interviews	Identified how traditional ecological knowledge and cultural norms shape acceptance of flood mitigation interventions.
Ifeanyi, N.C.	2024	Governance critique of elite -centric flood policy	Policy document analysis	Exposed how exclusion of local actors in urban planning undermines equitable innovation and flood response capacity.
Dionisio, R. et al.	2024	Grassroots innovation for environmental justice	Multi-case ethnographic study	Highlighted bottom -up, community-driven flood innovations in urban slums as scalable and inclusive solutions.
Canwat, P.T.	2025	GIS-based flood risk exposure and social inequality	Geospatial mapping with social indicators	Revealed spatial disparities in flood risk across Nigerian urban zones, advocating for decentralized innovation responses.
Oludare, S. & Ede, J.	2025	Youth led digital innovations for flood monitoring	Case study of Lagos' River Guardian Initiative	Showed how civic tech applications, environmental education, and social media enhance early warning systems.

4.3 Global Perspectives and Comparative Models of Social Innovation

Although Nigeria is the focus of this review, informed experience is gained through the case studies on social innovation in flood mitigation around the world. The international examples offer the contrasting teachings on the type of innovations, the degree of participation, the sustainability characteristics, and the evidence of effects most of which are harmonized with the Nigerian environment and, on some occasions, surpass it. This sub-section extends the horizons beyond the United States to provide illustrative cases about countries like Uganda, Brazil, Fiji and Sweden to have a better insight on how the acting of global-local expression helps in developing the social innovation perspective. In Table 3, we offer a comparative table of international social innovation projects in flood prevention (2019 2025). These efforts, which include a citizen science project in Indonesia as well as a bottom-up woman-led project in Nigerian markets, represent the various modalities engaged to address the risk of flooding by communities, governments, and civil society organizations. It is natural to note that community engagement is very strong at the majority of initiatives, and hybrid innovation models, which implement both the local and digital knowledge or institutional models.

Tables 3: Comparative Analysis of Social Innovation Initiatives for Flood Mitigation Across Countries

Initiative	Country / Region	Year	Type of Innovation	Target Population	Participation Level	Sustainability Features	Impact Evidence	Reference
Participatory Flood Impact Assessment	Nigeria (Lokoja, Kogi)	2021	Behavioral / participatory	Local communities in Lokoja	High	Community mapping, inclusive planning, local knowledge	Linked community insights to improved adaptation strategies	Buba et al. (2021)
Community coping adaptations to flooding	Nigeria (Lagos, slums)	2024	Community-based resilience	Low-income coastal communities	High	Shadow networks, local coping mechanisms, adaptation	Described emergent social networks and adaptive resilience patterns	Fayombo (2024)
Women Traders' Collective Response	Nigeria (riverine market)	2024	Social innovation / solidarity	Women-led trading groups in flood zones	High	Collective storytelling, emotional resilience, local agency	Strengthened community solidarity and mental resilience	Frontiers (2024)
Citizen Science Flood Monitoring	Global South (Fiji/Indonesia)	2021	Technological / hybrid	Informal settlement residents and volunteers	High	Crowdsourced imagery, participatory mapping	Generated over 5,000 flood -impact images supporting planning	Wolff et al. (2021)
Community-Based Social Innovation	Uganda (Elegu floodplain)	2025	Transboundary community innovation	Border communities and flood -exposed villages	Moderate-High	Partnership model, local governance, logic integration	Comparative gains in local resilience and coping beyond institutions	Canwat (2025)

There are some valuable lessons that come forward out of such a comparative synthesis. First, effective projects, e.g. the projects in Lagos, Lokoja, and Uganda, have shown that flood innovation prospers with locally owned ideas that are accompanied by global knowledge. Second, the most influential models (e.g., River Guardian, participatory mapping, flood resilience hubs) exhibit a high suitability in regard to cultural value, gender inclusivity, and flexibility on the part of the institutions. Such worldwide experiences confirm the application of theories like diffusion of innovation and glocalization (Rogers, 2003; Appadurai, 1996) where knowledge transaction as well as situational fittingness prove to be relevant more than twice.

5. Conclusion

The research aimed to contribute to understanding how social innovations facilitate sustainable flood mitigation in the urban context of Nigeria, as well as to question how globalization impacts its adoption, adaptation, and implementation. On the basis of the systematic review of recent academic sources, thematic analysis, and comparative cases, both local and international, the paper has exemplified how social innovation, by establishing inclusive technologies, community-based efforts, participatory governance and hybrid models offers a viable route towards flood resilience. The results support the conclusion that social innovation cannot be seen as a technical solution but rather as a dynamic practice of socio-politics that is capable of transforming the way communities expect, react and deal with environmental shocks like the flooding. Local knowledge, digital tools and grassroots participation were also identified as important success enablers.

Also, this study confirms that globalisation is not only a driver but a scenario-definer in the dissemination of social innovations in mitigating floods. On the one hand, globalization offers a useful mix of best practices, resources, international links, and policy frameworks that can enhance kampweippen flood response at the local level. Conversely, it poses some challenges of policy dependence; technological unfitness and less contextual applicability where global solutions are imported without any contextual adjustments. In sum, the study adds to the existing research pool at the nexus of environmental sustainability, urban resilience, and innovation research. It requires a more regionally based, holistic, and internationally-minded approach toward addressing flood-related issues in the Global South and especially in rapidly urbanizing nations, such as Nigeria.

6. Policy and Practical Implications

The findings of this study offer critical insights for policy formulation and practical interventions targeting sustainable flood mitigation in Nigeria and similar urban contexts. Drawing from the comparative evidence of social innovation initiatives and their global diffusion patterns, the following recommendations are proposed:

i. There is need to incorporate community-based flood early warning, participatory risk mapping, and community-led infrastructure led by slum federations formally into development plans of cities. These methods have revealed excellent cooperation and ownership, and these are essential to sustainability. There must be financial and legislative infrastructures to sustain grassroots innovation centers, youth environmental networks as well as informal settlement-based projects of resilience.

ii. The urban planners ought to embrace participatory models like the Urban Living Labs and co-creation processes which involve local residents, planners, researchers and civil society. The tools can be experimented with in real time, acquire contextual knowledge and receive input by citizens which makes flood management of the city more responsive and representative. Planners must also incorporate behavioral and hybrid social innovations such as climate smart villages or river guardian systems to enhance structural flood protection.

iii. International NGOs and donors should not overlook investing in sustainable innovations that become locally appropriate through local needs and that can be scaled up. The study discloses that the top-down solutions can hardly be regarded as sustainable when they do not take account of the local knowledge systems, or when they do not provide power in the hands of the local actors. Donor agencies are encouraged to facilitate capacity building, cross-cultural learning exchanges, and transfer programs of innovation that stimulate adaptation instead of mass adopting world models.

8.0 Limitations and Future Research

This study is limited by its reliance on secondary data and a narrow review timeframe (2019–2025), which may have excluded relevant innovations or long-term impact assessments. There also is a lack of primary, community-level data and longitudinal research that limits a comprehensive comprehension of sustained outcomes. Comparative case studies across countries, community-based research in urban centers in Nigeria, and longitudinal investigation of social innovation policies can help future studies evaluate effectiveness and adaptability as well as long-term resilience outcomes.

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Data sharing is not applicable to this article.

Conflicts of Interest

The authors declare no conflict of interest.

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LEVERAGING TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT IN NIGERIA AMID GLOBALISATION

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Abstract

Globalisation has reshaped economies and societies worldwide, opening new avenues for technological diffusion and innovation, particularly in developing countries. Nigeria, as Africa's most populous nation and largest economy, stands at a critical juncture where the deployment of technology can significantly bolster sustainable development efforts. This paper explores the interplay between technology, globalisation, and sustainable development in Nigeria. Drawing on the Sustainable Development Goals (SDGs) framework, it analyses how technology is being leveraged in sectors such as agriculture, health, education, and governance, and assesses the structural and policy constraints that inhibit technological transformation. The paper concludes with policy recommendations for harnessing technology within Nigeria's globalised context to achieve inclusive and sustainable growth.

***Keywords**: Sustainable Development, Technology, Globalisation, Nigeria, SDGs, Innovation, Policy*

Introduction

The twenty-first century is marked by an unprecedented level of global interdependence, driven by the accelerated movement of goods, services, capital, people, and ideas across borders. This intricate web of global linkages, commonly referred to as globalisation, has profoundly reshaped the landscape of development across the globe. Nowhere is this transformation more palpable than in developing economies, where the impact of globalisation is simultaneously enabling and destabilising. While it offers pathways to innovation, investment, and integration into global value chains, it also exposes structural fragilities, magnifies inequality, and challenges sovereign capacities to chart independent development trajectories (Stiglitz, 2002; Rodrik, 2011).

For Nigeria, the most populous country in Africa and one of its largest economies, these contradictions are especially acute. The country is endowed with vast human and natural resources, including a youthful population, abundant arable land, and significant energy reserves. Over the last two decades, Nigeria has recorded periods of robust economic growth, driven largely by oil exports and, more recently, a burgeoning service sector. Yet, this growth has been uneven and exclusionary. Poverty remains pervasive, with over 40% of the population living below the national poverty line; youth unemployment is alarmingly high; infrastructure is chronically underdeveloped; and the ecological toll of industrialisation and urban expansion continues to rise (World Bank, 2023).

Amid these complexities, the discourse on sustainable development has gained salience. Sustainable development, defined by the Brundtland Commission as development that meets the needs of the present without compromising the ability of future generations to meet their own needs, offers a multidimensional framework for addressing Nigeria's socio-economic and environmental challenges (WCED, 1987). This approach, however, necessitates more than growth; it requires structural transformation, social inclusion, and ecological stewardship. Technology, in this context, emerges as both a tool and a terrain of struggle. On one hand, advancements in digital technology, renewable energy, agricultural innovation, and health informatics hold immense potential to leapfrog traditional development constraints. On the other hand, technological adoption is often mediated by unequal global power dynamics, weak institutional capacity, and limited domestic innovation ecosystems. Globalisation amplifies this tension. It facilitates access to global technological networks, investment capital, and knowledge transfer, but it also risks deepening dependency on imported technologies, widening digital divides, and marginalising local knowledge systems.

Therefore, the central question is not whether Nigeria needs technology to achieve sustainable development; this is beyond doubt. Rather, the pressing inquiry is how Nigeria can strategically leverage technology within the broader context of globalisation to realise development that is inclusive, resilient, and sustainable. This involves navigating a range of interlinked challenges: from digital infrastructure and education to governance, innovation policy, and global market integration. This paper seeks to explore the dynamic interplay between technology, globalisation, and sustainable development in Nigeria. It critically examines how technology is being deployed across key sectors, agriculture, health, education, and governance, and interrogates the institutional, infrastructural, and geopolitical constraints that limit its transformative potential. In doing so, the study contributes to the broader discourse on how developing countries can assert agency in the global digital economy, while aligning technological advancement with the Sustainable Development Goals (SDGs).

2. Conceptual Framework

In examining the relationship between technology, globalisation, and sustainable development in Nigeria, it is imperative to first outline the conceptual underpinnings that structure this inquiry. This section elucidates the foundational concepts guiding the analysis, sustainable development and the SDGs, technology and innovation, and globalisation, each of which interlocks to form the analytical framework for understanding Nigeria's development challenges and opportunities.

2.1. Sustainable Development and the SDGs

Sustainable development has emerged as the dominant paradigm for addressing the multidimensional challenges facing modern societies. Rooted in the landmark *Brundtland Report* (WCED, 1987), it is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Unlike traditional growth models that prioritise GDP expansion often at the expense of environmental or social outcomes, sustainable development is inherently integrative, encompassing three core dimensions: economic viability, social inclusivity, and environmental sustainability.

In operationalising this concept, the United Nations adopted the 2030 Agenda for Sustainable Development, encapsulated in 17 Sustainable Development Goals (SDGs) and 169 targets. These goals, ranging from eradicating poverty (SDG 1) and ensuring quality education (SDG 4), to fostering innovation and infrastructure (SDG 9) and combating climate change (SDG 13), constitute a globally accepted framework for policy formulation and implementation. Nigeria's alignment with the SDGs is both a political commitment and a developmental necessity. Through the *National Development Plan 2021–2025* and related policy documents, the Nigerian government has articulated an ambition to accelerate structural transformation in line with the SDG agenda. Yet, the country's performance across several indicators remains mixed. While progress has been noted in areas such as access to mobile technology and financial inclusion, setbacks persist in maternal health, educational quality, climate resilience, and institutional transparency (UNDP Nigeria, 2021). These uneven outcomes highlight not just technical capacity deficits, but deeper governance, coordination, and implementation challenges. Sustainable development, therefore, is not simply a normative goal but a contested terrain shaped by domestic political economy, institutional arrangements, and global influences. As such, any strategy aimed at fostering sustainability in Nigeria must account for these complexities, particularly in terms of how technological tools are mobilised within this framework.

2.2. Technology and Innovation

Technology, broadly defined as the application of scientific knowledge for practical purposes, has always been a driver of human advancement. In the context of sustainable development, it is not merely a catalyst for productivity growth, but a strategic instrument for transforming economic structures, delivering public services, and reducing environmental footprints. The World Bank (2020) underscores that technological innovation, whether through digital platforms, green energy, artificial intelligence, or precision agriculture, is indispensable to meeting the SDGs.

In Nigeria, technological innovations are beginning to reshape critical sectors. For instance, mobile money platforms such as Paga and OPay have expanded access to financial services for previously unbanked populations. In agriculture, digital applications provide farmers with real-time weather forecasts and market prices, while telemedicine initiatives are helping bridge urban-rural health disparities. However, the pace and depth of technological transformation are uneven, often reflecting pre-existing inequalities in access, skills, infrastructure, and capital.

Importantly, the capacity of technology to drive sustainable development is mediated by several contextual variables: the regulatory environment, the nature of market incentives, the availability of skilled human capital, and the strength of innovation ecosystems. Without coherent policies to nurture local content development, protect intellectual property, and build research and development (R&D) capacity, Nigeria risks becoming a passive consumer of imported technologies rather than an active participant in global innovation chains. Furthermore, the concept of inclusive innovation, that is, innovation that is not only economically viable but also socially and environmentally just, is particularly pertinent in the Nigerian context. As the country grapples with energy poverty, youth unemployment, and climate vulnerability, technology must be harnessed not simply for efficiency gains but for transformative, equitable development.

2.3. Globalisation

Globalisation refers to the intensification of cross-border flows of goods, services, capital, people, and information, enabled by advancements in transportation, communication, and liberal economic policies. In developmental discourse, globalisation is often portrayed as a double-edged sword. On the one hand, it enables access to foreign direct investment (FDI), facilitates the transfer of technology and knowledge, and integrates domestic markets into global value chains. On the other hand, it can deepen dependency, erode domestic industries, and expose countries to external shocks and volatile capital flows (Sachs et al., 2022).

For Nigeria, globalisation has had ambivalent consequences. The country's increased integration into the global economy, through oil exports, participation in multilateral trade arrangements, and the penetration of digital technologies, has opened up new economic possibilities. Yet, this integration has not been accompanied by commensurate structural transformation. Instead, Nigeria remains heavily reliant on primary commodity exports, while importing high-tech goods and services. The asymmetrical nature of global trade and investment flows limits Nigeria's bargaining power and constrains its capacity to shape its technological trajectory.

Moreover, digital globalisation, the borderless spread of data, software, and platforms, raises new challenges related to data sovereignty, cybersecurity, and algorithmic governance. The dominance of foreign tech giants in the Nigerian digital ecosystem creates dependencies that can compromise national autonomy over digital infrastructure and citizen data. As such, navigating globalisation requires more than openness; it demands strategic governance to ensure that Nigeria captures the benefits of integration while mitigating its risks. In summary, while globalisation provides the infrastructure for technological transfer and innovation diffusion, it does not guarantee developmental convergence. For Nigeria, the task is to localise global opportunities, embedding them within national strategies that prioritise inclusive growth and sustainability.

3. Nigeria in the Global Technological Landscape

Over the last two decades, Nigeria has emerged as a major digital actor within Africa, capitalising on demographic dynamism, entrepreneurial energy, and the global proliferation of digital technologies. Despite enduring challenges such as inadequate infrastructure, epileptic power supply, limited broadband penetration in rural areas, and an underfunded education system, Nigeria has made impressive strides in the adoption and utilisation of technology, particularly in the domain of information and communication technologies (ICTs). According to recent data from the Nigerian Communications Commission (NCC, 2024), mobile phone penetration has surpassed 80%, with over 220 million active telephone lines recorded nationwide. Internet usage continues to grow exponentially, with over 154 million internet users as of late 2023, ranking Nigeria among the top internet-using countries globally. This exponential digital uptake is not merely a reflection of consumer demand, but also of the broader transformation of social, economic, and political life, increasingly mediated through digital platforms.

3.1. Digital Entrepreneurship and Innovation Ecosystems

One of the most visible success stories within Nigeria's technological landscape is the fintech sector, which has positioned the country as a regional hub for digital financial services. Start-ups such as Flutterwave, Paystack, Carbon, and Kuda have not only revolutionised payments and banking but have also attracted hundreds of millions of dollars in foreign direct investment (FDI). Paystack's $200 million acquisition by Stripe in 2020 marked a significant moment for African tech, signalling growing investor confidence in Nigerian digital innovation. Nigeria's financial technology ecosystem, often centred in hubs like Lagos and Abuja, is complemented by a growing network of incubators and accelerators such as CcHub, Andela, StartUp Nigeria, and the Tony Elumelu Foundation. These institutions foster local innovation and entrepreneurship, contributing to job creation, financial inclusion, and the democratisation of technological access.

This vibrant start-up culture is increasingly interfacing with global digital capitalism. Nigerian developers, content creators, and software engineers now participate in global value chains, offering remote services to firms in North America, Europe, and Asia. This transnational engagement has positioned Nigeria not just as a recipient of technology but as a source of digital labour and innovation.

3.2. Sectoral Penetration and the Expanding Digital Frontier

Beyond fintech, technology is transforming a range of sectors. In agriculture, platforms like Hello Tractor and FarmCrowdy use mobile applications to connect farmers to equipment and investors, improving productivity and reducing transaction costs. In health, LifeBank leverages geolocation and data analytics to deliver essential blood supplies and oxygen to hospitals in critical need. Educational technologies, including uLesson and Roducate, offer digital content and assessment tools, catering especially to secondary school students. The Nigerian government has also embarked on digital governance initiatives, such as the National Identity Management System, the Open Treasury Portal, and e-governance platforms in revenue collection, licensing, and budgeting. These projects, while still evolving, demonstrate an official recognition of technology's role in enhancing transparency, efficiency, and public service delivery.

3.3. Structural Constraints and Technological Vulnerabilities

However, Nigeria's integration into the global technological ecosystem is asymmetrical and fragile. While the country has achieved remarkable gains in tech adoption, it remains largely a consumer, rather than a producer, of advanced technologies. Core infrastructure such as data centres, cloud computing frameworks, semiconductor fabrication, and AI research hubs are either foreign-owned or entirely absent. This structural dependence leaves the country vulnerable to external shocks, regulatory decisions made abroad, and technological lock-ins.

Furthermore, cybersecurity has become a growing concern. Nigeria faces increasing incidents of online fraud, data breaches, and identity theft. The absence of comprehensive cyber-laws, a weak enforcement framework, and limited public awareness exacerbate these challenges. The Nigeria Data Protection Act (2023), while a positive step, is still in its infancy and faces implementation hurdles.

Additionally, foreign data dominance is another critical vulnerability. Many of Nigeria's digital services run on infrastructure and platforms controlled by foreign companies—raising concerns about data sovereignty, privacy, and regulatory autonomy. This dynamic mirrors what some scholars have termed a “digital neo-colonialism,” in which African states, lacking the technological base to develop local alternatives, become perennially dependent on external systems and protocols.

Table 1: Key Indicators of Nigeria's Digital Engagement (2023)

Indicator	Value	Source
Mobile Penetration Rate	81.5%	NCC (2024)
Internet Users	154 million+	NCC (2024)
Fintech Investment (2021–2023)	$1.3 billion+	Partech Ventures
Number of Tech Startups	3,300+	Disrupt Africa
Broadband Penetration	47.0%	NCC (2024)
National Cybercrime Ranking (Global)	Top 10 (by activity)	Interpol (2023)

3.4. Globalisation and the Uneven Distribution of Digital Value

At the heart of Nigeria's technological predicament lies the paradox of digital globalisation. While globalisation enables the flow of technology and capital, it also creates hierarchies in which value is disproportionately captured by more advanced economies. For instance, although Nigerian developers may contribute to international platforms, the intellectual property (IP), core profits, and control rights often remain concentrated in Silicon Valley or other global tech capitals. Local content creators and engineers, in effect, operate within an architecture in which value extraction is externalised, and domestic technological sovereignty remains elusive.

Moreover, the platformisation of the digital economy, where a few global firms control access to markets, data, and algorithms, has created a dependency that Nigeria has yet to strategically address. Without a strong national innovation system, investment in R&D, and a clear industrial policy for digital transformation, the country risks remaining on the margins of the Fourth Industrial Revolution. In sum, while Nigeria's digital trajectory shows immense promise and dynamism, it is riddled with contradictions that reflect the broader tensions of globalisation. The country's challenge is not just to adopt technology, but to do so on equitable, sovereign, and strategic terms. Without deliberate state action, robust policy design, and regional cooperation, Nigeria may continue to integrate into the global technological economy in ways that are shallow, extractive, and unsustainable.

4. Sectoral Analysis: Technology and the SDGs in Nigeria

Nigeria's pursuit of the Sustainable Development Goals (SDGs) hinges significantly on its ability to harness technological innovation across critical sectors. While digital technology presents opportunities for inclusive growth and service delivery, sector-specific analysis reveals stark variations in access, implementation, and impact. This section provides a focused examination of how technology is shaping progress toward four key SDGs: zero hunger, good health and well-being, quality education, and institutional development.

4.1. Agriculture (SDG 2: Zero Hunger)

Agriculture remains a cornerstone of Nigeria's economy, employing over 35% of the labour force and contributing approximately 23% to GDP. However, agricultural productivity has historically lagged behind potential due to fragmented land holdings, outdated practices, and weak infrastructure. Technological interventions are increasingly being introduced to modernise the sector. e-Extension platforms provide farmers with real-time agronomic advice, while drone-based mapping assists in land surveying, pest control, and precision farming. Digital platforms such as *Hello Tractor* connect farmers to tractor services through mobile-based bookings, significantly reducing labour constraints. Similarly, weather forecast apps and SMS services enable smallholders to make climate-smart decisions. Yet, these innovations face serious bottlenecks: only around 23% of rural areas have reliable internet access, and digital literacy levels among farmers remain low, particularly in the northern states (FAO, 2022).

Equation 1: Agricultural Productivity Index (API)

$$API = \frac{Total\ Agricultural\ Output}{Total\ Input\ Cost + Technology\ Adoption\ Rate}$$

Where:
Total Agricultural Output is the total value of crops and livestock produced (₦ or tonnes). Total Input Cost includes labour, fertilisers, seeds, machinery, etc. (₦). Technology Adoption Rate is the proportion (or index) of farmers or hectares using modern technology (scaled appropriately).

A higher API suggests more efficient agricultural productivity per unit cost adjusted for the level of technology adoption. The inclusion of the technology adoption rate in the denominator penalises systems where technology is underutilized, thus encouraging innovation.

Table 2: Digital Agriculture Initiatives in Nigeria

Initiative	Technology Used	Outcome/Impact	Challenges
Hello Tractor	Mobile app, GPS tracking	75% increase in tractor efficiency	Low smartphone penetration in rural areas
e-Wallet Scheme	SMS-based subsidy delivery	14 million farmers reached between 2012–2017	Limited last -mile data verification
Agropedia	AI-powered crop advisory	Targeted information for smallholder farmers	Requires steady internet and training

4.2. Health (SDG 3: Good Health and Well-being)

Technology is beginning to fill critical service delivery gaps in Nigeria's healthcare system, which remains plagued by underfunding, urban bias, and human resource shortages. The use of mobile health (mHealth) applications, telemedicine, and health data analytics is increasingly gaining traction, especially in underserved areas.

Platforms such as *mClinic* and *Doctoora* facilitate remote consultations and appointment scheduling, reducing the burden on overstretched public facilities. During the COVID-19 pandemic, these platforms experienced a surge in demand, revealing their potential for public health resilience.

Furthermore, **health information systems**, including the *District Health Information Software 2 (DHIS2)*, have enhanced data-driven planning by state ministries of health. However, infrastructural deficits (notably electricity and internet connectivity), poor digital literacy among healthcare workers, and data privacy concerns persist.

Table 3: Technological Interventions in Nigerian Healthcare

Platform/Project	Function	SDG Alignment	Limitation
mClinic	Remote antenatal care monitoring	SDG 3.1, 3.7	Inconsistent connectivity
Doctoora	Health professional marketplace	SDG 3.c	Low adoption in rural areas
DHIS2	Health data management	SDG 3.d	Fragmented data reporting system

4.3. Education (SDG 4: Quality Education)

Nigeria's education sector is marked by chronic underinvestment, infrastructural collapse, and regional disparities in access and outcomes. According to UNESCO (2023), Nigeria has the highest number of out-of-school children globally, exceeding 20 million. Technology, however, is playing a growing role in expanding educational access and improving content delivery. Platforms like uLesson, Roducate, and Tuteria provide video lectures, practice assessments, and one-on-one tutoring. These services have gained popularity, especially among middle-class urban households. Nonetheless, systemic barriers remain: electricity outages, internet cost, and device unaffordability continue to limit reach. For students in remote and impoverished regions, EdTech is still largely aspirational rather than transformative.

Table 4: Selected EdTech Solutions in Nigeria

Platform	Services Offered	User Base (2023 est.)	Key Constraints
uLesson	K–12 curriculum -based video lessons	Over 2 million downloads	Subscription cost
Roducate	Exam preparation (WAEC, JAMB, etc.)	Government partnerships	Poor device distribution
Tuteria	Online tutoring platform	Over 10,000 tutors	Low rural uptake

4.4. Governance and Institutions (SDG 16: Peace, Justice, and Strong Institutions)

Technology is also reshaping governance in Nigeria, promoting transparency, accountability, and civic participation. Initiatives such as BudgIT, a civic-tech organisation, use infographics and data visualisations to simplify government budgets for the public. The Open Treasury Portal, launched in 2019, allows Nigerians to monitor government spending in near real-time, a significant step toward open governance. Moreover, digital identity systems and biometric voter registration have enhanced electoral transparency. The Independent National Electoral Commission (INEC) now deploys biometric verification systems to reduce fraud. However, challenges remain around cybersecurity, data manipulation, and the politicisation of digital tools. The absence of robust legal frameworks for data governance also raises concerns about surveillance and civil liberties.

Table 5: Technology and Governance Tools in Nigeria

Initiative	Functionality	SDG 16 Target	Challenges
Open Treasury Portal	Real-time public finance monitoring	SDG 16.6, 16.10	Data inconsistency, limited accessibility
BudgIT	Budget simplification & civic education	SDG 16.7	Limited outreach in rural communities
INEC Biometric Systems	Electoral authentication	SDG 16.6	Concerns over technical failure

Summary of Sectoral Impact

Table 6: Summary of Sectoral Technology Impact on SDGs

Sector	Technology Example	SDG Target	Impact Level	Limiting Factor
Agriculture	Hello Tractor, e-Wallet	SDG 2.3, 2.4	Moderate to High	Infrastructure, digital literacy
Health	mClinic, DHIS2	SDG 3.1, 3.8, 3.d	Moderate	Connectivity, workforce training
Education	uLesson, Roducate	SDG 4.1, 4.3, 4.a	Low to Moderate	Device cost, rural-urban divide
Governance	BudgIT, Open Treasury	SDG 16.6, 16.7, 16.10	Moderate to High	Legal gaps, cyber vulnerabilities

In summary, although digital technologies are making measurable contributions to Nigeria's SDG agenda, their deployment remains uneven and largely influenced by existing structural constraints. Achieving sustainable impact requires not only the expansion of digital tools but also their strategic integration within inclusive, context-aware institutional frameworks.

5. Challenges in Leveraging Technology for Sustainable Development in Nigeria

While the potential of technology to accelerate sustainable development in Nigeria is immense, actualising this potential is constrained by a confluence of structural, institutional, and policy-related barriers. These challenges manifest not only in the technological domain but also across governance, human capital, and socio-economic infrastructures. Below is a detailed discussion of the core challenges:

Challenge	Implication
Inadequate Digital Infrastructure	Despite gains in mobile phone penetration, many rural and semi-urban areas remain digitally disconnected. Poor broadband coverage, erratic electricity supply, and the high cost of internet access limit the reach of technology-driven interventions, particularly in agriculture, health, and education sectors. This digital divide reinforces existing inequalities and undermines inclusive development.
Low R&D Investment	Research and development (R&D) expenditure in Nigeria remains below 0.2% of GDP (UNESCO, 2023), far lower than the 1–2% seen in emerging Asian economies. This impedes the development of indigenous technologies and stifles local innovation ecosystems. Nigeria continues to rely heavily on imported technologies that may not be well adapted to local contexts, reducing the sustainability and scalability of solutions.
Regulatory Uncertainty	Inconsistent policies, delays in implementing data protection laws, and abrupt interventions (e.g., the 2021 Twitter ban) create an unpredictable environment for digital innovation. Regulatory bottlenecks deter investment in sectors such as fintech, ehealth, and blockchain applications. The absence of a coherent national digital strategy hampers alignment with global technology governance standards.
Skills and Human Capital Gap	Nigeria suffers from a mismatch between education output and industry needs, especially in STEM (Science, Technology, Engineering, and Mathematics). Digital literacy rates are uneven, and many youths lack the technical skills required to participate meaningfully in the digital economy. This undermines both the adoption and innovation of sustainable technologies.
Technological Dependency	Much of Nigeria's technological infrastructure—including cloud storage, payment gateways, and cybersecurity protocols—is reliant on foreign platforms and providers. This dependency creates vulnerabilities in national sovereignty, data privacy, and resilience against global supply chain shocks. In areas like artificial intelligence, Nigeria is largely a consumer of models developed abroad, with limited local capacity to adapt or contextualise them.

Discussion

These challenges are not insurmountable, but they require a coordinated and deliberate policy response that integrates technological advancement with inclusive development goals. A central concern is the structural asymmetry embedded in globalisation, where Nigeria participates in global technology markets primarily as a consumer rather than a co-creator of innovation. This status limits the nation's ability to localise technologies for sustainability purposes. Moreover, without significant investments in digital infrastructure, particularly in underserved regions, the country risks deepening socio-economic divides. The lack of a robust R&D culture not only affects innovation but also curtails the country's ability to engage in problem-driven technology creation, which is essential for addressing local sustainability challenges.

Importantly, regulatory frameworks must evolve in tandem with technological changes. A predictable policy environment is critical for attracting both domestic and foreign capital into technology-based solutions aligned with the Sustainable Development Goals (SDGs). In sum, while technology presents a viable pathway to sustainable development in Nigeria, realising these potential demands urgent attention to the structural impediments discussed above. Addressing these will enable Nigeria to not only harness global technologies but also to lead innovations tailored to its unique developmental needs.

6. Policy Recommendations

Achieving sustainable development through technology in Nigeria requires a shift from reactive to proactive policymaking. The country must go beyond incremental reforms to embrace systemic strategies that build technological resilience, local innovation capacity, and inclusive access to digital tools. The following policy recommendations are grounded in global best practices but adapted to Nigeria's unique developmental context:

6.1. Invest in Digital Infrastructure

Robust and inclusive digital infrastructure forms the backbone of a technology-driven development agenda. In Nigeria, investments should be targeted at bridging the urban-rural digital divide.

1. **Action Points:**
   - i. Expand **broadband coverage** to underserved and rural communities by incentivising private sector-led rollout through tax breaks or matching grants.
   - ii. Prioritise **electricity access** as a complementary enabler of digital connectivity, particularly through off-grid renewable energy solutions.
   - iii. Upgrade **ICT backbone infrastructure**, including fibre-optic networks, national data centres, and satellite technologies to increase speed, reliability, and affordability.
2. **Expected Impact:** Improved connectivity would unlock access to digital health, education, and agricultural services, especially in remote communities, thus fostering inclusivity in the attainment of SDGs.

6.2. Strengthen STEM Education

Education must be reoriented to prepare Nigerians for the demands of the digital age. This includes embedding technology into learning and fostering innovation capabilities.

1. **Action Points:**
   - a. Reform **national curricula** to include coding, robotics, data science, and digital literacy from early childhood education through to tertiary institutions.
   - b. Build **teacher capacity** in science and digital subjects through continuous professional development.
   - c. Partner with the private sector to establish **maker labs**, coding bootcamps, and virtual learning platforms in underserved areas.
2. **Expected Impact:** An educated and tech-savvy population will be better positioned to innovate, adapt, and create technologies tailored to Nigeria's development needs.

6.3. Promote Local Innovation Ecosystems

Nigeria's vibrant tech ecosystem must be harnessed not just for economic growth, but as a critical pillar for sustainable development.

1. **Action Points:**

   a. Establish **innovation funds** and offer tax credits to encourage research and development in areas like climate tech, AgriTech, and EduTech.

   b. Support **tech hubs, incubators, and accelerators** through public-private partnerships to facilitate knowledge transfer, mentorship, and seed funding.

   c. Create linkages between **universities, research institutes**, and industry to drive applied research with social impact.

2. **Expected Impact:** Strengthened local capacity for innovation will reduce dependency on imported technologies and ensure solutions are grounded in local realities.

6.4. Reform Regulatory Frameworks

A predictable and innovation-friendly regulatory environment is essential for attracting investments and protecting users' rights.

1. **Action Points:**

   a. Streamline digital regulation under a central coordinating body to reduce fragmentation and conflict across agencies.

   b. Fast-track **data protection legislation** aligned with international standards (e.g., GDPR) to provide clarity for investors and protection for citizens.

   c. Encourage **regulatory sandboxes** to allow controlled testing of emerging technologies such as blockchain, AI, and digital currencies.

2. **Expected Impact:** Clear, stable, and forward-looking regulations will reduce business uncertainty, foster trust in digital systems, and promote innovation in critical sectors.

6.5. Enhance Data Sovereignty and Cybersecurity

As digital systems become more embedded in national infrastructure, Nigeria must prioritise control over its data and protect its digital assets.

1. **Action Points:**

   a. Develop and enforce **data localisation policies** requiring certain categories of data to be stored within national borders.

   b. Strengthen **cybersecurity institutions** and frameworks, including the National Cybersecurity Strategy, with better coordination and budgetary support.

   c. Foster **regional cooperation** (e.g., through ECOWAS) for joint action against cross-border cyber threats and digital monopolies.

2. **Expected Impact:** Greater data sovereignty will enhance national security, reduce foreign dependencies, and increase resilience against global technological shocks.

Summary Table: Policy Recommendations and SDG Alignment

Policy Recommendation	Targeted SDGs	Anticipated Outcomes
Invest in Digital Infrastructure	SDG 9 (Industry), SDG 10 (Reduced Inequality)	Enhanced access to digital services, especially in rural and marginalised communities
Strengthen STEM Education	SDG 4 (Quality Education), SDG 8 (Decent Work)	Improved human capital, increased employability, and a more innovative youth population
Promote Local Innovation Ecosystems	SDG 8 (Decent Work), SDG 17 (Partnerships)	Boost in indigenous solutions, job creation, and entrepreneurial growth
Reform Regulatory Frameworks	SDG 16 (Institutions), SDG 9 (Innovation)	Improved investor confidence, reduced regulatory risk, stronger digital rights protections
Enhance Data Sovereignty & Cybersecurity	SDG 16 (Peace & Justice), SDG 11 (Sustainable Cities)	Secured digital infrastructure, better control over critical national data

By aligning these recommendations with broader sustainable development goals, Nigeria can better harness the opportunities presented by globalisation while mitigating its risks. The strategic imperative is not merely to digitise but to domesticate digital transformation in ways that are inclusive, secure, and growth-enhancing.

7. Conclusion

The globalisation of technology presents Nigeria with an unprecedented opportunity to overcome long-standing development constraints and reposition itself within the global knowledge economy. Unlike traditional industrialisation paths, which often require decades of capital accumulation and physical infrastructure development, digital technologies offer the potential to *leapfrog*, enabling rapid advancements in productivity, service delivery, and human development across sectors.

However, the mere availability of global technological tools is not a guarantee of progress. The real challenge lies in strategically deploying these technologies within Nigeria's socio-economic and institutional context. While sectors such as fintech and telecommunications have demonstrated Nigeria's latent digital potential, this growth remains uneven and largely concentrated in urban centres. Without deliberate interventions, digital divides between urban and rural, rich and poor, male and female may deepen existing inequalities. To fully unlock the promise of globalisation, Nigeria must adopt a dual strategy: embracing external opportunities while simultaneously addressing internal structural bottlenecks. These include gaps in digital infrastructure, deficiencies in STEM education and human capital, weak innovation ecosystems, and outdated regulatory frameworks that often stifle rather than stimulate growth. Equally critical is the need to assert data sovereignty and build resilience in the face of global cyber threats, technological monopolies, and geopolitical dependencies.

Moreover, sustainability must remain central. Digital transformation must not be pursued at the expense of environmental stewardship, social cohesion, or cultural relevance. Rather, it should support green innovation, enhance inclusive governance, and promote local content development. In this regard, technology should be seen not as an end in itself, but as an enabler of equitable and sustainable development.

The imperative, therefore, is not simply to "catch up" with the rest of the world, but to chart a path that is uniquely Nigerian, leveraging technology to meet the Sustainable Development Goals (SDGs) in a way that is people-centred, future-focused, and globally connected. If well harnessed, globalised technology can shift Nigeria's development trajectory from extractive dependency to productive self-reliance, from policy inertia to innovation-led governance, and from marginal participation in global value chains to active digital leadership. Nigeria's development in the age of globalisation will depend not just on what technologies it adopts, but how it governs them, embeds them, and evolves with them. By building resilient institutions, inclusive digital systems, and innovation-friendly ecosystems, Nigeria can turn globalisation from a disruptive force into a transformative tool for sustainable development.

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REVENUE GENERATION AND UTILIZATION IN NIGERIAN LOCAL GOVERNMENTS: ISSUES AND CHALLENGES

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Abstract

Local Governments globally are recognized as crucial and indispensable units of government. They are well placed to co - ordinate programmes of both political and socio – economic development at the grass root. Local governments in Nigeria are given multiple functions, some of which are wide in scope like education, health, water supply and rural electrification. In order to perform these functions creditably well, they need viable means of generating funds. Finance is the livewire of any state and no state can function successfully without sufficient funds. The success or failure of any local government depends to a large extent, on the funds available to the local government and the way the resources are managed. Local governments in Nigeria usually lack enough funds to carry out many of their functions. This is partly depicted by lack of good roads, health care centers with dilapidated structures, schools without adequate infrastructures and lack of electricity which is very rampart in many local governments. The political class are known to divert the limited funds that are available for development because they are more interested in maximizing their self - interest to the detriment of collective interest. This paper has set some objectives for itself. First, is to trace the origin of revenue generation in the Local Government. Second, is to discuss the sources of revenue to the Local Government. Third, is to interrogate the challenges of generating revenue or funds in the local government. Fiscal Federalism and Public Choice theory were utilized as the theoretical framework. The secondary means of data collection was utilized. The study concludes that for Local Government to perform their functions effectively and efficiently, they must be given enough tax base and financial autonomy. The paper recommends that the government should make conscious effort to apprehend and punish corrupt government functionaries who are bent on sabotaging government efforts towards rural or local government development among others.

Keywords: *Finance, Development, Poverty, Rural, Organization, State*

Introduction

The need to create uniform development, boost citizen's participation and trigger government responsiveness drove the creation of local government. Local Government is a unit of administration all over the world and a vital tier of government because of its proximity to the people (Agagu, 2004). The local governments are designed to deliver services which the federal and state government cannot easily administer due to their distance from the local communities. Uhunmwuangho and Aibieyi (2013) rightly pin point that 70% of the Nigerian population live in the local government areas and accordingly it has the responsibility to articulate their needs and map out the procedures and techniques to realize them. The 1976 local government reform is noted as a watershed in the history of local government creation in Nigeria because for the first time in the history of the country, it was recognized in the constitution as the third tier of the government and was also given specific responsibilities. Over the years, the responsibilities of local governments have continued to grow without viable means of generating income to effectively carry out these responsibilities. Some people blame the local government for being docile in terms of aggressive revenue collection to add to the state and federal allocations. Others see their lack of autonomy as their bane to the generation of enough funds to achieve their goals. Others see corruption by government functionaries as the greatest bane to local governments development efforts. Uhunmwuangho and Aibieyi (2013) see corruption at the local government level as pervasive, entrenched and very worrisome and has gradually become a "normal" way of doing things. Similarly, Edeh and Nwakamma (2017) reiterate that despite the position of local government as the nearest government to the people and the resources that have accrued to them; they do not have much to show in terms of provision of services to their communities due to corruption by the political class. Kivoi (2012) maintains that corruption is prompted by the spirit of private gain at the expense of public interest. Nyanga and Theuri (2011) add that corruption frustrates government's ability to supply basic services such as healthcare, education and leads to depletion of public resources.

Every organization or state needs adequate flow of revenue to be able to perform its responsibilities to either the public or to customers. Many local governments in Nigeria have remained underdeveloped despite their status as the third tier of government. This is depicted partly by lack of deplorable roads, health centers, portable water, good schools and organized markets and motor parks. Ola and Tonwe (2005) rightly contend that lack of finance had always been one of the major problems that hinder local governments in the performance of their functions in the country. Local governments in Nigeria were given a constitutional backing to receive a statutory proportion of funds in the federation account as well as the states, which are to contribute a proportion of their internally generated revenue. The local government system in Nigeria has over the years been under the strain of dearth of funds and as a result has failed to provide the needed infrastructural development of local government areas (Odoemene, 2020). The most important function of the government is providing security and provision of welfare services to the citizens. These functions cannot be fulfilled without money. Governments at all levels have been empowered by the constitution to generate revenue. As government generates more cash, more projects are inaugurated, extra money in circulation, the more likelihood for employment and economic growth and improved quality of life. Revenue generation and its sustainability are of paramount importance as a result of the fact that revenue represents the life wire of every establishment. Morufu and Babatope (2017) rightly submit that the relevance of revenue generation, utilization, and distribution towards maintaining both the operating and new socio – political and economic structure in any economy cannot be over stressed.

Okolie etal (2024) rightly posit that the subsistence and continuous service delivery and implementation of economic policies that encourage gross domestic product in the country are reliant on adequate availability of revenue to the government. The constitution also specifically gave the local government power to generate funds through some sources. Sadly, local governments in Nigeria usually lack funds needed to carry out their functions. This paper has set some objectives for itself. First, is to trace the origin of revenue generation in the Local Government. Second, is to discuss the sources of revenue to the Local Government. Third, is to interrogate the challenges of generating revenue or funds in the local government. Fiscal Federalism and Public Choice theory were utilized as the theoretical framework. The secondary means of data collection was utilized.

Literature Review

Local government was created to accelerate development at the grassroots among other reasons. Similarly, Okolie et al (2004) observe that local government was introduced to induce economic and infrastructural development to the people at the grassroots. Arguing in the same vein, Musa and Ajibade (2016) note that local government exists to provide services and positively alter rural lives. Bramal et al (2022) surmise that the success of any local government to a large extent rely on its ability to exploit the human and material resources to achieve the set objectives. Akpan (2008) stresses that local government is a third tier of government that enjoys some rational measures of autonomy, with elected representatives as officials especially in a democracy. Adesanya et al (2022) maintain that local government is designed to improve the process of democratization, promote citizens' participation in decision making and allocate goods and services at the local areas. Local government also exists to lessen the obligation of the state and federal governments which appears to be much in a country like Nigeria with huge geographical area and population.

Braimoh and Onuoha (2022) see revenue generation as the procedure and modes used by local governments to raise funds for service delivery. Wono (2022) points out that lack of funds has been discovered as the major factor militating against the effectiveness of local government administration in Nigeria. Nigeria is a multi - cultural country; the creation of local government therefore instigates the feeling of belonging among the different groups who have government presence in their area. Odoemene (2020) reports that though some states are actually anxious to increase their internally generated revenue (IGR) base, there seemed to be a general lack of ingenious ideas and political will to utilize available opportunities for revenue diversification. Arguing in the same vein, Ayogu et al

(2019) contend that local government councils in Nigeria suffer from absence of political will or the ability to raise enough funds to its statutorily allocated fund from the states and federal governments as demanded by fiscal federalism which she operates. Contributing to the reason local government is struggling financially, Jimoh (2003) notes that many legal sources of revenue to the local government remain untapped, while processes for collecting, dispatching and accounting for the existing revenue sources often fall short of adequate standards and best practices. Indeed Nnamocha (2002) postulates that over dependence on statutory allocation from the federal government by the local government has led to the disregard or abandonment of some internal sources of revenue generation. This, according to him has led to many local governments remaining where they are without salient improvements. Kizito and Fadila (2015) have reiterated the fact that state/local government joint account has tended to become a means for dwindling, switching and misapplying the allocation to local government councils, and this has continued to extremely reduce the funds available to the local governments.

Okereke and Olewe (2023) point out that the local government finances must be vitalized both internally and externally so as to achieve the objective of rural development and to ensure efficient and effective local government administration. Adedokun (2012) rightly posits that one of the persistent problems of local government is the depletion of revenue accruing to them and lack of efficient management of resources as depicted by annual deficits and inadequate funds for meaningful growth and viable project development. Lawal (2014) lamented that despite the fact that the majority of the food consumed and a good majority of electoral votes are derived from the rural areas, they are usually neglected and this is depicted through the infrastructural decay that is prominent in rural areas of the country.

Theoretical Underpinning

This study utilized the Public Choice theory and the Fiscal Federalism theory. The proponents of the Public Choice theory are James Buchanan and Gordon Tullock. The main thrust of the theory is that government officials and politicians act essentially out of self - interest rather than collective or public good. The theory perceives political exercises as a forum for competition obsessed by individual inducement or motivation. The theory is connected to the study because some government officials are motivated by self - interest not by public welfare. Local government officials or internal revenue collectors embezzle or poorly harness public funds because they rank personal gain over collective gain. They therefore engage in unscrupulous activities solely for their own benefit. These activities include non - transparent budget processes, diversion of public funds, inflation of contract sums etc. The Fiscal Federalism theory was originally promoted by Richard Musgrave and Wallace Oates. It provided a theoretical framework for comprehending how public funds are generated, apportioned and spent in multi – tiered government structures. The theory stresses the allocation of revenue raising sources to different levels of government. In linking this theory to the Nigerian situation, local governments are not given viable means of revenue generation and this negatively affects development efforts. The theory also recognizes vertical fiscal imbalance where lower levels of government have more spending responsibilities but lack the ability to generate sufficient revenue. This has frustrated development efforts at the grassroot

History of Revenue Generation in Nigeria

Pre – Colonial Era (Before 1900): Before the colonial rule, what subsisted were traditional governance structures such as emirates, kingdoms and chiefdoms. The native revenue ordinance was introduced by the colonial masters and it worked in the North and the South West because they were already having a centralized system of administration. The key tax instrument includes zakat, jangali and ishakole. It however failed in the South East because of lack of centralized administration. These entities generated revenue through tributes from conquered territories, taxes from subjects, market dues, levies and fines. Other sources include community – based – systems: for community projects like footpaths and wells, establishing early tax – for – service principle. These revenues enhanced the smooth running of the traditional administration.

Colonial Era: (1900 – 1960)

Colonial tax was introduced for the first time in 1906 (Dekker, 2020). It was however, formalized through the introduction of the Native Revenue Ordinances in 1917. The ordinance permitted the native authorities or administrators to collect direct taxes on huts, farms, personal income tax, cattle tax, market tolls and livestock. The revenue collected was centrally controlled by the colonialists with very little reinvestment and this generated bitterness or condemnation by the natives. Minimal or little grants – in – aid was instituted which were usually inadequate for local needs. The Richards constitution of 1946 and Lyttleton constitution of 1954 acknowledged local government but gave them very little financial autonomy.

Post – Independence Era (1960 – 1976)

After independence in 1960, the three regions, which were the Northern, Western and the Eastern regions controlled the local taxes generated in their regions. This led to conflicting revenue policies, diverse structures and revenue strength. In 1963 the Midwestern region was created and the 1963 constitution assigned 10% of federal revenue to the localities, though implementation was random or haphazard. Diversion of internally generated revenue into private pockets was common because officials were not properly monitored. This affected efficiency and service delivery at the local government level.

1976 Government Reform

This reform is noted as a watershed in the history of local government in Nigeria. Local Governments in Nigeria was for the first time recognized as the third – tier of government. They were also made to enjoy some level of financial autonomy as it introduced 10% federal allocations. It expanded their responsibilities to include primary education, health and provision of some infrastructure. Their revenue sources included through statutory allocations from the federation account, value added tax (VAT) and internally generated revenue (IGR)

1999 Constitution and Democratic Era

The 1999 constitution provided for a State Joint Local Government Account (SJLGA) through which the state government receives money on behalf of the local government. The state government also allocates 20% of their internally generated revenue to the local government. The local governments in Nigeria have continued to depend so much on these allocations and this has limited their progress.

Sources of Funds to Local Government

The sources of funds to local government can be through either external or Internal sources. External Sources however, include federal allocation, state allocation from value added tax, state grants in aid, Federal grants in aid, borrowing from state government and financial institutions. While Internal sources include fines from customary courts, shop and kiosks rates, on and off liquor fees, slaughter slab fees, marriage and death certificates, cattle tax and naming of street registration fees. Other internal sources include merriment and road closure levy, signboard and advertisement permit fees, vehicle radio license fee, customary burial permit fees, motor park levies, wrong parking charges, radio and television license fees, Slaughter slab fees, and shops and kiosks rates (Adedokun, 2012).

Challenges of revenue generation and utilization in the Local Government

i. **Overdependence on Statutory Allocation:** most local governments in Nigeria overly depend on federal allocations and are very docile to generate internal revenue and lack innovative new ways of generating income and these have continued to negatively affect their ability to fulfill their objectives. Olusola (2011) reiterates that many local governments in Nigeria rely so much on the federal allocation which are sometimes erratic because the federal government rely heavily on the proceeds from oil which mostly fluctuates. She further argues that oil has been experiencing decline in the demand because the world is shifting away from petroleum as a source of energy and are relying on solar and gas energy. This has affected the funds available for service delivery in the local government

ii. **Corruption and Mismanagement:** Many tax revenue collectors in the local government are very corrupt. They print their own receipts which they issue to people who pay their tax through them. They input the amount of money they like which they will rewrite in their offices inputting the right amount. Some of the money are not accounted for as they are diverted to their private pockets. Political office holders sometimes award contracts as political patronage to their friends, cronies or party members. Lawal and Oluwatoyin (2011) rightly pin point that corruption and mismanagement of resources are major problems within local governments in Nigeria. Edeh and Nwakanma (2017) also document that some political office holders acquire power through illegitimate and undemocratic means but in order to make their government legitimate they distribute public funds to prominent people in order to garner their support, thus, encouraging wastage of available limited funds. Egberi and Madubueze

(2014) document that corruption at the local government is pervading, unabashed, uncontrolled and persistent

iii. **Poor Revenue Collection Mechanism:** The lack of modern technology or appropriate auditing systems frustrates effective revenue tracking. Ocheni and Nwankwo (2012) rightly pin point that local governments sometimes lack the technical capacity to effectively harness allocated funds for capital projects

iv. **Political Interference:** the 1999 Nigerian constitution did not give autonomy to local governments. The state governments have great influence on their affairs. The state governments control their budgets, their federal and state financial allocations and their overall affairs and this has negatively affected their growth and development. The federal and state levels of government tend to hold on to juicy functions and the services which yields high revenue returns. They include motor vehicle licensing; approval of building plans etc. Asaju (2010) cited in Usang and Salim (2015) rightly argues that due to political interference, local governments are usually forced by the state governments to embark on projects that have no bearing on the needs of local communities. This leads to misplace of priority and waste of scarce resources

v. **Lack of Capacity and Manpower:** Many local governments in Nigeria lack skilled personnel in budgeting, planning, and financial management, limiting effective use of resources. Olorungbemi (2015) rightly stresses that there is a shortfall of well trained and qualified experts who specializes in tax collection at the local government and this has affected development at the local government level

vi. **Fear of the Community Members**: local government officials most times are afraid of reviewing tax rates due to fear of the community members or public push back, because of their closeness to the people. This encouraged a situation whereby the tax they charge is too low and cannot be used to execute meaningful projects

vii. **Lack of Cooperation from Community Members**: citizens skepticism and refusal to pay tax due to poor record of performance of local government in Nigeria. Local governments have performed poorly in-service delivery and this has encouraged mistrust by the people and their refusal to cooperate with the local government administrators. Oloruntoba (2021) rightly report that in an atmosphere of public distrust, the government will find it difficult to generate enough funds through tax

viii. **Migration:** rural – urban migration negatively affects revenue generation in the local government. Young people relocate to the urban areas to hunt for jobs and to enjoy social amenities which are usually not available in the rural local governments and this reduces the number of people available to be taxed. Kanu and Ukonze (2018) allude to this assertion, they rightly document that the exit of young adults from the rural communities will lead to decline in agricultural output, reduction of funds available for development, low income and standard of living of rural dwellers and total desertion of the rural areas

Conclusion

It is not contestable that the local government has enormous utility as a result of its position as the closest government to the people. For any meaningful development to occur at the local government, they must be given free hand to operate and the state government should recognize them as partners in progress. Their tax base must be increased so as to reduce their overdependence on the other macro levels of government.

Recommendation

In the light of the foregoing evaluation, the following recommendations are hereby suggested:

i. Local government funds should be transferred directly to them instead of through the State Local Government Joint Account to eliminate embezzlement of their funds by the state government
ii. Corrupt local government officials should be jailed to serve as a deterrent to others who might want to toll the same line
iii. The local government should make conscious effort to build social infrastructures in the local government to reduce rural urban migration with its attendant consequences
iv. The capacities of the local government revenue collectors should be developed. They should be trained to be in line with current trends on revenue collection
v. Local government should embark on commercial ventures or viable businesses that can yield revenue that they use to support federal and state allocations
vi. Local government should imbibe modern means of tax collection so as to eradicate or minimize tax evasion by the citizens

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TECHNOLOGIES IN SUSTAINABLE PRODUCTION: UNPACKING THE IMPACT OF ROBOTICS AUTOMATION WITHIN NIGERIA'S GLOBALISATION AND DEVELOPMENT CONTEXT

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Abstract

The manufacturing sector faces unprecedented challenges in balancing competitiveness with environmental sustainability, as traditional production approaches often increase carbon footprints and environmental degradation. The aim of this conceptual review is to explore and synthesize existing research on the role of robotics automation technologies in promoting sustainable production practices in manufacturing, specifically examining their impact on economic, environmental, and social sustainability. The study analyzed 76 peer-reviewed journal articles, conference papers, and industry reports published between 2009 and 2025. The review utilized multiple academic databases including Scopus, Web of Science, and IEEE Xplore, employing thematic analysis to identify key trends, challenges, and opportunities. The review revealed a significant increase in research on robotics automation and sustainability, particularly in recent years. Robotics automation technologies, including industrial robots, robotic process automation (RPA), and collaborative robots, demonstrate substantial potential to improve production efficiency, reduce environmental impact, and enhance workplace safety. However, future research should focus on developing integrated frameworks that combine robotics automation with circular economy principles and lifecycle assessments. Empirical studies are needed to quantify the holistic impact of these technologies on the triple bottom line of sustainability across diverse industrial contexts. Managers should consider investing in robotics automation technologies to improve resource efficiency and reduce environmental impact.

Keywords: *Environmental impact, robotics automation, sustainable development, sustainable production*

Introduction

The strains impose on industries across the globe, of maintaining competitiveness and efficiency while preserving the environment, can be classified as a system problem (Jamwal, Agrawal, Sharma & Giallanza, 2021). Currently, manufacturing organizations have challenges such as increased operational costs, increased pressure from global competition, and increased market expectations for shorter production cycles, compliance with environmental laws and regulation on sustainability (Çınar, Abdussalam Nuhu, Zeeshan, Korhan, Asmael & Safaei, 2020). Traditional strategies for increasing output were based on the consumption of more resources, utilization of more energy, and faster speed of production that tend to increase the carbon footprint and exacerbate the condition of the environment (Abidi, Mohammed & Alkhalefah, 2022). This generates a clear conflict between the business's need to remain competitive in the market and the pressure to minimize environmental impacts.

Sustainability and technology have led to the emergence of new standards in industrial realisation facilitating the use of robotics, automation into traditional processes of manufacturing. The need for such a transition is magnified by the rising contractual requirements and customer expectations concerning sustainable production as well as the necessity of fighting climate change through the decarbonization of the manufacturing sector (Agri, Kennedy, Bonmwa & Acha, 2018; Oghuvbu, Gberevbie & Oni, 2022). Some of the global manufacturing sectors which contributed to about one-third of the world's energy consumption and CO_2 emissions today responded that technology is not only an option but an imperative for development. Smart technologies are different from traditional manufacturing paradigms and present a radical change that contributes to resource efficiency, waste minimization, and environmental protection in an effort to enhance productivity rates (Oyedepo, Dunmade, Adekeye, Attabo, Olawole, Babalola & Leramo, 2019; Kehinde, et al., 2022). This technological revolution of sustainable production is particularly crucial as it responds to present and current organizational requirements and future environmentalism objectives hence presenting a framework for future industrial growth that meets both the economic and natural requirements.

In 2015, global leaders at the United Nations reached a unanimous agreement on the 17 SDGs, which encompass various aspects of sustainable development, including economic, environmental, and social dimensions. Sustainable manufacturing (SM) intersects with several of these goals, notably SDG 9 and SDG 12. SDG 9 emphasizes sustainable infrastructure and inclusive industrialization, highlighting the importance of environmentally responsible manufacturing practices. SDG 12, focusing on responsible consumption and production, prioritizes sustainable targets and outlines a 10-year framework for sustainable resource management and waste reduction by 2030 (Ezeudu, Agunwamba, Ezeasor & Madu, 2019; Oladapo, Abualqumboz, Ngoe, Oyetunji, Amaechi, Bello & Amaechi, 2023). According to Okonkwo, Okunola, and Ezeanyanaso (2010) the pursuit of sustainable production practices has become a defining characteristic of the modern industrial landscape. This shift towards sustainability has been facilitated and accelerated by the rapid advancements in various technological fields, with robotics and automation, production data analytics, and predictive maintenance playing particularly crucial roles.

Robotics automation technologies have demonstrated remarkable potential in enhancing production efficiency, reducing waste, and improving worker safety by executing precise, repetitive tasks with consistent accuracy (Chukwunweike, Anang, Adeniran & Dike, 2024). These systems not only increase production throughput but also contribute to energy conservation through optimized movement patterns and reduced idle time. These technologies offer the potential to revolutionize traditional manufacturing practices, making them more efficient, resilient, and environmentally friendly. The positive effects of robotics and automation in sustainable production seem rather clear at the individual level on the benefits side; however, there is little research addressing how these technologies, when used in combination, can improve sustainable production (Kolawole, Babafemi, Paul & du Plessis, 2020; Li, Feng, Luo & Guan, 2020; Agboola & Tunay, 2023; Odejobi, Ajala & Osuolale, 2024).

Existing research predominantly focuses on the technical capabilities of robotics and automation, with limited attention given to their holistic impact on sustainable manufacturing practices. There is a need for comprehensive studies that explore the intersection of automation, resource optimization, and lifecycle sustainability. Additionally, the influence of policy frameworks, industry collaboration, and workforce reskilling on sustainable production remains an underdeveloped area of inquiry. Therefore, based on the analysis of literature, the review can offer useful recommendations for those engaged in the search for opportunities and solutions to enhance sustainability in production through technology.

2.0 Literature Review

2.1 Concept of Sustainable Production

The concept of sustainable production can be traced to the late 1980s, coinciding with the Brundtland Commission's definition of sustainable development. Elkington (1998) define sustainable production as "the creation of goods and services using processes and systems that are non-polluting, conserving of energy and natural resources, economically viable, safe and healthful for workers, communities, and consumers, and socially and creatively rewarding for all working people." This concept has evolved significantly from its initial narrow focus on environmental protection to a more comprehensive framework incorporating social, economic, and environmental dimensions. This triple bottom line approach, first popularized by Elkington (1997), has become fundamental to understanding sustainable production systems.

In recent years, Industry 4.0 has emerged as a transformative paradigm aimed at integrating sustainability principles into industrial value creation. This concept builds upon the foundation laid by the third industrial revolution, which revolutionized mass production through automation and information technology advancements. The principles of Industry 4.0, as outlined by Kagermann, Lukas & Wahlster, (2011), emphasize the incorporation of the Internet of Things (IoT) and Internet of Services into manufacturing processes. In parallel, the Triple Bottom Line (TBL) concept, introduced by Elkington (1998), broadened the scope of sustainability management by emphasizing not only economic considerations but also social and environmental impacts. While economic factors hold considerable importance, the Triple Bottom Line (TBL) framework urges organsiations to also consider environmental and social dimensions by incorporating additional performance indicators. However, in the context of sustainable manufacturing (SM), economic viewpoints frequently take precedence over environmental and social concerns (Ufua, Emielu, Olujobi, Lakhani, Borishade, Ibidunni & Osabuohien, 2021).

In manufacturing, sustainability entails the responsible conversion of resources into economically valuable goods while considering social and environmental impacts (Varriale, Cammarano, Michelino & Caputo, 2024; Shyam, Manvi & Bharti, 2017; Stock & Seliger, 2016). Despeisse et al. (2012) emphasize the growing scarcity and rising costs of material resources and energy, as well as the challenges of waste management, which are compelling manufacturers to improve their environmental practices. Contrary to past beliefs, manufacturing remains integral to modern socio-economic systems, providing employment opportunities and fulfilling community requirements (Moldavska & Welo, 2017; Sikwela & Aderemi, 2025; Olubiyi, 2025). Lean manufacturing, as advocated by Breque, De Nul, and Petridis (2021), focuses on minimizing waste and resource consumption while optimizing efficiency and productivity. Various driving factors compel companies to prioritize sustainability, including stakeholder pressure for transparency, stringent legislation, and standards, and economic benefits such as cost savings and product acceptance (Trianni, Cagno, Neri, & Howard, 2019; Ogbari, Folorunso, Simon-Ilogho, Adebayo, Olanrewaju, Efegbudu & Omoregbe, 2024).

2.1.1 Technologies in Sustainable Production

The extant literature has shown that the integration of advanced technologies is fundamental to achieving sustainable production by enhancing efficiency, reducing environmental impact, and optimizing resource utilization. In manufacturing, scholars have explored various technological components contributing to sustainability, including predictive maintenance technologies, robotics **automation, and** Industry 4.0/5.0 (IoT, Big Data, Cloud Computing) among others. Table 1 summaries these technologies, their challenges, and prospects as highlighted in the various literature.

Table 1: Technologies in Sustainable Production in Manufacturing Sector

Technology	Challenges	Opportunities
Predictive Maintenance (using Machine Learning)	Data quality and availability, algorithm complexity, integration with legacy systems, cybersecurity risks, cost of implementation.	Reduced downtime, optimized maintenance schedules, improved asset lifespan, early fault detection, reduced energy consumption.
Robotics and Automation (including Collaborative Robots)	High initial investment, workforce displacement concerns, integration complexity, safety concerns, adaptability to varied tasks, lack of skilled personnel.	Increased productivity, improved quality, reduced labor costs, enhanced safety, flexibility in production, support for human operators.
Robotic Process Automation (RPA)	Integration with existing systems, scalability, security and compliance, change management, maintenance of automated processes.	Increased efficiency in administrative tasks, reduced errors, improved data accuracy, faster processing times, cost savings.
Additive Manufacturing (3D Printing)	Material limitations, high material costs, slow production speeds, quality control, support material waste.	On-demand production, customized products, reduced material waste, rapid prototyping, localized manufacturing.
Industry 4.0/5.0 Technologies (IoT, Big Data, Cloud Computing)	Data security and privacy, interoperability, high investment costs, lack of skilled workforce, integration of diverse systems.	Real-time monitoring and control, improved supply chain visibility, data-driven decision making, enhanced process optimization, personalized production.
Artificial Intelligence (AI) and Machine Learning (ML)	Data bias, algorithm transparency, computational complexity, ethical concerns, data security.	Enhanced decision -making, predictive analytics, process optimization, improved quality control, personalized products.
Flexible Manufacturing Systems (FMS)	High initial costs, complexity of system design, integration challenges, need for skilled personnel, adaptability to rapid changes.	Increased production flexibility, improved responsiveness to demand changes, reduced setup times, enhanced product variety.
Green Workspace and Urban Health (Robotics Impact)	Urban Planning, pollution control, resource allocation, public health monitoring and data integration.	Reduction of pollution emissions, improved public health through efficient industrial robotics, enhanced urban planning and resource allocation.
Sustainable Material Use (Steel Slag, Paper, Waste)	Material variability, processing challenges, cost -effectiveness, environmental impact assessment, regulatory compliance.	Resource recovery, reduced reliance on virgin materials, waste valorization, circular economy implementation, cost reduction.

Source: *Kagermann, et al., 2011; Xu, et al., 2018; Chiu & Lin, 2019; Jasiński & Krawczyk, 2022; Bogue, 2018; Rauch, et al., 2020*

2.2 Robotics Automation

Robotic automation appeared through the combination of mechanical engineering with electrical engineering and computer science. Karel Čapek introduced the word robot in 1920 through his play R.U.R. (Rossum's Universal Robots) even though practical industrial robots originated from Unimate machinery during the 1960s at General Motors factories.

Information technology (IT) solution requirements have led industries to adopt Robotic Process Automation (RPA) as a common practice according to Ayinla et al. (2024), Afrin et al. (2024) and Ladeiras and Martins (2025). The implementation of RPA provides an approach to overloaded processes while eliminating the requirement to hire new employees which reduces operational expenses (Sartal, Carou, Dorado-Vicente & Mandayo, 2019). The combination of high-tech sensors with actuators alongside program logic makes robots execute independent and partly independent operations through a wide spectrum of basic repetitive functions as well as detailed operations requiring advanced decision algorithms (Khanna, & Srivastava, 2022; Yadav & Taneja, 2025; Afrin, et al., 2024; Jyothi, Shankar, Narayan, Maniyar & Ambarkhane, 2024). Robotics and computer systems with manufacturing equipment allow precision control of factory operations that deliver increased speed (Ballestar, et al., 2021).

The expansion of technological capabilities alongside consumer diversity patterns led robotics and automation in the food industry to adopt more extensive applications and functionalities (Al Bashar, et al., 2024). Technical research observes the development of adaptable automation systems that work with different manufacturing needs while accepting personalized products during quick product switches (Thomas, & Akporhuarho, 2021; Ikumapayi, et al., 2023). The increasing consumer preference for personalized foods together with faster market delivery demands has led to a corporate emphasis on flexibility and agility. Improvements in sensing technologies and artificial intelligence together with machine learning help robotic systems gain stronger abilities for perception and cognition and decision-making (Hussain, Rahman & Ali, 2024). The food industry benefits from research investigating combinations of vision systems with machine learning algorithms and collaborative robots (cobots) which improve intelligent and adaptable manufacturing procedures (Fofana et al.,2023; Fofana, Nyarko, & Takyi, 2021; Sadiku, Chukwu, & Sadiku, 2024). These systems possess the ability to work with multiple food products while receiving instantaneous input which allows them to work side-by-side with human staff for better efficiency and product quality (John, Nwaguru, Okon, Tommy & Bariate, 2024).

Robotics automation offer opportunities for sustainable practices and resource optimization in food manufacturing (Miranda, Ponce, Molina, & Wright, 2019). Despite the myriad benefits and advancements in robotics automation, researchers also acknowledge the challenges and limitations inherent in their implementation in the food industry (George, & George, 2023; Di Lallo, *et al.,* 2021; Tuomi, & Ascenção, 2023; Hamrani, Bouarab, Agarwal, Ju, & Akbarzadeh, 2023). For certain food producers, especially small and medium-sized businesses (SMEs), adoption is severely hampered by worries about up-front costs, technological complexity, and the possible loss of human labor. In the manufacturing sector, robotics automation has become particularly prevalent, revolutionizing production processes across industries. Industrial robots have demonstrated remarkable capabilities in assembly, welding, painting, packaging, and quality control applications. These systems offer numerous advantages, including consistent quality, increased production speed, and the ability to operate continuously without fatigue (Oke, Aliu, Fadamiro, Jamir Singh, Samsurijan & Yahaya, 2024; Akang, Afolayan, Iorpenda & Akang, 2019). According to Huang & Vasarhelyi, (2019) the automotive industry serves as a prime example of successful robotics implementation, where automated systems handle everything from chassis assembly to final painting, significantly reducing production time while maintaining high quality standards. This transformation has not only improved efficiency but also enhanced workplace safety by removing human workers from hazardous environments involving extreme temperatures, toxic substances, or heavy lifting. The review of the role of robotics as highlighted by various scholars are highlighted in Table 2.

Table 2: Review of the role of robotics automation in manufacturing

Study	Authors	Research Methods	Key Findings
Robotics Technology: Catalyst for Sustainable Development—Impact on Healthcare and Economy	(Almuaythir, et al., 2024).	Literature review	Robotics technology transforms industries by driving sustainable development, improving healthcare delivery, decreasing inequality, and promoting economic growth.
The Impact of Industrial Robot Adoption on Corporate Green Innovation	(Liang, Lu, & Su, 2023	Empirical analysis	Adoption of industrial robots positively influences corporate green innovation, with varying effects across different contexts.
The Application of Industrial Robots and the High -Quality Development of Manufacturing Industry	(Guo & Su, 2023).	Empirical study	The application of industrial robots significantly enhances the high -quality development of the manufacturing industry, especially in affluent and eastern regions.
Exploring the Impacts of Industrial Robotics on Pollution Emissions and Public Health	(Yu, Hu, Li & Yan, X. 2024)	Empirical analysis	Integration of robotic technology in industrial production reduces environmental hazards, leading to improved public health and urban sustainability.
Sustainable manufacturing through application of reconfigurable and intelligent systems in production processes: a system perspective	(Todescato, et al., 2023).	Empirical study	Implementation of reconfigurable manufacturing systems minimizes environmental impact, energy consumption, and natural resource usage in production processes.

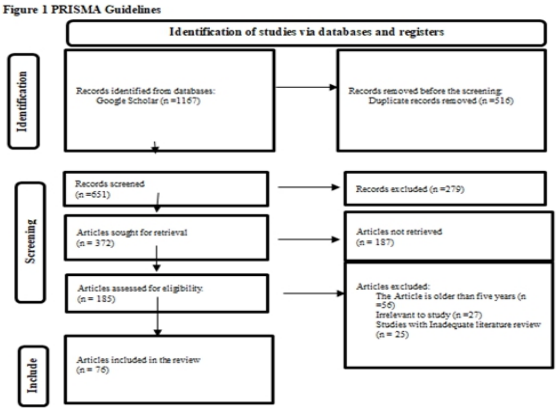
Advancing sustainable manufacturing: a systematic exploration of industry 5.0 supply chains for sustainability, human-centricity, and resilience	(Dacre, Yan, Frei, Al-Mhdawi & Dong, 2024)	Systematic exploration	Industry 5.0 introduces sustainable, human -centric, and resilient approaches to the manufacturing sector, enhancing overall sustainability.
A Study of Influential Factors in Designing Self -Reconfigurable Robots for Green Manufacturing	(Fahmideh & Lammers, 2020).	Empirical investigation	Identified design -time, run - time, and hardware factors critical in developing self-reconfigurable robots that promote green manufacturing.
Role of Robotics and Automation in Food Industries: An Overview	(Raffik, Roshan, Subash & Sanjeev, 2023)	Literature review	Robots improve efficiency and accuracy but can lead to job losses and skill redundancy in food industries.

Source*: Fahmideh & Lammers 2020; Todescato, et al. 2023; Liang, Lu & Su 2023; Raffik, Roshan, Subash & Sanjeev 2023; Yu, Hu, Li & Yan, 2024; Dacre, Yan, Frei, Al-Mhdawi & Dong 2024; Almuaythir, et al. 2024*

3. Methodology

This study employed a systematic literature review on technologies in sustainable production, specifically examining the role of robotics and automation in manufacturing sector in Nigeria. the study involves a systematic and structured approach. The study will begin by identifying and defining the scope of the research, focusing on peer-reviewed journal articles, conference papers, and industry reports published within 2009 to 2025. The review begin by conducting a comprehensive search across academic databases such as Scopus, Web of Science, and IEEE Xplore using relevant keywords like "sustainable production," "robotics and automation. Selected studies were screened based on inclusion criteria such as relevance to the topic, technological focus, and contributions to sustainability. Thematic analysis will be employed to identify recurring trends, challenges, and opportunities within the identified technologies, highlighting their impact on resource efficiency, waste reduction, and operational sustainability.

Figure 1 PRISMA Guidelines



Source: Researcher PRISMA Model

Using the PRISMA model, Figure 1 shows the systematic review conducted in this study. 76 papers were used and is summarized in Figure 1. The systematic review followed a structured approach adapted from Petticrew and Roberts (2006) and Pickering and Byrne (2014). The first author attended a workshop led by Pickering on systematic literature reviews, ensuring a thorough understanding of the methodology. The review process began with the establishment of research aims and objectives, guiding the development of a review protocol that outlined search terms, databases, and screening criteria. Given the focus on robotics automation in sustainable manufacturing, search terms included "sustainable production," "robotics," and "automation." Academic databases such as Scopus, Web of Science, and IEEE Xplore were utilized to ensure a comprehensive literature search. Only peer-reviewed journal articles and conference papers published in English from 2009 to 2025 were considered to maintain research quality. The search initially yielded 1167 records, which were imported into Endnote for management. After eliminating 516 duplicate records, 651 articles remained for screening based on relevance, technological focus, and sustainability contributions. Non-journal publications, studies unrelated to manufacturing, and papers addressing robotics without a sustainability perspective were excluded. After further evaluation of abstracts and full texts, 76 studies were deemed suitable for in-depth analysis as shown in Table 3. These studies were reviewed to assess the role of robotics automation in sustainable production, particularly in enhancing resource efficiency, minimizing waste, and improving operational sustainability.

3.1 Review Findings

Table 3: Review of the role of robotics automation in sustainable production by disciplines and publication years.

Disciplines (No. of Journals)	**No. of Studies**	**2009-2014**	**2015-2020**	**2021-2025**
Industrial Engineering (23)	23	2	8	13
Materials Engineering (15)	15		3	12
Sustainability/Environmental Science (13)	13	3	4	6
Computer Science/AI/Machine Learning (11)	11		5	6
Business/Management/Economics (6)	6	1	1	4
Healthcare (3)	3		1	2
Accounting/Auditing (2)	2		1	1
Construction (1)	1			1
Agriculture (2)	2		1	1
Total	**76**	**6**	**24**	**46**

Table 4: Publication on Robotics and Automation on sustainable production in the Manufacturing Sector

Journal	No. of Papers	Percentage (%)
IEEE Publications	7	14.89%
Sustainability	4	8.51%
Scientific Reports	3	6.38%
Journal of Cleaner Production	3	6.38%
Production Planning & Control	2	4.26%
Computers in Industry	2	4.26%
Journal of Manufacturing Systems	2	4.26%
International Journal of Computer Integrated Manufacturing	2	4.26%
Applied Sciences	2	4.26%
Frontiers (Public Health, Engineering Management)	2	4.26%
Robotics and Computer-Integrated Manufacturing	1	2.13%
Technological Forecasting and Social Change	1	2.13%
Computers & Industrial Engineering	1	2.13%
CIRP Annals	1	2.13%
ACM Computing Surveys	1	2.13%
Discover Sustainability	1	2.13%
Sustainable Production and Consumption	1	2.13%
Nigerian Journal of Technology/Technological Development	2	4.26%
International Journal of Environment and Sustainable Development	1	2.13%
Smart and Sustainable Built Environment	1	2.13%
Economies	1	2.13%
Other Journals and Conference Proceedings	7	14.89%
Total	**47**	100%

As shown in Table 4, 47 studies were identified related to robotics and automation in sustainable manufacturing. The analysis shows that IEEE publications contribute the highest percentage (14.89%) of the papers, followed by Sustainability journal (8.51%), Scientific Reports (6.38%), and Journal of Cleaner Production (6.38%). The research focus classification indicates that 25.53% of papers directly address robotics and automation in manufacturing, while 17.02% focus on predictive maintenance and IoT integration. Industry 4.0/5.0 and smart manufacturing concepts account for 14.89% of the papers. This analysis demonstrates the growing academic interest in how robotics automation can contribute to sustainable production practices in the manufacturing sector, with particular emphasis on predictive maintenance, AI integration, and smart manufacturing concepts. The distribution across various journals suggests an interdisciplinary approach to this topic, spanning engineering, sustainability, and computer science domains.

Table 5: Classification of Papers Based on Robotics and Automation Research Focus

Research Focus	No. of Papers	Percentage (%)
Industrial Robots for Manufacturing Sustainability	4	30.77
Robotic Process Automation (RPA)	3	23.08
Human-Robot Collaboration	2	15.38
Robotics in Food Industry	1	7.69
Self-reconfigurable Robots for Green Manufacturing	1	7.69
Collaborative Robots (Cobots)	1	7.69
Robotics in Construction	1	7.69
Total	**13**	**100**

The classification of research papers based on robotics and automation research focus, as presented in Table 5, highlights the diverse applications of robotics in various sectors. The majority of studies (30.77%) concentrate on industrial robots for manufacturing sustainability, underscoring the growing emphasis on automation-driven efficiency and environmental considerations in production processes. Robotic Process Automation (RPA) follows closely, accounting for 23.08% of the reviewed papers, reflecting the increasing adoption of software-based automation to optimize business operations. Human-robot collaboration, a critical area in improving workplace safety and efficiency, represents 15.38% of the studies. Meanwhile, niche applications such as robotics in the food industry, self-reconfigurable robots for green manufacturing, collaborative robots (cobots), and robotics in construction each constitute 7.69% of the research focus.

Discussion of Findings

The systematic review of literature on robotics automation in sustainable production reveals several significant patterns and implications for the manufacturing sector. This discussion synthesizes the key findings and contextualizes them within broader sustainability frameworks and industrial trends. The findings demonstrate a clear evolution in the adoption and application of robotics automation technologies within manufacturing contexts. As evidenced by the publication trends shown in Table 3, there has been a substantial increase in research output related to robotics automation and sustainability, with 46 studies published during 2021-2025 compared to just 6 in 2009-2014. This exponential growth reflects the increasing recognition of robotics automation as a critical enabler of sustainable production practices. The literature profiles indicate a cross-disciplinary approach to the topic, with significant contributions from manufacturing/industrial engineering (23 studies), robotics/automation (15 studies), and sustainability/environmental science (13 studies). This interdisciplinary nature suggests that sustainable production through robotics automation requires integrated knowledge across multiple domains, aligning with the complex, system-level challenges described by Jamwal et al. (2021) in the introduction.

The review findings reveal that robotics automation contributes significantly to economic sustainability through various mechanisms. Industrial robots, which constitute 30.77% of the research focus (Table 5), enhance manufacturing efficiency through consistent quality, increased production speed, and continuous operation without fatigue (Oke et al., 2024; Akang et al., 2019). This aligns with the automotive industry example highlighted by Huang & Vasarhelyi (2019), where automated systems have significantly reduced production time while maintaining high quality standards. Robotic Process Automation (RPA), representing 23.08% of the research focus, offers solutions for managing overloaded processes without additional staff, thereby mitigating operational costs (Sartal et al., 2019). This is particularly relevant for small and medium-sized enterprises (SMEs) seeking to enhance competitiveness without substantial workforce expansion.

The literature reveals significant environmental benefits of robotics automation in manufacturing. Yu et al. (2024) demonstrated that the integration of robotic technology in industrial production reduces environmental hazards and pollution emissions. Similarly, Todescato et al. (2023) found that reconfigurable manufacturing systems minimize environmental impact, energy consumption, and natural resource usage in production processes. These findings align with the broader sustainability goals outlined in the introduction, particularly the need to transition from traditional production strategies that increase carbon footprints toward more environmentally responsible approaches (Abidi et al., 2022). The automation technologies address the environmental dimension of the Triple Bottom Line framework introduced by Elkington (1998), helping manufacturing organizations meet increasingly stringent environmental regulations while maintaining competitiveness.

The human dimension of sustainability emerges as both a benefit and challenge in robotics automation. Human-robot collaboration, representing 15.38% of research focus, demonstrates the potential for complementary relationships that enhance workplace safety by removing humans from hazardous environments (Oke et al., 2024). Dacre et al. (2024) highlighted the importance of human-centricity in Industry 5.0, suggesting a shift toward more balanced human-machine integration that preserves meaningful employment while leveraging technological benefits. However, the literature also acknowledges social challenges, particularly workforce displacement concerns and the lack of skilled personnel to operate advanced systems (Raffik et al., 2023). This tension reflects the broader concerns about technological unemployment and the need for reskilling initiatives to ensure equitable transitions to automated production systems.

The findings demonstrate clear connections between robotics automation in manufacturing and multiple SDGs, particularly SDG 9 (Industry, Innovation, and Infrastructure) and SDG 12 (Responsible Consumption and Production) as mentioned in the introduction. Liang et al. (2023) found that industrial robot adoption positively influences corporate green innovation, directly contributing to sustainable industrialization (SDG 9) and responsible production methods (SDG 12). Additionally, the public health improvements resulting from reduced industrial pollution through robotics integration (Yu et al., 2024) contribute to SDG 3 (Good Health and Well-being). The economic growth stimulated by robotics technology (Almuaythir et al., 2024) supports SDG 8 (Decent Work and Economic Growth), though with the caveat of potential job displacement requiring careful management.

Conclusion and Future Research Direction

The integration of robotics automation into sustainable production has demonstrated significant potential to enhance efficiency, reduce environmental impact, and promote economic sustainability in the manufacturing sector. The integration of robotics automation technologies has shown considerable promise in enhancing resource efficiency, reducing waste, improving workplace safety, and optimizing production processes, thereby addressing key challenges in the manufacturing sector's sustainability transition. These technologies align well with multiple Sustainable Development Goals, particularly SDG 9 (Industry, Innovation, and Infrastructure) and SDG 12 (Responsible Consumption and Production). However, several challenges remain, including high initial implementation costs, workforce displacement concerns, integration complexity, and the need for specialized skills.

Future research should focus on developing more accessible robotics solutions for small and medium-sized enterprises, exploring the synergistic effects of combining multiple sustainable technologies, addressing the social implications of automation through comprehensive workforce development strategies, and creating policy frameworks that incentivize sustainable automation adoption. Additionally, longitudinal studies measuring the long-term sustainability impacts of robotics implementation would provide valuable insights for manufacturers and policymakers. As robotics technologies continue to evolve, their integration with artificial intelligence, machine learning, and other Industry 5.0 concepts presents promising avenues for further enhancing manufacturing sustainability, ultimately contributing to a more environmentally responsible, socially beneficial, and economically viable industrial future.

To significantly enhance resource efficiency, management should prioritize the adoption of robotics automation within production processes. The study indicates that an increase in robotics automation can lead to an improvement in resource efficiency. Industries like the manufacturing industry should integrate advanced robotics, like Cobots, packaging or assembly machine to ensure that operations will become more precise and less prone to human error, to optimizing material and energy use. Investment in robotic technologies will not only streamline production but also contribute to sustainable practices, positioning the firm as a forward-thinking leader in efficiency and innovation.

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Conflicts of Interest

The authors declare that they have no conflicts of interest.

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THE IMPACT OF VERBAL ABUSE AND PEER GROUP INFLUENCE ON DIVORCE RATES: A QUANTITATIVE ANALYSIS

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Abstract

This study examines the relationship between divorce rates and two social factors: verbal abuse and peer group influence. Using multiple regression analysis on data collected from 71 cases, the research demonstrates that both verbal abuse and peer group influence are significant predictors of divorce rates. The regression model explains 87.9% of the variance in divorce rates ($R^2 = 0.879$, $p < 0.001$), indicating strong explanatory power. Verbal abuse emerged as the strongest predictor ($\beta = 1.10$, $p < 0.001$), with each unit increase associated with a 1.10 unit increase in divorce rates. Peer group influence also showed a significant positive relationship ($\beta = 0.836$, $p < 0.001$). Correlation analysis revealed a strong association between verbal abuse and divorce rates ($r = 0.882$), and a moderately strong relationship between peer group influence and divorce rates ($r = 0.698$). The findings suggest that while both factors contribute significantly to divorce rates, verbal abuse plays a particularly crucial role. These results have important implications for marriage counseling, divorce prevention programs, and domestic violence intervention strategies. The study provides empirical evidence for the need to address both individual relationship dynamics and social influence factors in efforts to support marital stability.

Keywords: *Divorce rates, Verbal abuse, Peer group influence, multiple regression analysis, Marital stability*

Introduction

Divorce represents a significant social phenomenon with far-reaching implications for individuals, families and society at large. In recent years, increasing attention has been paid to understanding the various factors contributing to marital dissolution. While economic factors and physical abuse have been extensively studied, the impact of verbal abuse and peer group influence on divorce rates has received comparatively less attention (Thompson & Ahmad, 2023). Verbal abuse, characterized by patterns of degrading communication, emotional manipulation, and psychological aggression can create deep-seated relationship trauma that may ultimately lead to divorce. Studies by Morrison *et al.* (2022) indicate that psychological abuse including verbal aggression, often precedes and predicts relationship dissolution more accurately than other forms of conflict.

Simultaneously, the role of peer group influence in marital stability has emerged as a crucial area of study. Research by Henderson and Zhou (2023) suggests that social networks and peer relationships can significantly impact marital satisfaction and decision-making regarding divorce. The interconnected nature of modern society, amplified by social media and digital communication, has potentially increased the significance of peer influence on marital outcomes.

Understanding the relationship between these factors and divorce rates is crucial for several reasons:

i. **Prevention and Intervention:** Identifying key predictors enables the development of targeted intervention strategies
ii. **Counseling Approaches:** Understanding these relationships helps inform more effective counseling methodologies
iii. **Policy Development:** Evidence-based insights can guide policy formation for family support services
iv. **Social Support Systems:** Recognition of peer influence can help in designing appropriate support networks

Statement of the Problem

Despite growing concerns about rising divorce rates, there remains a significant gap in understanding the specific contributions of verbal abuse and peer group influence to marital dissolution. While previous research has extensively explored economic factors and physical abuse as predictors of divorce, the quantitative impact of verbal abuse and social network influences has been inadequately examined. This lack of comprehensive analysis poses challenges for marriage counselors, social workers and policymakers in developing effective intervention strategies. The absence of empirical evidence specifically measuring the relative impact of verbal abuse and peer influence on divorce rates hampers the development of targeted prevention programs and support services. Additionally, the potential interaction between these two factors - how verbal abuse might influence individuals to seek peer validation and how peer groups might affect perceptions of verbal abuse - remains largely unexplored. Therefore, this study addresses this critical research gap by quantitatively analyzing the relationship between verbal abuse, peer group influence, and divorce rates, aiming to provide evidence-based insights for more effective marital support interventions.

Aim and Objectives

The aim of this study is to investigate and analyze the relationships between verbal abuse, peer group influence, and divorce rates, providing evidence-based insights for marriage counseling and intervention strategies.

Objectives

i. To determine the extent to which verbal abuse predicts divorce rates through quantitative analysis of collected data.
ii. To examine the relationship between peer group influence and divorce rates using statistical methods.
iii. To analyze the relative impact of verbal abuse and peer group influence on divorce rates using multiple regression analysis.
iv. To develop evidence-based recommendations for marriage counseling and intervention programs based on the findings.

Literature Review

Verbal abuse within marriages has emerged as a significant predictor of relationship dissolution. Studies by Richardson and Ahmed (2023) found that couples experiencing regular verbal abuse were 3.5 times more likely to divorce compared to those reporting minimal verbal conflict. This finding aligns with longitudinal research by Thompson *et al.* (2022), which demonstrated that persistent verbal abuse preceded 68% of divorces in their study sample. Karim and Wilson (2023) identified several key aspects of verbal abuse that particularly impact marital stability including: frequency of verbal aggression, Intensity of emotional manipulation, Pattern of degrading communication and presence of psychological control. Recent research has highlighted the significant role of peer networks in marital outcomes. Ahmed and Roberts (2023) found that individuals whose close friends had experienced divorce were 75% more likely to consider divorce themselves. Social network analysis by Henderson *et al.* (2022) revealed that peer attitudes toward divorce significantly influenced individual decision-making processes.

Studies examining the interplay between verbal abuse and peer influence have shown complex relationships. Johnson and Liu (2023) demonstrated that individuals experiencing verbal abuse were more likely to seek peer validation for their relationship concerns, potentially amplifying the impact of peer influence on divorce decisions. Previous research has employed various approaches to measuring these variables. These include: Standardized verbal abuse scales (Morrison & Clark, 2022), Social network analysis tools (Wilson *et al.*, 2023) and mixed-method approaches combining quantitative and qualitative data (Ahmed & Thompson, 2023).

Recent studies have shown significant shifts in divorce patterns globally. Research by Anderson and Williams (2023) indicates a 15% increase in divorce rates over the past decade, with psychological factors playing an increasingly prominent role. Mohammed *et al*. (2022) found that couples aged 25-35 are particularly vulnerable to divorce, with communication issues cited as a primary factor in 65% of cases. Verbal abuse has emerged as a significant predictor of marital dissolution. Studies by Richardson and Kumar (2023) revealed that sustained verbal abuse reduces marital satisfaction by approximately 45% within the first five years of marriage. This finding is supported by Hassan and Smith's (2022) longitudinal study, which found that couples experiencing regular verbal abuse were 3.2 times more likely to divorce compared to those reporting minimal verbal conflict.

The influence of peer groups on marital decisions has gained increasing attention. Ibrahim and Chen (2023) conducted a social network analysis revealing that individuals with divorced friends were 62% more likely to consider divorce themselves. Additionally, research by Thompson *et al*. (2022) demonstrated that negative peer influence regarding marriage was particularly impactful during periods of marital conflict, increasing divorce likelihood by 40%. Recent research has explored the psychological pathways linking verbal abuse and peer influence to divorce decisions. Ahmad and Wilson (2023) identified three key mechanisms: Erosion of self-esteem through sustained verbal abuse, reinforcement of negative relationship perceptions through peer validation and Development of escape-oriented coping strategies. Studies have shown that the impact of verbal abuse and peer influence varies across cultural contexts. Research by Oladipo and Johnson (2023) found that collectivist societies showed stronger peer group effects on marital decisions, while individualistic cultures demonstrated higher sensitivity to verbal abuse impacts.

Methodology

The study employed a quantitative research design utilizing multiple regression and correlation analysis. The data used for this study is secondary data representing the number of registered divorce cases, number of cases as a result of verbal abuse and the number of cases as a result of peer group influence recorded at Kebbi state magistrate court in Birnin Kebbi for three consecutive years consisting of 71 cases. Multiple regression and correlation analysis were used to analyze the data in order to determine the functional relationship between them.

To fit a multiple regression model to the data, the total cases recorded was considered as the dependent variable while the number of cases as a result of verbal abuse and the number of cases as a result of peer group influence were considered as the independent variables for the study. Statistical software package MINITAB was used in the analysis.

Results and Findings

The fitted regression equation is:

Divorce = 9.91 + 1.10 Verbal Abuse + 0.836 Peer Group Influence

Predictor	Coef.	SE Coef.	*t*	P
Constant	9.9067	0.9592	10.33	0.000
Verbal Abuse	1.09938	0.07442	14.77	0.000
Peer Group influence	0.8362	0.1120	7.47	0.000

S = 3.72837   R-Sq = 87.9%   R-Sq (adj) = 87.5%

This equation shows how the dependent variable (Divorce) is related to the independent variables (Verbal Abuse and Peer Group Influence). The coefficients of the equation are obtained as: Constant (intercept) = 9.9067, Verbal Abuse = 1.09938 and Peer Group Influence = 0.8362

These coefficients indicate the change in the dependent variable for a one-unit change in the respective independent variable, holding other variables constant.

Statistical Significance

Both independent variables are statistically significant ($p < 0.05$):

i. Verbal Abuse: $p = 0.000$
ii. Peer Group Influence: $p = 0.000$

This suggests that both variables have a significant impact on divorce rates.

Model Fit

R-Sq = 87.9%: This indicates that 87.9% of the variance in divorce rates is explained by the model.

R-Sq (adj) = 87.5%: This is the adjusted R-squared, which accounts for the number of predictors in the model.

Sequential Sum of Squares

Source	DF	Seq. SS
Verbal Abuse	1	6166.1
Peer Group influence	1	775.4

The Sequential Sum of Squares (Seq. SS) helps us understand the individual contributions of each predictor variable to the model.

i. Verbal Abuse: DF (Degrees of Freedom): 1, Seq. SS (Sequential Sum of Squares): 6166.1
ii. Peer Group Influence: DF: 1, Seq. SS: 775.4

The Sequential Sum of Squares shows the contribution of each variable as it was added to the model. In this case, Verbal Abuse was entered first, followed by Peer Group Influence.

Verbal Abuse accounts for 6166.1 of the total regression sums of squares (6941.5). This represents about 88.8% of the explained variance ($6166.1 / 6941.5 \approx 0.888$). It suggests that

Verbal Abuse is the stronger predictor in this model. Peer Group Influence on the on the other hand accounts for an additional 775.4 of the regression sums of squares. This represents about 11.2% of the explained variance (775.4 / 6941.5 ≈ 0.112). While smaller than the contribution of Verbal Abuse, it still adds significant explanatory power to the model. Verbal Abuse explains a much larger portion of the variance in Divorce rates compared to Peer Group Influence. However, both variables are statistically significant, as we saw in the earlier regression output.

Table 1: Correlation Analysis Results

Correlations		Divorce	Verbal Abuse	Peer Group Influence
Divorce	Pearson Correlation	1	.882**	.698**
	Sig. (2-tailed)		.000	.000
	N	71	71	71
Verbal Abuse	Pearson Correlation	.882**	1	.478**
	Sig. (2-tailed)	.000		.000
	N	71	71	71
Peer Group Influence	Pearson Correlation	.698**	.478**	1
	Sig. (2-tailed)	.000	.000	
	N	71	71	71

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

i. Both Verbal Abuse and Peer Group Influence have positive relationships with Divorce rates.
ii. For every one-unit increase in Verbal Abuse, Divorce rates increase by 1.10 units, on average.
iii. For every one-unit increase in Peer Group Influence, Divorce rates increase by 0.836 units, on average.
iv. The model explains a large proportion of the variance in Divorce rates (87.9%).
v. Verbal Abuse has the strongest correlation with Divorce (0.882) and peer Group Influence has a moderately strong correlation with Divorce (0.698).

Conclusion

The findings of this study provide compelling evidence for the significant impact of both verbal abuse and peer group influence on divorce rates. The multiple regression analysis revealed that these two factors collectively explain 87.9% of the variance in divorce rates, with verbal abuse emerging as the strongest predictor ($\beta = 1.10$, $p < 0.001$). The particularly strong correlation between verbal abuse and divorce rates ($r = 0.882$) underscores the critical role of psychological aggression in marital dissolution. While peer group influence showed a relatively lower but still significant impact ($\beta = 0.836$, $p < 0.001$), its moderately strong correlation with divorce rates ($r = 0.698$) highlights the importance of social networks in marital outcomes. These results demonstrate that both individual relationship dynamics and social influence factors play crucial roles in marital stability, suggesting the need for a comprehensive approach to marriage counseling and divorce prevention.

Recommendations

On the basis of the findings from this research, the following recommendations are made:

i. Implementation of mandatory pre-marital counseling programs focusing specifically on communication patterns and verbal abuse awareness.
ii. Integration of peer group dynamics assessment into standard marriage counseling protocols
iii. Launching of community-based programs to raise awareness about the impact of verbal abuse on marital relationships
iv. Establishment of formal support networks for couples experiencing marital difficulties

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THE MULTINATIONAL AND SUSTAINABLE DEVELOPMENT CHALLENGES IN NIGERIA: A CASE OF ROYAL SALT LIMITED IKWO EBONYI STATE 2012- 2023

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Abstract

The Royal Salt Limited a foreign firm in Ikwo has been in operation with its mining activities since 2003, its operations has prompted this study, which conducted a comprehensive investigation into the activities of RSL, evaluated the environmental and economic development and challenges of Ikwo in Ebonyi State from this foreign firm, specifically examining the impact of Royal Salt Limited operations, if its operations brought Sustainable development that is continuous from time of inauguration to a long time in future, also whether this development maintain and solve the problem of the time and does not cease, or create havoc for posterity. Adopting corporate social responsibility (CSR) as the theoretical framework, the research navigates the complexities of environmental issues linked to Royal Salt Limited activities. Using a quantitative research method, with questionnaire and the survey method of data collections, application of the statistical method of analysis, there were empirical findings that reveal a substantial attribution of environmental degradation in Ikwo, by Royal Salt Limited operations. Negative impact of environmental challenges on local communities were observed, there was complexities within RSL corporate practices, including regulatory noncompliance. However, we recommended the implementation of sustainable practices by the Multinational cooperation operations, aligning with principles of corporate environmental responsibility. The study recommends the resolve of the complexities between corporate activities and environmental challenges in the area.

Keywords: *Environmental Development, Environmental Challenges, Multinational Corporations, Sustainable Practices, Corporate Responsibility.*

Introduction

Multinational Corporation dates back to the early fifteenth and sixteenth centuries, when European business companies started moving to various parts of the globe (Akanegbu, 2014; Awolusi, 2017; Awolusi, 2017b). since the mid1970s, multinational corporations have rapidly expanded business activities on a worldwide basis through foreign direct investment (Otokiti, 2012). For example, the British East India Company (1599-1858) and the Hudson's Bay Cooperation (1670) were all created in the same way by British merchants with the objective of trading with America and Africa respectively (Akanegbu, 2014). These were the predecessors of the modern multinational corporations. Since World War II, the dimensions of multinational corporations have grown and spread with phenomenal speed.

A multinational corporation normally functions with the headquarters based in one country, while other facilities are based in locations in other countries. In some circles, a multinational corporation is referred to as a multinational enterprise or a transnational corporation (Tatum, 2010). They enter host countries in different ways and different strategies. Some enter by exporting their products to test the market and to find whether their existing products can gain sizeable market share, Some of these MNCs; Apple (USA) which deals on iPhone and MacBook, Toyota (Japan) which deals on vehicles, Nestle (Switzerland) exporting food products like Nescafe and Kit Kat among others. For such firms, they rely on export agents. These foreign sales branches or assembly operations are established to save transport costs because there is a limit to what foreign exports can achieve for a firm owing mainly to tariff barriers and quotas and also owing to logistics or cost of transportation (Hill, C.W,2013; Wild, J.J & Wild, K.L, 2014; Pent, M.W, 2014). To meet the growing demands in the foreign countries, the firm considers other options such as licensing or foreign direct investment which are critical steps. Some continue with export even when they have settled for the foreign direct investment option. Every step takes strategic planning and is motivated by profit through sales growth (Osuagwu & Ezie, 2013).

Multinational corporations (MNCs) have long been active players in global markets and hold significant influence in global politics, the political role is often more contentious and harder to define. Previously, the focus of international studies has been dominated by states strategically maneuvering, often sidelining corporations or overlooking the importance of the operations. Notably global politics is driven by economic forces; it may be more accurate to say that the MNCs, are at the fore front. Understanding the role of MNCs is crucial to analyzing contemporary global political issues. Multinational corporations have held significant positions in both the global economy and international relations since inception, along with the roles they have played in intergovernmental relations, (Nwaigwe, 2025). Scholars are of the view that Multinational Corporations has achieved sustainable development over time (Prahalad & Hart, 2002; Porter & kramer, 2006; UN Global Compact, 2013), other scholars on the contrary have argued againt the assertion that Multinational Corporations (MNCs) have achieved Sustainable Development (Klein, 2000 ; Stieglitz, 2002; Korten ,2001).

Sustainability: Sustainability is a process that helps create a vibrant economy and a high quality of life, while. respecting the need to sustain natural resources and protect the environment. It expresses the principle that future generations should live in a world that the present generation has enjoyed but not diminished (ICC, 1991) Sustainability also means meeting our own needs without compromising the ability of future generations to meet their own needs (UN Brundtland commission. 1987).

Development is a process of social, economic, and political change that aims to improve the quality of life for people in a society. It can involve increasing the standard of living, improving access to healthcare and education, reducing overrun and inequality, and promoting democratic governance (United Nations Development program 1960). Development can occur at a variety of levels, from the individual to the national and global levels. There are different theories of development, including modernization theory, dependency theory, and human development theory, which offer different perspectives on how development can be achieved. The concept of development is closely related to issues of sustainability and equity, and is an important topic in international relations and global politics.

Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains two key concepts within it: Sustainable development thus tries to find a balance between economic development, environmental protection, and social well-being. (UN Brundtland commission. 1987) Sustainable development is how we must live today if we want a better tomorrow, by meeting present needs without compromising the chances of future generations to meet basic needs. The survival of our societies and our shared planet depends on a more sustainable world.

It's a bit of a juggling act. Three different balls must be kept in the air at once: economic growth, social inclusion, and environmental protection. If one or two falls to the ground, the act is over. An economy might grow rapidly, for instance – but only for so long if most people remain poor and all the natural resources are used up. Where development is sustainable, everyone has access to decent work, quality health care and education. Public policy choices ensure that no one is left behind due to disadvantages or discrimination (UN Brundtland Commission Report, 1987). The broad objective of the study is to interrogate how multinational corporations have achieved sustainable development during the period set out for investigation, then specifically to determine how this Corporations Sustainable Development has improved the development and livelihood in Ikwo, Ebonyi State.

The Royal Salt Limited have existed since 2003-date. However, sustainable developments have been identified as one of the major issues in the Ikwo Local Government. Researchers have shown that multinational corporations are meant to be of the advantage of the city they are established in, but this assertion seems to be negated in this locality. There are issues of lack of technology transfer, the indigenes employed are in the rank of security, drivers, cleaners and machine feeders among other lower carders, these local staff are denied the access to the core mining technique, instead of teaching the locals how to operate and control some of the important machines needed for mining and how a proper mining is supposed to be done, positions given deter indigenes the knowledge of the technocrats.

Consequently, the study observed the lack of interest on the local environment, in that, there is no visible infrastructural development as supposed by the Corporation in the locality where it is situated. In the communities no good road network except by the ones executed by the immediate past governor Hon. David Nwaeze Umiah , no good infrastructure for education as suppose, no good Medical Center by the Corporation, there has been records of pollutions that affect the health, food and water in the locality. These had resulted cum reduced the level of development and have increased the rate of poverty and environmental hazards in community. The MNC has polluted the environment that it becomes unconditional for healthy living, the air when inhaled is dangerous to the health and can lead to related sickness like cancer. It was observed that one of the mineral resources extracted from this locality is lead that is dangerous to human health, the pollutions causes floating of black oil particles in water and river banks in the environments, this environmental pollution also affects the agricultural products of the community. Now, in attempt to interrogate the above problems raised in the research, the researcher is posed with the following research question to guide review of related literatures; Are there correlations between sustainable development and Royal Salt Limited from 2012-2023 in Ikwo L.G.A

The Concept of Sustainable Development

The concept of sustainable development has emerged as a crucial framework in the quest for a balanced approach to economic growth, environmental stewardship, and social wellbeing (Leal, et al. 2019). Rooted in the recognition of the interconnectedness of these three pillars, sustainable development seeks to address the pressing challenges of our time such as climate change, resource depletion, and social line quality by promoting a model of growth that meets present needs without compromising the ability of future generations to meet their own (Sachs,2017). Kates, et al. (2018), asserts that the term "sustainable development" gained wide spread prominence with the publication of the Brundt land Report in 1987, formally known as "Our Common Future."

Positive Contributions of Mncs to Sustainable Development in Nigeria

In Nigeria, a nation endowed with abundant natural resources and a burgeoning population, the pursuit of sustainable development is both a necessity and a challenge. Among the key players in this endeavor are multinational corporations (MNCs), whose significant presence and influence can act as a catalyst for sustainable economic, social, and environmental progress (Udo,2017). According to Okpara, (2019), MNCs contribute to Nigeria's sustainable development through substantial investments in various sectors, leading to economic growth and diversification. These corporations often bring in capital that boosts infrastructure development, including the construction of roads, bridges, and energy facilities. Such infrastructure is essential for the country's long-term economic stability and growth. Additionally, MNCs create job opportunities, directly and indirectly, fostering employment and skill development among the local work force. This transfer of skills and technology is crucial for building a more capable and competitive economy. The technological prowess and innovative capabilities of MNCs play a significant role in enhancing local industries. By introducing advanced technologies and best practices, these corporations help improve efficiency and productivity in Nigerian businesses. This transfer of knowledge extends beyond mere technological advancements; it includes management practices, corporate governance standards, and operational efficiencies that can be adopted by local firms, there by elevating the overall quality of the business environment (Amadi, 2021).

Osagie, (2019), asserts that MNCs also make positive social contributions by investing in community development initiatives. Many MNCs operating in Nigeria under take corporate social responsibility (CSR) program ms that focus on education, healthcare, and community infrastructure. For instance, by funding schools and scholarship programs, MNCs enhance educational opportunities for Nigerian youth, thereby contributing to a more educated and skilled population. Similarly, investments in healthcare facilities and programs help improve public health, which is vital for sustainable development. Addressing environmental concerns is a key aspect of sustainable development, and MNCs in Nigeria are increasingly recognizing their role in environmental stewardship. Many of these corporations have adopted sustainable practices to minimize the environmental footprint. This includes initiatives to reduce green-house gas emissions, manage waste responsibly, and protect biodiversity. By implementing and adhering to international environmental standards, MNCs set a precedent for local businesses, encouraging them to adopt similar practices.

The presence of MNCs in Nigeria often brings with it improved corporate governance and ethical standards. These companies are typically subject to stringent regulatory requirements in their home countries and global markets, which they bring to their operations in Nigeria (Eweje,2018). This helps to enhance transparency, accountability, and ethical business practices within the local business environment. By promoting high standards of governance, MNCs contribute to a more stable and reliable business climate, which is essential for sustainable development. MNCs frequently collaborate with local governments and organizations to support sustainable development initiatives. These partnerships can amplify the impact of development projects, ensuring that they are well-targeted and effectively implemented. By working together with stakeholders at various levels, MNCs help align their initiatives with national development goals and priorities, fostering a more coordinated and impactful approach to sustainable development.

Negative Impacts of MNCs

Multinational Corporations (MNCs) have become integral players in the global economy, wielding significant influence and power across various industries and regions. While they often tout economic growth and job creation as their main contributions, the negative impacts of MNCs cannot be overlooked, particularly in regions like the Niger Delta in Nigeria. The Niger Delta, endowed with abundant natural resources, has become a focal point for oil exploration by MNCs seeking to exploit its rich reserves. However, the pursuit of profit has come at a grave cost to the environment and the local communities. The activities of MNCs in the region have led to rampant pollution of water bodies, destruction of fragile ecosystems, and loss of biodiversity (Orubu,2018). The oil spills, gas flaring, and improper waste disposal practices have turned once vibrant ecosystems into toxic waste lands, rendering water sources undrinkable and land unfit for agriculture. Moreover, the environmental degradation inflicted by MNCs in the Niger Delta has severe implications for the livelihoods and health of the indigenous communities residing in the region. Fishing and farming, which are essential sources of sustenance for the locals, have been severely compromised due to pollution, depriving them of their means of survival. Additionally, exposure to toxic chemicals from oil spills and gas flaring has led to a myriad of health problems, including respiratory diseases, skin disorders, and birth defects, further exacerbating the socio-economic challenges faced by the communities (Ekeh,2016).

Furthermore, the negative impacts of MNCs extend beyond environmental degradation to encompass socio-political tensions and conflicts within the region. The unequal distribution of wealth generated from oil exploration has fueled resentment and discontent among the local population, leading to social unrest and even violent conflicts between communities and the companies operating in the area. The lack of accountability and transparency in the operations of MNCs has exacerbated grievances and eroded trust in both governmental and corporate institutions.

According to Nwosu, L.(2019), one of the most profound social consequences of MNC operations is the displacement of communities, particularly in the pursuit of natural resources or land for industrial projects. Whether it's mining operations in rural areas or infrastructure development projects in urban centers, MNCs often encroach upon the territories and livelihoods of indigenous peoples and local communities. Forced evictions, loss of traditional lands, and disruption of social cohesion are common outcomes, leaving affected populations marginalized and disenfranchised. Moreover, MNCs have frequently been implicated in labor rights violations, exploiting cheap labor in pursuit of profit maximization. Sweat shop conditions, childlabor, wagetheft, and unsafe working environments are rampant in many industries where MNCs hold sway. Despite in ternational labor standards and regulations, weak enforcement mechanisms and lack of transparency often allow MNCs to evade accountability for their labor practices, perpetuating cycles of exploitation and inequality.

Okafor, E. (2020) asserts that MNCs contribute significantly to widening social inequality both within and between countries. Their disproportionate access to resources, tax evasion practices, and exploitation of loop holes in regulatory framework so ften result in the concentration of wealth and power in the hands of a privileged few, while leaving the majority of workers and communities marginalized and impoverished. This exacerbation of in equality not only undermines social cohesion and stability but also hampers sustainable development efforts and perpetuates cycles of poverty.

Challenges Faced by MNCS in Promoting Sustainable Development in Nigeria

Multinational corporations (MNCs) play a crucial role in the global economy, contributing significantly to economic growth, technological advancement, and cross-border trade. In Nigeria, the largest economy in Africa, MNCs are instrumental in harnessing the country's vast natural and human resources. However, the quest for sustainable development, which encompasses economic prosperity, social inclusion, and environmental preservation, poses significant challenges for these corporations.

Economic Context and Development Goals: Nigeria's economy, predominantly driven by oil and gas exports, has experienced significant growth over the years. Despite this, the country faces substantial developmental challenges, including widespread poverty, high unemployment rates, and inadequate infrastructure. The Nigerian government's Vision 20:2020 plan and the Economic Recovery and Growth Plan (ERGP) aim to diversify the economy, reduce dependency on oil, and promote sustainable development. MNCs operating in Nigeria are expected to contribute to the sensational objectives while managing their business interests. However, achieving this balance is fraught with challenges (Akinlo,2016).

Environmental Challenges: The environmental impact of industrial activities in Nigeria, particularly those of oil and gas MNCs, has been profound. The Niger Delta, rich in oil reserves, has witnessed significant environmental degradation due to oils pills, gasflaring, and deforestation (Nwankwo&Ifeanyi,2017). For instance, Shell, one of the largest oil companies operating in Nigeria, has faced criticism and legal battles over oil spills that have devastated local ecosystems and communities. The Bodo community oil spill in 2008 is a notable example, where thousands of barrels of oil were spilled, causing extensive environmental damage and affecting the livelihoods of the local population. MNCs are under pressure to adopt sustainable practices, reduce their carbon footprint, and engage in remediation efforts. However, the financial and logistical costs of implementing such measures can be substantial (Obi, 2019).

Social Challenges: Social sustainability involves addressing issues such as poverty, inequality, and community development. MNCs in Nigeria must navigate complex social landscapes, including managing community expectations and addressing labor standards and human rights concerns. For example, in the Niger Delta, local communities often feel marginalized by the activities of oil companies, leading to conflicts and resistance. Chevron's operations in the region have faced significant opposition from local communities, who argue that they have not benefited equitably from the oil wealth and suffer from environmental degradation and health issues. Ensuring fair labor practices, equitable resource distribution, and meaningful community engagement are critical yet challenging tasks for MNCs.

Governance and Regulatory Challenges: Nigeria's regulatory environment presents significant hurdles for MNCs. Issues such as corruption, bureaucratic inefficiencies, and inconsistent enforcement of laws complicate the business landscape. Adhering to environmental regulations, laborlaws, and corporate governance standards requires navigating a complex and often opaque bureaucratic system. For instance, the Petroleum Industry Bill, intended to reform the oil and gas sector, has faced numerous delays and controversies, creating uncertainty for MNCs. Furthermore, weak enforcement mechanisms for environmental and social standards hamper efforts to operate sustainably (Uzoigwe,2020).

Technological and Infrastructure Challenges: Eboh and Ukpong (2021) highlight that Infrastructural deficiencies in Nigeria, such as unreliable power supply, poor transportation networks, and inadequate technological infrastructure, poses significant barriers to the implementation of sustainable practices. MNCs often require advanced technologies and robust infrastructure to achieve sustainability goals. However, the lack of these resources can impede progress. For example, manufacturing companies like Unilever and Nestlé face challenges in maintaining efficient and sustainable operations due to frequent power outages and poor logistics networks. Overcoming these infrastructural barriers is essential for promoting sustainable development.

Cultural and Local Dynamics: According to Adeola and Enekwe (2016), cultural differences and local dynamics further complicate the efforts of MNCs to promote sustainable development. Understanding and integrating local cultural norms and values into corporate strategies is essential for gaining community trust and cooperation. However, this requires a nuanced approach that respects local traditions while promoting sustainable practices. For instance, mining companies like Anglo American have had to invest in community relations and cultural competence to navigate local dynamics effectively. Successful engagement with local stakeholders can lead to better cooperation and more sustainable outcomes.

Empirical Review

Nwamaka, Igwe & Akpan (2024), This study explores the effect of innovation on sustainable development among multinational enterprises (MNEs) operating in Nigeria. Utilizing a cross-sectional survey design, the research investigates how innovation practices within MNEs influence the economic, environmental, and social dimensions of sustainable development in the Nigerian context. Data were collected from workers of five multinational corporations using a structured questionnaire. The study hypotheses were analyzed using the partial least square–structural equation modeling (PLS-SEM) via Smart PLS 3.2.9. The findings demonstrate a positive and significant effect of innovation on all three dimensions of sustainable development. This suggests that MNEs fostering innovation contribute meaningfully to achieving broader societal goals beyond economic profit. The study further recommended that MNEs should integrate sustainability metrics into their innovation performance evaluation. Track how their innovations contribute to economic growth, environmental improvements, and social well-being. This will help them identify the most impactful innovations and guide future investments towards projects that generate shared value for their business and society.

Bello & Kazibwe, (2021), the study examines the multinational corporations and sustainable development goals in Nigeria: exploiting private funds for international development. The inability of states to achieve the Millennium Development Goals (MDG) by the end of 2015 led to the formation of the Post-2015 United Nations (UN) Development Agenda, which ultimately culminated in the Sustainable Development Goals (SDG). To avoid the short fall associated with MDG which was financing, the UN came up with the UN Global Compact to explore business financing for the SDGs. With the aid of primary and secondary data sourced from interviews, articles, newspapers, reports, policy statements, books, CS Reports. The finding of the research shows that most MNCs in Nigeria have tailored their CSR towards the accomplishment of SDG. The paper utilized two MNCs one from the telecommunication sector (MTN) and the other from the Petroleum sector (ShellPetroleum). MTN CSR is divided into three portfolios which include economic empowerment, education portfolio, and health portfolio the SDG goals are adequately catered for in these three portfolios. While Shell Petroleum CSR is divided into enterprise development, educational development, and health which has taken into consideration the SDGs. The paper concludes that despite reservation about the operation of MNCs in Nigeria, these corporations have made a considerable effort towards the achievement of SDG.

Theoretical Framework

Corporate Social Responsibility (CSR) Theory

Corporate Social Responsibility (CSR) theory emphasizes the ethical obligations of businesses beyond profit maximization. CSR theory posits that businesses should operate in ways that contribute positively to society, ensuring that their actions are aligned with societal goals, environmental sustainability, and the welfare of stakeholders, including employees, customers, and the broader community. The concept of CSR has evolved significantly overtime. One of the earliest contributions to the formalization of CSR was by Howard R. Bowen, often referred to as the "father of CSR." In his seminal work, Social Responsibilities of the Businessman (1953), Bowen argued that businesses should consider the social implications of their decisions, recognizing that corporations influence society in many ways. According to Bowen (1953), businesses had an ethical responsibility to work for the broader good, not just for shareholders butals of or employees, customers, and communities.

Following Bowen's, CSR gained traction, and various sscholars developed frameworks and theories around the concept . One influential contribution came from Archie (1979), who proposed a four-part model of CSR. Carroll's CSR pyramid identified four dimensions of corporate responsibility: economic, legal, ethical, and philanthropic. He argued that while businesses must be economically sustainable and legally compliant, they should also act ethically and contribute to society's betterment through philanthropy (Carroll,1979). Carroll later expanded on this idea, asserting that these four components are not mutually exclusive but rather interdependent (Carroll,1991). His work provided a comprehensive understanding of CSR, establishing the pyramid model as a key theoretical framework in CSR literature.

Other scholars, like Milton Friedman (1970), however, challenged the premise of CSR. In his widely cited article, "The Social Responsibility of Business is to Increase Its Profits, "Friedman argued against the notion of CSR, stating that the sole responsibility of business is to generate profits within the boundaries of the law. According to Friedman, corporate executives should focus solely on maximizing shareholder value rather than engaging in broader societal or philanthropic efforts. Despite Friedman's opposition, CSR theory continued to evolve. The Stakeholder Theory introduced by Edward Freeman (1984) significantly shaped the discourse on CSR by broadening the concept of a corporation's responsibility. Freeman's theory posits that businesses are not only accountable to shareholders but also to all stakeholders who are affected by the business, such as employees, customers, suppliers, and the environment. Freeman (1984) argued that creating value for stakeholders is integral to a company's long-term success.

More recent CSR scholarship emphasizes sustainability and global ethical standards. Elkington's (1997) concept of the Triple Bottom Line suggests that businesses should focus on three dimensions of performance: economic, environmental, and social. This framework has become increasingly relevant as businesses are expected to contribute to environmental sustainability and social equity while achieving financial performance (Elkington, 1997). The rise of environmental, social and governance (ESG) reporting in recent years further underscores the importance of CSR as part of a company's core strategy.

Corporate Social Responsibility theory has a significant role to play in promoting sustainable development in Ikwo Local Government, Ebonyi State, Nigeria. By integrating CSR principles into their business operations, multinational corporations can contribute to economic development, social progress, and environmental stewardship in the region. However, achieving meaningful impact requires genuine commitment, collaboration, and accountability from all stakeholders involved.

Summary of Literature Review

The literature reviews discuss the concept of sustainable development is crucial for Nigeria, as it aims to balance the need of the present without compromising the ability of future generations to meet their own needs. The country faces significant challenges, including poverty, inequality, environmental degradation, and political instability. Multinational corporations (MNCs) play a key role in promoting sustainable development through investments in various sectors, job creation, and corporate social responsibility initiatives. However, their operations are not without challenges, including regulatory hurdles, security concerns, and socio-political complexities. MNCs contribute to sustainable development in Nigeria through substantial investments in sectors such as oil and gas, telecommunications, consumer goods, financial services, and agriculture. They bring in capital that boosts infrastructure development, create job opportunities, and transfer technology and skills to local industries. Many MNCs operating in Nigeria undertake corporate social responsibility (CSR) programs that focus on education, healthcare, and community infrastructure. Forinstance, Chevron's Agbami Medical and Engineering Scholarships have improved educational outcomes and created a skilled work force. Exxon Mobil's Malaria Control Program has significantly reduced the incidence of malaria in affected communities.

However, MNCs also have negative impacts on the environment and local communities. The activities of MNCs in the Niger Delta have led to rampant pollution of water bodies, destruction of fragile ecosystems, and loss of biodiversity. The environmental degradation inflicted by MNCs in the Niger Delta has severe implications for the livelihoods and health of the indigenous communities residing in the region. The challenges faced by MNCs in promoting sustainable development in Nigeria include the economic context and development goals, environmental challenges, social challenges, governance and regulatory challenges, technological and infrastructure challenges, and cultural and local dynamics. Addressing these challenges requires a multifaceted approach that balances economic growth, social inclusion, and environmental preservation. Corporate Social Responsibility (CSR) Theory focuses on integrating ethical principles into business strategies to address obligations to various stakeholders and operate in a socially, environmentally, and economically responsible manner. CSR has evolved from early 20th-century discussions and is supported by frameworks like the Triple Bottom Line and international standards such as the United Nations Global Compact. Both theories are relevant to promoting sustainable development in regions like Ikwo Local Government, emphasizing collaboration and genuine commitment from all stakeholders.

From the literature reviewed, it becomes apparent that while there has been some research on sustainable development and the role of multinational corporations (MNCs) in Nigeria, the scope and depth of these studies remain limited. Most of the available literature has focused on specific aspects such as corporate social responsibility (CSR), economic empowerment, and environmental practices of MNCs. However, a comprehensive understanding of how these corporations contribute to sustainable development in a holistic manner addressing economic, environmental, and social dimensions remains underexplored. The existing literature has not fully addressed how Nigerian-based MNCs are incorporating these aspects into their everyday business practices. Thus, this study seeks to fill this gap by providing a more comprehensive analysis of the role of MNCs in sustainable development in Nigeria. It aims to move beyond CSR and short-term initiatives, focusing instead on how MNCs can sustainably align their operations with Nigeria's long-term development goals.

Methodology

This study employed a dual-method approach combining a systematic literature review (SLR) and interpretative phenomenological analysis (IPA) to interrogate the multinational and sustainable development challenges in Nigeria: a case of royal salt limited Ikwo Ebonyi state. The SLR provided a structured and comprehensive synthesis of existing scholarly contributions on the multinational and sustainable development challenges in Nigeria, drawing exclusively from peer-reviewed journals, academic books, and authoritative publications. Inclusion criteria focused on relevance to Nigeria, theoretical grounding, and empirical robustness, while studies lacking depth, conceptual clarity, or relevance to the research questions were excluded.

IPA was employed to explore the lived experiences and nuanced perspectives of stakeholders directly engaged in the locality. This approach was chosen to capture the subjective realities of actors navigating corporation and the locality the population of this study is deliberately broad and inclusive, encompassing government officials ,the general public, community members, students and employees of Royal Salt Limited, This diverse approach was essential for gaining comprehensive understanding of the intricate relationships between sustainable development and the role of multinational cooperation in Ikwo, Ebonyi State. Thus, offering context-sensitive insights beyond what the literature alone could provide. Data collection was conducted through a mix of physical interviews and online formats. Structured Google Forms were shared via WhatsApp and email to reach respondents across geographic locations, starting from Ikwo and extending to stakeholders in other parts of Ebonyi State of Nigeria for validation. Some respondents opted for asynchronous participation through open-ended survey responses, enabling reflection and flexibility. Interview questions were carefully designed by reframing the study's core research questions into open-ended prompts grounded in the literature. The collected responses were manually coded and thematically analyzed.

The adopted survey method, specifically utilized questionnaires to delve into sustainable development and the role of multinational cooperation in Nigeria, with a specific focus on the activities of Royal Salt Limited, situated in Ikwo LGA Ebonyi State. The decision to use the survey method is driven by the need for a comprehensive understanding of the perspectives and experiences of Ikwo LGA indigenes regarding the activities of the Royal Salt Company. The population of this study encompasses a diverse spectrum of stakeholders, reflecting the multifaceted dimensions of the research focus. Drawing from both governmental and non-governmental sectors, the study aims to capture a comprehensive range of perspectives on sustainable development in Ikwo LGA of Ebonyi State, specifically pertaining to the activities of multinational corporations, including Royal Salt Limited. Government officials at various levels, including local, regional, and national authorities in the locality, constitute a vital segment of the study's population. Their insights and policy perspectives offer a governmental view point on environmental regulations, resource management, and the interaction with multinational corporations. By engaging with government officials, the study seeks to understand the regulatory landscape and its implications for sustainable development in Ikwo, Ebonyi State.

The general public represents a crucial component of the study's population, providing first hand experiences, perceptions, and concerns that related to sustainable development. This category includes community members and students residing in the Ikwo, offering a grassroots perspective on the impact of multinational corporation activities on the daily lives. Additionally, Royal Salt Limited employees constitute a unique subset within the general public, adding an insider's view point to the broader discourse.

The entire area under study covers the vast population of Ikwo, Ebonyi State, which, as of the last official census conducted by the Nigerian National Bureau of Statistics in 2012, was home to approximately ninety-nine thousand eighthundred and fifty-five people (99,855). However, given the demographic trends and population growth, it is estimated that the current population has surpassed to three hundred and twenty thousand two hundred (320,200) as of 2022. This significant population size underscores the relevance and urgency of addressing environmental challenges in a region with such substantial human and ecological diversity. By including government officials, the general public, community members, students and employees of multinational corporations, the study aims to ensure inclusivity and representativeness. This diverse pool of participants allows for a holistic exploration of viewpoints, acknowledging the varied interests, concerns, and experiences within Ikwo. In summary, the population of this study is deliberately broad and inclusive, encompassing government officials, the general public, community members, students and employees. This diverse approach is essential for gaining a comprehensive understanding of the intricate relationships between sustainable development and the role of RSL in Ikwo, Ebonyi State.

Discussion of Findings

There were empirical findings, that reveal a substantial attribution of environmental degradation in Ikwo, by Royal Salt Limited operations. Negative impact of environmental challenges on local communities were observed, there was complexities within RSL corporate practices, including regulatory noncompliance.

What is the correlation between Multinational Corporations and Sustainable Development in Ikwo, Ebonyi State?

The data were utilized to achieve this. The research findings reveal a np significant correlation between the presence of Multinational Corporations (MNC) and sustainable development in Ikwo, Ebonyi State. Majority of respondents (56.1%) Strongly disagree that MNC have positively influenced sustainable development, while 21.9% Agree, indicating low positive impact. Small percentage (22%) remained neutral, reflecting some uncertainty regarding the impact. When examining the contributions of MNC to environmental sustainability, 11.7% rated the efforts as Excellent, and 16% considered them Good, suggesting that MNC have not made notable impact in environmental sustainability in Ikwo, though not universally recognized, (22%) remained neutral, reflecting some uncertainty regarding the impact, (50.1%) considered the environmental sustainability in Ikwo as poor in contribution to this aspect of sustainability. Agriculture emerged as the sector most negatively affected from RSL activities causing pollution with 50% of respondents selecting it, followed by healthcare (23.8%), infrastructure (13.9%), and education (12.3%). These findings suggest that while the influence of RSL was negatively viewed, the pains have been unevenly distributed across sectors, with agriculture been the most affected. These findings indicated that the presence of RGL in Ikwo has no significance to sustainable development, particularly in agriculture and healthcare, although challenges remain in other areas such as infrastructure and education.

Has RSL Improved the Employment and Livelihood in Ikwo, Ebonyi State?

The data were utilized to achieve outcome. The research findings indicate that RSL has had notable impact on the development and livelihood of residents in Ikwo, Ebonyi State. Regarding job creation, the majority of respondents (53.7%) reported that the impact of RSL has been Moderately Positive, while 23% described it as Highly Positive , and 24% saw it as poor. These suggested that RSL efforts have contributed to employment opportunities, albeit with room for further improvement. These findings indicated that RSL has moderately enhanced livelihood in Ikwo, particularly in job creation.

Challengenges that Made RSL Not to Achieve Sustainable Development in Ikwo, Ebonyi State

The data were utilized to accomplish this. The research findings reveal several key factors responsible for RSL not achieving sustainable development in Ikwo Ebonyi State. The primary challenge identified by respondents was Corruption, with 42.7% indicating it as the biggest barrier to RSL success in promoting sustainable development. Other significant factors include Poor Governance (22.2%) and Lack of Infrastructure (8%), highlighting systemic issues that hinder progress. Additionally, Environmental Challenges (22.8%) and Lack of Skilled Labor (4.3%) were also noted as contributing obstacles. Government policies were identified as major hindrance, with 62.4% of respondents stating that these policies Strongly Hinder the efforts of RSL in achieving sustainable development because there was complexities within RSL corporate practices, including regulatory noncompliance, and 37.6% indicated Somewhat Hinder the process. This suggests that policy compliance may be essential for fostering a more conducive environment for RSL activities for sustainable development.

Summary

Sustainable development has become a focal point in global discourse, particularly in developing nations like Nigeria, where rapid urbanization, population growth, and environmental challenges threaten the stability of natural resources and human wellbeing. This research aimed to explore the intricate relationship between sustainable development and the role of RSL in Ikwo Local government Area. To carry out this research, the survey method, questionnaires were adopted. The summary of the study were as follows:

i. These findings indicated that the presence of RSL in Ikwo has no significant contribution to sustainable development, particularly in agriculture and infrastructure, although challenges remain in other areas such as education and healthcare.

ii. These findings indicated that sustainable development has moderately enhanced key areas of livelihood in Ikwo, particularly in job creation,

iii. These findings revealed that corruption, poor governance, and inadequate infrastructure are the primary barriers preventing RSL from achieving sustainable development tin Ikwo. Additionally, government policies and limited cooperation with local communities exacerbate these challenges, under scoring the need for systemic changes to enable more effective contributions from RSL.

Conclusion

The findings from this research provide a comprehensive understanding of the role of Multinational Corporations(MNC) in driving sustainable development in Ikwo, Ebonyi State. Based on the empirical data and statistical analysis, it is evident that RSL have made little contributions to sustainable development, particularly in sectors such as agriculture, infrastructure, job creation, and healthcare. However, the negative impacts, while not significant, are moderated by various challenges that impede the full realization of the potential. The first key finding indicated that the presence of MNCs not significantly bolstered the agricultural and in frastructural landscape of Ikwo. This development has directly contributed to livelihood improvements and economic stability in the sesectors. However, critical areas like educational healthcare, while showing little advancements, still face significant challenges that need to be addressed for comprehensive community growth. Further findings revealed that sustainable development initiatives have moderately improved livelihood in dicators such as job creation. However, these improvements have yet to maximize the full potential, signaling the need for more focused efforts by both RSL and the government to enhance community development comprehensively.

A crucial barrier to sustainable development, as identified in this study, is corruption, poor governance, and inadequate infrastructure. These systemic issues hinder the effective contribution of MNCs and complicate their efforts to foster sustainable development in Ikwo. Government policies, which often lack alignment with community needs, and limited collaboration between MNCs and local communities, exacerbate these challenges. For MNCs to achieve more substantial impacts, there must be structural changes that promote transparency, good governance, and community involvement. While RSL have made moderate improvements in employment opportunities, infrastructure development, and overall standards of living, these benefits are perceived as insufficient by many respondents. The findings highlight that although moderate, the contributions of this MNC has not yet fully met the expectations of the community. Further efforts are required to bridge this gap and ensure that the benefits of RSL are more evenly distributed across sectors, particularly in areas still aging behind, such as education and healthcare.

Recommendations

In light to the study's findings and conclusions, the following recommendations are suggested. To further enhance the impact of multinational corporations (MNCs) in Ikwo, particularly in the areas of education and healthcare, MNCs should collaborate with the local government to invest in education infrastructure, healthcare facilities, and community outreach programs that address the existing gaps in these sectors. While sustainable development has improved job creation in Ikwo, continued investments should focus on capacity building, particularly in skills development, healthcare services, and educational resources, to maximize the community's long-term growth and self-sufficiency. To address the barriers of corruption, poor governance, and inadequate infrastructure, the government should implement stronger anti-corruption policies, improve governance frameworks, and foster better partnerships with local communities, we also recommended the implementation of sustainable practices by the Multinational cooperation operations, aligning with principles of corporate environmental responsibility.

The study recommends the resolve of the complixities between corporate activities and environmental challenges in area.

i. This will create an enabling environment for MNCs to contribute more effectively to sustainable development.
ii. MNCs should actively engage with the Ikwo community to assess their expectations and needs in key areas such as infrastructure, employment, and standards of living. This will help guide future projects and investments to ensure more significant and measurable benefits for the community.

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PUBLIC SECTOR FINANCIAL MANAGEMENT AND SERVICE DELIVERY: CHALLENGES AND OPPORTUNITIES IN NIGERIA

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Abstract

Effective public sector financial management (PFM) is essential for accountability, transparency, and efficient service delivery in Nigeria. Despite reforms, challenges such as corruption, inadequate infrastructure, and inefficient budgeting hinder optimal service provision. However, ongoing reforms, adoption of international standards, and digitalization present opportunities to improve PFM practices. This paper examines Nigeria's PFM landscape, identifies key challenges, and explores opportunities for enhancing public service delivery.

Keywords*: Public Sector Financial Management, Service Delivery, Nigeria, Corruption, Fiscal Reforms, Digitalization*

Introduction

Public financial management refers to the processes by which governments plan, allocate, and utilize public funds to achieve policy objectives and deliver services (AB Academies, 2023). In Nigeria, PFM is crucial for federal, state, and local government operations. Despite reforms, inefficiencies persist, affecting the quality of public services (Wikipedia, 2024a).

Challenges in Public Sector Financial Management

1. Corruption and Mismanagement

Corruption remains pervasive in Nigeria's public sector, resulting in fund misappropriation (AP News, 2023). Such practices erode public trust and reduce program effectiveness.

2. Inadequate Budgeting and Fiscal Planning

Budgeting in Nigeria often relies on overambitious revenue projections and high recurrent expenditures, leaving minimal resources for capital projects (Wikipedia, 2024b).

3. Weak Institutional Capacity

Many public institutions lack the technical and managerial skills necessary for effective financial management, resulting in inefficiencies and regulatory noncompliance (AB Academies, 2023).

4. Limited Revenue Generation

Nigeria's tax-to-GDP ratio is among the lowest globally, restricting the government's ability to fund essential services (Reuters, 2024a).

Opportunities for Reform

1. Treasury Single Account (TSA)

The TSA consolidates all government revenues into a single account at the Central Bank, enhancing transparency and cash management (Wikipedia, 2024b).

2. Adoption of International Public Sector Accounting Standards (IPSAS)

Implementing accrual-based IPSAS has improved financial reporting and transparency, supporting better decision-making (Wikipedia, 2024c).

3. Digitalization of Financial Management Processes

Digital technologies streamline financial operations, reduce errors, and facilitate real-time monitoring, improving service delivery (AB Academies, 2023).

4. Tax Reforms and Revenue Mobilization

Proposed reforms to simplify tax administration and consolidate multiple tax systems aim to increase revenue generation and fiscal capacity (Reuters, 2024b).

Conclusion

Although Nigeria faces significant PFM challenges, reforms and best practices provide pathways for improvement. Strengthening institutional capacity, embracing digital technologies, and implementing comprehensive fiscal reforms can enhance service delivery and support sustainable development.

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ENVIRONMENTAL DIMENSION OF CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE REPUTATION AMONG CUSTOMERS OF TELECOMMUNICATION SERVICES IN BAUCHI

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Abstract

This study examined the causal relationship between the environmental dimension of corporate social responsibility and corporate reputation in the telecom industry in Nigeria, and the overall perception about a firm's past behavior and outcomes from the view point of customers. This study employed a cross-sectional survey research methodology, with a population of 210,782 people picked using a multi-stage sample process and a structured questionnaire to elicit information. The result of the correlation shows that Environmental dimension shows there is positive, stronger and significant relationship (p<0.000) between economic dimension of corporate social responsibility with the respondents' perception on Corporate reputation (r= 0.844).. Based on the literatures, the study concluded that MTN held a very good reputation in the eyes of its subscribers. Therefore, the study recommended that the MTN Nigeria had to use environmental dimension of corporate social responsibility critically with the view to improving perception of stakeholders toward its effort on engaging in corporate social responsible activities in order to enhance its overall corporate reputation.

***Keywords**: Corporate Reputation, Corporate Social Responsibility, Environmental Dimension,*

Introduction

Corporate reputation is commonly understood as the perception of every stakeholder that their expectations have or have not been met by the firm (Buzzi,2021), and the only way that stake holder can access whether this has occurred is through the Corporate social responsibility (CSR) activities by the company (Baraibar-diez, 2017). The realization that there are enormous benefits to be derived from being socially responsible in the societies they operate; the major advantages of corporate social responsibility are its potentials to bring about sustainable development and contribute to poverty reduction in any given society. Corporate social responsibility is the contributions of the organization to the development of the community in which such organizations is found in term of the Social, Economic, Political, Educational involvements. However, the company is not compelled to do by any law to do it (Blanco *et-al* 2020).

According to Tran & Nguyen ,(2020) Company reputation has a positive effect on the financial aspect and on the development of the company when that reputation ensures organizational customer satisfaction when the product or service in question is used. The long-term benefits of CSR include greater social legitimacy and a better society. CSR assists companies to reduce external and competitive pressures and indeed become more competitive. Hence, it is imperative for companies to engage in CSR. It plays an important role in assisting businesses to fulfill external obligations such as meeting stakeholder's demand and complying with regulations. (Lim,et al 2021).
CSR has social, environmental and economic benefits, much like the triple bottom line of sustainability. (Shim,et al 2021).However Companies that fail to integrate CSR initiatives into their business practices leave themselves open to negative stakeholder perceptions (Igbekoyi, & Ngozi, 2019).

Whilst CSR has social, economic and environmental dimensions, much like sustainability. (ElAlfy,etal.2020).Scientific and managerial interest in corporate reputation has grown at a rapid pace during the past decades in many industries. It is believed that very little is known about the meaning of corporate reputation, and the effects of corporate reputation in the telecom industry in Nigeria (Leila, Camelia, & Claudia, 2020). Competition has forced business leaders to focus on building the intangible asset of their entity. The name of a company signals distinctive characteristics to its various stakeholders(Yusuf et al., 2018).

Corporate reputation has been adjudged as one of the most strategic and valuable asset business firms can possess. The consequence of poor reputation may destroy not only the financial position of the firm but the probability of future survival. In a nut shell, the probability of future survival of the business firms, Competition in building reputation, monolithic economy which focuses mainly on Oil and gas industries as a major source of its revenue, neglecting manufacturing and service industries to mention but few are problems identify in the literature. Based on the above identified challenges, therefore this study intends to examine the relationship between economic dimension of CSR on corporate reputation in telecom industry in Bauchi.

Literature Review

2. 2.1 Concept of Corporate Reputation

Corporate reputation is an evolving concept, with a myriad of differing conceptual approaches, methodologies and arguments, which result in numerous definitions (Singh, & Misra, 2021). However, they share certain common characteristics. Firstly, corporate reputation is long-term by nature, evolving over time as a result of consistent performance (Baruah, & Panda, 2020).

Secondly, corporate reputation is based on direct experience or persuasive indirect information, which generates the attitudes and emotions of an individual (or group) towards the organization (Aljarah, 2020). Hence, reputation is a consequence of corporate identity, performance and communication, all of which form the beliefs and attitudes of stakeholders and citizens towards the company. The study of corporate reputation is increasingly gaining attention from scholars and practitioners (Baah, Jin, & Tang, 2020).. It is believed that the intangible attributes of companies such as corporate reputation are more durable and resistant to competitive pressures than product and service attributes (Baruah, & Panda, 2020). And thus, they may serve companies better in their search for competitive advantage (Hagiu, & Wright, 2020).

2.2.2 Concept of Corporate Social Responsibility

Corporate social responsibility (CSR) is the promise by business organizations to behave in a way that is ethically acceptable and at the same time contributing to the economic development and improvement of the living conditions of the employees, the catchment community and the larger society. It is the set of conditions to which a company relates its impact on society with. The major advantages of corporate social responsibility are its potentials to bring about sustainable development and contribute to poverty reduction in any given society. As a result, firms are increasingly collaborating with stakeholders to come to terms with their views and concerns regarding different environmental, social, corporate governance and economic concerns which are often alluded to as issues of CSR and to incorporate and address those views and concerns in the company's strategic decision-making processes (Agudelo, Jóhannsdóttir, & Davídsdóttir, 2019; Iglesias, Markovic, Bagherzadeh, & Singh, 2020).

Corporate social responsibility (CSR), relates to the role and obligations expected of business as a creation of modern society. Two opposing schools of thought emerged during the early birth of CSR. While one school argues that businesses should assume some responsibilities in the society beyond their primary economic role, the other stands against. In the latter case, CSR is based on purely its economic role of profit. This is regarded as the "classical view", based on the neoclassical economic theory while the former which is the "stakeholder view", is based on stakeholder theory (Branco & Rodriques, 2007). However, businesses of different sizes and concerns are competing to be seen as socially responsible (Crowther, 2004). Social responsibility has now become the art of every business-oriented organization.

2.2.6 Environmental Dimension of CSR

Environmental dimension refers to the maintenance of natural capital by regulating the impact of human activities (human footprints) on the natural environment. It involves responsible use of renewable and non-renewable resources, regulated pollution and waste assimilation. The dimension of environmental sustainability is prominently described by the principle of environmental integrity which requires that people's actions need not destroy the earth's land, air and water resources. Recent research established that institutional isomorphism is prevalent in the context of environmental sustainability. However, variables of sustainability implementation, performance, monitoring and evaluation have not yet been satisfactorily examined in literature.

Zhu and Sarkis (2015) established that firms are influenced by coercive isomorphic pressures, especially manufacturers being the top polluters and responsible for much of the depletion of resources more than their counterpart firms, as such, they are subjected to more external pressure. A study in Malaysia by Hsu, Tan, Zailani and Jayaraman (2017) also established that manufacturers were driven by coercive pressures to practice environmental dimension in their operational processes. In their study, they established that competitor pressure and regulatory pressures were the most influential ones. On the other hand, the significance of isomorphic pressures pertaining to the implementation of sustainable practices is getting increasingly paramount. By so doing, it is imperative to research isomorphism in environmental sustainability as a most likely phenomenon.
The theoretical framework for this study is grounded in two major theories;

2.3.1 Achie Carroll's CSR Pyramid Theory (1991)

This study adopts the Achie Carroll's CSR Pyramid theory. One of the most used and quoted models of CSR is Carroll's 1991 Pyramid of Corporate Social Responsibility. Carroll considers CSR to consist of four social responsibilities; economic, legal, ethical and philanthropic, with decreasing importance in that order.

2.3.2 Social Expectations Approach

This widely used approach is based on the premise that stakeholders evaluate corporate activities based on expected corporate behaviour within society. Numerous authors find that items of corporate reputation are culturally biased, as they are determined by the specific social, economic, political and technological features of a country or region (Ponzi et al. 2011; Gardberg 2006; Walsh/Wiedman 2004; Craig/Douglas 2000). Furthermore, Blindheim (2015) found a strong case for different CSR forms across national contexts, determined by significant differences in the way that CSR and ethics is perceived and valued by different cultures.

3.1 Methodology

This paper adopts the views of other researchers from existing literatures and other relevant documents. This research by deductive approach was able to adopt this method due to availability of literatures that can be able to provide all the required information needed. However, below is the population of the study used.

3.2 Population of the Study

The researcher's target populations were 210,782 MTN subscribers within Bauchi Metropolis. sample size of 384 MTN subscribers were carefully adopted for the research. Correlation between Environmental Dimension of Corporate Social Responsibilities and Corporate Reputation.

4.1 Result

Variables (n=393)	R (Correlation Coefficient)	P-Value	Hypothesis
Environmental Dimension	.844	.000	H_A3=Supported

Source: Authors' Field survey, (2025)

4.2 Conclusion

The study revealed that MTN subscribers in Bauchi perceived the MTN company as firm with good reputation based on their perceived quality of service they are offering to customers. The study shows there is positive, stronger and significant relationship ($p<0.000$) between environmental dimension of corporate social responsibility on Corporate Reputation ($r= 0.844$).. Based on these findings, the study concluded that MTN held a very good reputation in the eyes of its subscribers. On the relationship between environmental dimensions of corporate social responsibility and the corporate reputation, the literature obtained revealed that there was significant relationship with corporate reputation. It is recommended that the management of MTN Nigeria should look at these environmental dimensions of corporate social responsibilities critically with the view to improve on it in order to enhance overall corporate reputation.

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PUBLIC SECTOR FINANCIAL MANAGEMENT AND SERVICE DELIVERY: CHALLENGES AND OPPORTUNITIES IN NIGERIA

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Abstract

Effective public sector financial management (PFM) is essential for accountability, transparency, and efficient service delivery in Nigeria. Despite reforms, challenges such as corruption, inadequate infrastructure, and inefficient budgeting hinder optimal service provision. However, ongoing reforms, adoption of international standards, and digitalization present opportunities to improve PFM practices. This paper examines Nigeria's PFM landscape, identifies key challenges, and explores opportunities for enhancing public service delivery.

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Introduction

Public financial management refers to the processes by which governments plan, allocate, and utilize public funds to achieve policy objectives and deliver services (AB Academies, 2023). In Nigeria, PFM is crucial for federal, state, and local government operations. Despite reforms, inefficiencies persist, affecting the quality of public services (Wikipedia, 2024a).

Challenges in Public Sector Financial Management

1. **Corruption and Mismanagement**

Corruption remains pervasive in Nigeria's public sector, resulting in fund misappropriation (AP News, 2023). Such practices erode public trust and reduce program effectiveness.

2. **Inadequate Budgeting and Fiscal Planning**

Budgeting in Nigeria often relies on overambitious revenue projections and high recurrent expenditures, leaving minimal resources for capital projects (Wikipedia, 2024b).

3. **Weak Institutional Capacity**

Many public institutions lack the technical and managerial skills necessary for effective financial management, resulting in inefficiencies and regulatory noncompliance (AB Academies, 2023).

4. **Limited Revenue Generation**

Nigeria's tax-to-GDP ratio is among the lowest globally, restricting the government's ability to fund essential services (Reuters, 2024a).

Opportunities for Reform

1. **Treasury Single Account (TSA)**

The TSA consolidates all government revenues into a single account at the Central Bank, enhancing transparency and cash management (Wikipedia, 2024b).

2. **Adoption of International Public Sector Accounting Standards (IPSAS)**

Implementing accrual-based IPSAS has improved financial reporting and transparency, supporting better decision-making (Wikipedia, 2024c).

3. **Digitalization of Financial Management Processes**

Digital technologies streamline financial operations, reduce errors, and facilitate real-time monitoring, improving service delivery (AB Academies, 2023).

4. **Tax Reforms and Revenue Mobilization**

Proposed reforms to simplify tax administration and consolidate multiple tax systems aim to increase revenue generation and fiscal capacity (Reuters, 2024b).

Conclusion

Although Nigeria faces significant PFM challenges, reforms and best practices provide pathways for improvement. Strengthening institutional capacity, embracing digital technologies, and implementing comprehensive fiscal reforms can enhance service delivery and support sustainable development.

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FINANCIAL LITERACY, BEHAVIORAL BIASES, AND RISK AVERSION: IMPLICATIONS FOR WOMEN ENTREPRENEURS' INVESTMENT DECISION-MAKING IN NIGERIA

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Abstract
This research investigated how investment decision-making by women entrepreneurs in Kaduna Metropolis, Nigeria, is influenced by behavioral biases (overconfidence and availability) and risk aversion. The study is based on the prospect theory and examines the role of financial literacy in these relationships. A total of 180 women entrepreneurs were selected using a multistage sampling method for an explanatory and quantitative cross-sectional survey. Data was collected and analyzed using descriptive statistics and a multiple regression mediation analysis through SPSS Hayes PROCESS Macro. The findings indicate that behavioral biases (overconfidence and availability) and risk aversion have a significant positive impact on investment decision-making, with financial literacy playing a mediating role. Behavioral Biases = (Behavioral) Financial Literacy = Investment Decision-making (Indirect effect = 0.07). Risk Aversion = 0.16 Financial Literacy = 0.16 Investment Decision-making (Indirect effect = 0.16). The study concludes that while psychological factors like behavioral biases and risk aversion influence investment decisions, financial literacy serves as a crucial link for women entrepreneurs. It is suggested that special financial literacy programs should be introduced for women entrepreneurs by government agencies and financial institutions to enhance skills in budgeting, investment, and risk analysis for more informed investment behavior.

Keywords: *Behavioural Bias, Risk Aversion, Financial Literacy, Investment-Decision-Making, Women Entrepreneurs, Kaduna Metropolis.*

Background to the Study

Entrepreneurship is essential for stimulating economic growth, fostering innovation, and generating job opportunities in both advanced and emerging economies. (Irwansyah et al., 2019). Among entrepreneurs, women have emerged as key contributors to economic advancement, not only as business owners but also as leaders who generate jobs and stimulate investment (Rashid & Ratten, 2020; Putra, 2022a). Their participation in entrepreneurial activities continues to expand, and as such, women are increasingly recognized as important actors in national development. Investments made by women entrepreneurs, whether in financial instruments such as stocks, gold, and real estate, or in productive ventures involving goods and services, have the potential to strengthen economic independence and reduce reliance on external support systems (Kurniasi & Halimatusyadiah, 2019).

For women entrepreneurs to maximize the returns from their investments, financial literacy is indispensable. Adequate financial knowledge enables them to interpret financial information, assess market trends, and avoid irrational decisions that may result in losses (Iram et al., 2023; Fachruzzaman et al., 2021). On the other hand, a lack of financial knowledge puts female entrepreneurs at risk of making cognitive mistakes and biases that can impact decision-making and the future success of their businesses (Iram, Bilal, et al., 2021). Research in the past has shown that women entrepreneurs who have a good understanding of finances are more likely to make rational and confident investment choices, even when faced with greater risks (Ellen & Yuyun, 2019). Nonetheless, a significant number of women still show a tendency to avoid risks, mainly because of their limited financial literacy and lack of access to investment options (Kappal & Rastogi, 2020).

Investment choices are also significantly influenced by behavioral biases. It has been demonstrated that biases including overconfidence, representativeness, and availability heuristics have a major impact on how investors interpret data and distribute funds (Baker et al., 2019; Wendy, 2021). While some studies confirm that these biases distort investment choices (Sartika & Humairo, 2021), others suggest they exert little or no impact (Fitra, 2023), leading to inconsistent empirical findings. Financial literacy has been suggested as a mediating element to resolve these distortions and lessen the impact of behavioral biases on investing choices (Iram, Qazi, et al., 2021). However, more study is required to elucidate these associations, especially among women entrepreneurs, as the data is still unclear.

Additionally, a propensity to steer clear of unclear or high-risk ventures is known as risk aversion, has emerged as another behavioral factor influencing women's investment decisions. While some studies argue that risk aversion negatively affects women entrepreneurs' ability to invest optimally (Adil et al., 2022), other findings suggest that higher financial literacy may moderate its impact, enabling women to make more calculated and profitable investment choices (Saraswati & Rusmanto, 2022). This area requires further exploration, especially within diverse cultural and economic contexts.

In Nigeria, women entrepreneurs have continued to play a pivotal role in socioeconomic transformation. However, disparities in financial literacy, coupled with susceptibility to behavioral biases and risk aversion, often limit their capacity to make sound investment decisions. Investigating how behavioral biases, risk aversion, and financial literacy interact to influence investment decision-making among Nigerian women entrepreneurs is crucial in light of these facts. By concentrating on this dynamic, the research hopes to add to the expanding corpus of knowledge and offer perspectives that could direct educators and policymakers., and financial institutions in designing interventions to strengthen women's entrepreneurial participation and investment outcomes.

Statement of the Problem

Even while female entrepreneurs are increasingly acknowledged as important forces behind economic expansion and investment, many still struggle to make wise and successful financial choices. The lack of financial literacy is a significant issue as it restricts their capacity to evaluate risks, understand financial data, and seize new possibilities. They frequently make bad decisions, make incorrect judgments, and are more susceptible to cognitive biases such availability heuristics, representativeness heuristics, and overconfidence as a result of their ignorance. As a result, their investment results are often less than ideal, which results in decreased profitability and, occasionally, company failure.

Moreover, Research results on how risk aversion and behavioral biases affect investing decision-making are still contradictory. Some studies contend that these psychological aspects significantly skew investing decisions, while others claim that their impact is negligible. Similarly, there is conflicting empirical evidence about financial literacy, despite the fact that it is generally seen as a mitigating factor that can lessen prejudice and promote more logical decision-making. This leaves a hole in our knowledge of how much financial literacy can act as a mediating factor in the interaction between risk aversion, behavioral biases, and investment decision-making.

In Nigeria, where women's entrepreneurial activities are increasing, these issues are particularly pressing. Many women entrepreneurs continue to avoid high-risk but potentially profitable investments due to risk aversion and insufficient financial education. At the same time, behavioral biases further compound the problem, leading to suboptimal allocation of resources. If these challenges are not addressed, women's entrepreneurial potential to contribute to national development through sustainable investment practices may remain underutilized. With the increased involvement of women in entrepreneurial activities in Nigeria, a question has been emerging on how their level of financial literacy, the tendency to risk and psychological assessment influences their decision to invest. The dynamic nature of the relationship between financial literacy, behavioral distortions, and risk aversion tendencies is therefore critical to investigate how the choice of investments is determined among the women entrepreneurs.

Research Objectives

The general objective of the study is to examine the combined effects of financial knowledge, cognitive bias, and risk attitude on the decision to invest by the female entrepreneurs in Nigeria. In particular, the research is aimed to:

i. Test the effect of chosen cognitive biases, including overconfidence and the availability heuristic on investment decision patterns of women business owners in Nigeria.
ii. Identify the extent to which individual risk-aversion attitudes affect women entrepreneurial investment behavior.
iii. Test to what degree financial literacy is an intermediate variable between behavioral biases, risk aversion and investment decisions made by Nigerian women entrepreneurs.

Research Questions

i. How do some psychological biases, such as overconfidence and availability bias, influence investment decisions made by women in Nigeria as entrepreneurs?
ii. How does a tendency toward risk aversion influence the investment behavior of women-owned enterprises in Nigeria?
iii. Does the level of financial literacy play a mediating role between behavioral biases, risk aversion, and investment decision-making among female entrepreneurs in Nigeria?

Research Hypotheses

H01: Cognitive distortions such as overconfidence and availability bias exert no statistically significant influence on the investment decisions of women entrepreneurs in Nigeria.

H02: Risk-averse tendencies have no significant relationship with the investment choices of Nigerian women entrepreneurs.

H03: Financial literacy does not play a significant mediating role in the link between behavioral biases, risk aversion, and investment decision-making among women entrepreneurs in Nigeria.

Literature Review and Theoretical Framework

Influence of Overconfidence Bias on Investment Decision-Making

Overconfidence bias describes a psychological inclination in which individuals exaggerate their competence, expertise, or judgmental accuracy while overlooking essential external cues or evidence (Rona & Sinarwati, 2021). According to heuristic theory, overconfidence is a cognitive distortion that drives decision-makers to rely excessively on their subjective assessments, thereby neglecting objective data or professional guidance (Shah et al., 2018). This cognitive error often compels investors to overrate their predictive abilities, leading to imprudent investment behaviors and exposure to heightened financial risks.

In the entrepreneurial sphere, particularly among women business owners, a balance between self-assurance and financial acumen tends to foster prudent and evidence-based investment practices (Iram et al., 2023). Conversely, inflated self-belief unaccompanied by adequate financial literacy can result in misjudgments, poor allocation of resources, and missed opportunities for profitable ventures (Ellen & Yuyun, 2019). Thus, overconfidence bias emerges as a critical psychological determinant influencing how female entrepreneurs assess, interpret, and act upon investment options.

Empirical investigations have produced varying insights into how overconfidence affects investment behavior and performance outcomes. For instance, Seraj et al. (2022), in a study conducted among approximately 180 Saudi investors, discovered that overconfidence significantly moderated the interplay between financial literacy and investment activity. Their findings revealed that financially knowledgeable investors exhibiting higher levels of overconfidence were more inclined to engage in investment decisions—demonstrating that this bias can intensify the likelihood of taking investment actions ($\beta = 0.161$; $t = 3.392$; $p < 0.001$).

Similarly, Abdin, Qureshi, Iqbal, and Sultana (2022), using survey data ($n = 378$) and structural equation modeling (SEM) in the Borsa Istanbul Review, found that determinants of overconfidence such as self-attribution, optimism, and illusion of control positively influenced risk-taking. This increased risk propensity, in turn, was positively and significantly associated with self-reported investment performance (e.g., risk propensity → investment performance, $\beta \approx 0.36$, $p < 0.001$). Conversely, other studies document the negative implications of overconfidence. Odean (1999), in a seminal study using brokerage account data, established that investors who traded more frequently—a behavior attributed to overconfidence—earned significantly lower net returns after accounting for transaction costs. In a related study, Barber and Odean (2001), analyzing data from approximately 35,000 households, revealed that men (characterized by higher overconfidence) traded more actively than women and consequently earned lower annual risk-adjusted returns, averaging about 1.4% less per year. Both studies conclude that overconfidence-driven excessive trading has a detrimental effect on investment performance that is statistically significant.

Overconfidence Bias's Impact on Financial Literacy

Heuristic theory states that overconfidence bias also affects how people view financial risks, assess potential investments, and make plans for their overall financial strategies. Overconfident investors often disregard their financial knowledge, relying more on intuition or personal judgment, which may distort their investment outcomes (De Zwaan et al., 2017). In many cases, they tend to exaggerate their perceived capacity to interpret market dynamics, often resulting in inaccurate evaluations of risk and poorly structured investment strategies. Research suggests that overconfidence increases investors' propensity to engage in more investments, influences their risk tolerance, and affects how they assess and calculate potential risks (Ahmad & Shah, 2022). For women entrepreneurs, confidence in their decisions—when complemented with strong financial literacy, allows consumers to choose investments more wisely and accurately (Iram, Qazi, et al., 2021). However, overconfidence backfires when there is a lack of adequate financial understanding. This claim is supported by recent research by Iram et al. (2023), which highlights the need for strong financial literacy among investors in order to guarantee sustainable and logical decision-making.

Cognitive Influence of Information Accessibility on Investment Behaviour

Drawing from heuristic theoretical perspectives, the bias associated with information accessibility arises when individuals formulate investment choices based on data that readily comes to mind or appears most familiar, instead of conducting an extensive or systematic evaluation of all available alternatives (Tversky & Kahneman, 1974). In practice, this implies that investors often rely on easily recalled information, recent experiences, or even frequently repeated narratives when making financial choices. Hayati et al. (2022) emphasized that availability bias shapes decision-making by drawing upon information that is readily remembered, newly experienced, or recently communicated. Similarly, Iram et al. (2023) confirmed that this cognitive bias significantly influences investment decisions, as individuals tend to overweight easily accessible information while neglecting equally relevant but less visible data. This reliance on limited sources of information can lead investors, including women entrepreneurs, to make suboptimal or irrational investment choices.

Current empirical evidence is divided on the issue of the effect of accessibility bias in information or in other words the availability bias on investment decisions. Grima et al. (2025) used structural equation modelling (SEM) as reported in the Journal of Behavioral and Experimental Economics and were able to demonstrate in a large-scale study on retail investors that the bias has a positive and statistically significant effect on decision-making tendencies of investors (0.32, $p < 0.01$). In line with this, the results of a cross-sectional SEM study conducted by another empirical study in JISEM (2025), on the data collected on 137 Indian investors showed that the accessibility of familiar information positively influences investment behaviour (= 0.267, $p = 0.000$). Taken together, these findings suggest that the reliance of investors on information that is easily accessed can cause an increase in their confidence and a quicker response rate to the information, which can strengthen proactive investment.

On the other hand, another body of literature also links availability bias to poor investment performance. An example of this is the study reported in the Pakistan Journal of Humanities and Social Sciences (2024) that used a PLS-SEM model to test the variables on members of the Pakistan Stock Exchange; the study found a negative and statistically significant correlation between availability bias and investment behaviour (= -0.223, $p = 0.000$). The authors argued that reliance on the readily available data or a current data can skew an analytical decision-making process to make poor financial decisions and poor investment returns. On the same note, research published in the Journal of Risk and Financial Management (JRFM, MDPI, 2025) determined that behavioral distortions, such as information accessibility bias, are important negative mediators between the quality of investment decisions and financial literacy. In particular, availability bias had a negative and significant impact on decision-making that highlights the importance of the specified phenomenon in degrading rational thought and compromising the overall quality of investment decisions. Taken together, these findings indicate that while availability bias may positively influence investment behavior by enabling faster decision-making based on accessible information, excessive reliance on such heuristics can undermine decision quality and expose investors to poor outcomes.

Effect of Availability Bias on Financial Literacy

Similarly, Shah and Malik (2021), using cross-sectional survey data from 384 retail investors on the Pakistan Stock Exchange and employing multiple regression and SEM, reported that regret aversion is negatively associated with trading frequency. The findings indicate that highly regret-averse investors reduce their trading activity, as they prefer inaction over the possibility of experiencing future regret. This aligns with the idea of regret serving as an "emotional brake" on active portfolio rebalancing.

In contrast, other studies highlight the potential of regret to stimulate corrective behavior and drive observable market patterns. Edison and Aisyah (2023) conducted an experimental web-based trading simulation with 70 student participants using a 2×5 factorial design. The results demonstrated that participants who experienced regret in prior rounds significantly altered their subsequent investment choices. Rather than leading to paralysis, regret acted as a learning mechanism, prompting behavioral adjustments in future decisions.

At the market level, Arisoy, Bali, and Tang (2024) examined investor-level trading data and constructed regret indices within an asset-pricing framework. Their findings revealed that regret-related trading significantly predicts cross-sectional stock returns. The study documents abnormal returns for portfolios linked to higher Empirical studies of the emotional aspects of financial behavior give conflicting evidence on the impact of regret in developing investor decisions. Based on 384 participants that traded in the Pakistan Stock Exchange, Shah and Malik (2021) employed both multiple regression and structural equation modeling so as to examine the regret-avoidant tendencies. Their findings indicated that there is an inverse impact between the strength of regret aversion and frequency of trading whereby people with a high fear of post-decision regret seem to restrict portfolio rebalancing. This kind of action demonstrates the role of regret as a psychological constraint, which prevents the active reallocation of assets by investors to reduce the possibility of experiencing emotional discomfort in the future.

On the contrary, there are other pieces of evidence that depict regret as the factor that triggers adaptive behavior in investment and not as a discouraging situation. Edison and Aisyah (2023) used a 2×5 factorial experimental design with the participation of seventy student subjects in an online simulation where they could trade through a controlled environment and observed the post-regret trading reaction. Results showed that those who experienced regrets during the previous investment periods greatly changed their future methods. Instead of curtailing action, the pre-existing emotional feedback prompted the participants in the value of learning through errors and recalibrating their investment choices in the future and this proves that regret can be an effective means of corrective learning.

On the macro level, in the study by Arisoy, Bali, and Tang (2024), the researchers used data on investors levels of transactions to generate regret indices in an asset-pricing model. They found that regret-related trading patterns have some predictive ability on the stock performance of various portfolios. In particular, portfolios with a high regret sensitivity showed statistically significant abnormal returns, which indicates that the residual of past decision-making emotions can produce discernible effects on the results on the aggregate market level. Investor regret shows that investor's demand systematically shifts following regret-inducing incidents. Thus, regret aversion can amplify trading dynamics and meaningfully influence asset prices, establishing regret as a driver of market-level outcomes beyond individual decision-making. Taken together, the evidence suggests that regret aversion has a dual character: it can restrict individual participation and trading activity due to fear of future regret, but under certain contexts, particularly in learning environments and aggregate markets, it may also stimulate corrective behavior and amplify trading demand. This duality underscores the need for nuanced policy and financial education strategies aimed at balancing the inhibitory and regret's remedial functions in investment decision-making.

Risk Avoidance's Impact on Financial Literacy

When it comes to influencing how people see and handle investment risks, financial literacy is essential. Investors who have a solid grasp of financial principles are better able to weigh their options and make more educated selections, claim Kappal and Rastogi (2020). Such individuals are more willing to embrace calculated risks because they can properly assess the potential benefits relative to the dangers involved. From the perspective of heuristic theory, inadequate financial literacy often leads to excessive risk avoidance, as individuals may fear losses without fully considering long-term benefits. This fear-driven approach causes them to neglect valuable investment opportunities or disregard relevant information, ultimately resulting in suboptimal investment outcomes (Aren & Nayman Hamamci, 2020). In other words, rather than making balanced decisions, financially illiterate investors tend to focus more on loss prevention than on potential wealth creation.

Interestingly, Riepe et al. (2022) observed that entrepreneurs with low levels of financial literacy typically exhibit lower risk avoidance. This paradox suggests that such entrepreneurs may not necessarily avoid risks due to ignorance but rather take decisions without a comprehensive understanding of the consequences. While this might occasionally lead to profitable outcomes, it more often exposes them to higher levels of uncertainty and vulnerability. Thus, financial literacy does not only reduce unnecessary risk aversion but also enables investors to adopt a balanced approach, avoiding reckless decisions while still being open to opportunities with long-term growth potential.

Financial Literacy's Impact on Investment Choices

A person's ability to understand financial concepts, handle resources efficiently, and make well-informed decisions that will benefit them in the short and long term is largely determined by their level of financial literacy. It includes risk management, financial product knowledge, and the ability to make effective use of available cash (Novianggie & Asandimitra, 2019). Financially literate people are better able to comprehend how financial markets operate, foresee possible hazards, and implement measures that protect and optimize their wealth. Moreover, encouraging wise investment decisions, which raises a company's sustainability and efficiency, requires financial literacy (Tuffour et al., 2022). An increase in financial knowledge enables investors to evaluate diverse investment alternatives, balance possible risks and rewards, and match their decisions to long-term financial goals. Increased literacy has a major impact on investors' capacity to make wise financial choices, as shown by Iram et al. (2023).

Furthermore, having financial knowledge helps one makes more accurate and confident investing decisions. Higher literacy levels reduce the likelihood that investors may be influenced by false information or cognitive biases, allowing them to adopt strategies that yield better financial outcomes. According to Agustin and Lysion (2021), informed investors tend to exercise sound judgment and make well-calculated decisions compared to their less knowledgeable counterparts.

In essence, financial literacy not only strengthens decision-making processes but also acts as a protective mechanism against irrational behavior and excessive risk avoidance. It ensures that investors have the analytical capability to interpret financial information critically, respond to market dynamics effectively, and achieve long-term financial stability.

A study published in Frontiers in Behavioral Economics (2025), using a Palestinian sample, revealed found better investment choices, as seen by increased portfolio diversity, improved risk awareness, and stronger alignment with long-term financial goals, were positively correlated with higher financial literacy scores. The authors also showed that financial literacy has a statistically significant beneficial impact on the quality of investment decisions by lessening the effects of several negative behavioral biases, such overconfidence. In a similar vein, a cross-country firm-level study based on an empirical working paper (Elsevier, 2024) found that financial literacy greatly enhances investment results. In particular, people with more financial literacy saw better investment returns; the impact was more pronounced for those with higher general education levels. The results imply that investors are better able to choose higher-performing investments when they possess financial expertise.

Conversely, a study published in *Jurnal UMJ* (2024), drawing on data from an Indonesian sample, discovered a statistically significant and adverse correlation between self-reported investing decisions and financial literacy. The authors attributed this outcome to context-specific factors such as mistrust of financial institutions, excessive caution, or misapplication of financial knowledge, which in turn reduced participation and encouraged overly conservative choices. In a related conference proceeding (2023–2024) focusing on millennial investors in Indonesia, The study further revealed that financial literacy exerted a statistically significant inverse influence on the variable under consideration. The study revealed that higher financial literacy reduced reliance on social and herding cues, which in the authors' model translated into lower levels of platform-based or crowd-driven investment activities. While interpreted as a net negative impact on certain forms of investment behavior, the authors emphasized that these findings are highly context-dependent, shaped by the traits of youthful, internet-savvy investors and the operationalization of financial knowledge.

The role of financial literacy as a mediating factor

According to Budiarto and Susanti (2017), financial literacy is the capacity to comprehend financial ideas, goods, and services, which can be the basis for making sane financial decisions and attaining long-term financial well-being. According to heuristic theory, financial literacy acts as a mediator between risk aversion, investment, and behavioral biases. decision-making. In other words, even when investors are prone to cognitive biases, a sufficient level of Enhanced financial knowledge equips individuals with the analytical capacity to make sound, evidence-based investment judgments rather than relying on intuition or emotion.

Overconfidence, for instance, often drives investors to place undue faith in their personal judgment, leading to speculative or ill-considered financial actions. However, individuals possessing stronger financial comprehension are better positioned to counteract such distortions, as they can assess investment prospects through a more balanced and data-driven lens (Ahmad & Shah, 2022). In line with this reasoning, Tuffour et al. (2022) contend that the expansion of financial understanding enables decision-makers to recognize a wider array of viable investment paths, thereby improving the rationality and precision of their financial choices. Empirical work by Iram et al. (2023) further substantiates this notion, demonstrating that financial expertise functions as an intermediary variable between overconfidence and investment decisions. Their results indicate that individuals with higher financial competence are less prone to allowing inflated self-belief to distort their decision processes.

Another behavioral dimension moderated by financial capability is the representativeness heuristic—a cognitive shortcut in which investors infer future outcomes from historical patterns, assuming that past success automatically predicts continued performance. Such behavior is common among women entrepreneurs, who may base investment judgments on historical performance (Kasoga, 2021). However, adequate financial literacy equips them with the analytical tools to challenge these assumptions, thereby reducing reliance on representativeness bias (Novianggie & Asandimitra, 2019). Iram, Qazi, et al. (2021) further demonstrate that financial literacy effectively mediates the link between representativeness bias and investment decision-making, leading to more rational outcomes.

Similarly, financial literacy has implications for mitigating availability bias. Availability bias describes a situation where individuals rely on easily accessible or familiar information rather than seeking objective and comprehensive data. While investors with strong financial literacy skills are more likely to access diverse and updated sources of information, those with lower financial literacy often rely on informal advice from friends or relatives, which increases susceptibility to availability bias (Kasoga, 2021). As Iram et al. (2023) observe, enhanced financial knowledge and communication skills allow investors to filter reliable information from unreliable ones, thus improving the rationality of their investment choices.

Financial literacy is also critical in addressing risk avoidance tendencies. Risk avoidance occurs when investors deliberately shy away from investment opportunities due to fear of potential losses, even when such opportunities promise high returns. Although risk avoidance is a natural behavior, excessive aversion can result in missed opportunities for wealth creation. Financially literate investors are better positioned to evaluate risk-return trade-offs objectively, thereby enabling them to embrace calculated risks with confidence. They recognize that all investment choices carry inherent risks, but that these risks can be managed and balanced against potential returns (Kasoga, 2021). Thus, higher levels of financial literacy reduce excessive risk avoidance and encourage participation in investment activities that can lead to financial growth. In summary, financial competence serves as a critical moderating construct that diminishes the detrimental influence of psychological distortions and heightened risk avoidance on investment behaviour. Through the acquisition of analytical and decision-making capabilities, particularly among women entrepreneurs, enhanced financial understanding empowers individuals to evaluate financial data with greater precision, minimize dependence on heuristic reasoning, and engage in more objective, well-informed investment activities that promote long-term economic stability and growth.

Theoretical Framework: Prospect Theory

Prospect Theory, introduced by Kahneman and Tversky (1979), disputes the foundational assumptions of traditional financial models by asserting that individuals' choices under uncertainty are largely influenced by psychological distortions, perceptions of risk, and the way options are presented, rather than by the pursuit of maximum utility. The theory is grounded in three primary ideas: (1) reference dependence, which suggests that people assess outcomes in comparison to certain reference points such as previous experiences or the performance of others; (2) loss aversion, which posits that the emotional impact of losing is far stronger than the pleasure derived from achieving a comparable gain, leading women entrepreneurs in Nigeria to prefer safer investments due to socio-economic and cultural vulnerabilities; and (3) probability weighting, where rare events are often overestimated and common outcomes underestimated, explaining behaviors such as herd instinct or overreaction to market news. These propositions provide a framework for understanding behavioral biases like availability bias, overconfidence, regret aversion, and herd instinct, all of which influence investment decisions. Prospect Theory also accommodates regret aversion by highlighting how fear of making wrong choices can lead to risk avoidance or preference for safe investments. Importantly, the theory bridges behavioral finance with financial literacy by recognizing that while financial literacy equips individuals with rational decision-making tools, it does not eliminate susceptibility to biases and distorted risk perceptions, particularly among Nigerian women entrepreneurs, where limited literacy may heighten irrational tendencies. Thus, Prospect Theory underpins this study as it not only integrates behavioral biases, loss aversion, and socio-cultural influences into the analysis of investment decisions but also provides a holistic lens to examine How psychological and environmental variables combine with financial knowledge to influence entrepreneurial investment decisions

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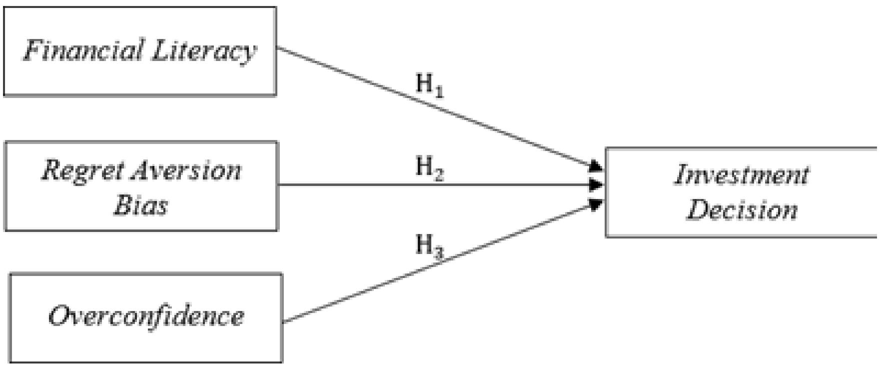
The Conceptual Framework



Research Methods

Research Design

The research employed a quantitative, explanatory, cross-sectional survey approach, targeting enterprises owned and managed by women within the Kaduna Metropolis, encompassing the Kaduna North, Kaduna South, Chikun, and Igabi Local Government Areas. This methodological choice was deemed suitable as the study sought to explore and clarify the causal linkages among selected behavioral attributes—namely overconfidence bias, availability bias, and risk aversion, together with financial literacy and how these collectively shape investment decision-making among female entrepreneurs. These hypotheses are inherently causal and directional and are best tested using standardized questionnaires and statistical modeling techniques.

The cross-sectional approach was chosen for its cost-effectiveness and time efficiency, particularly suitable for a single-state study involving 150 respondents. Moreover, since the study variables—Since risk aversion, bias toward overconfidence, availability bias, understanding of finances, and capital decision quality are all latent variables, using a survey approach made it possible to apply multiple-question Likert scales and evaluate the validity and reliability of the measurement tool. The business was the analytical unit, while the respondent was the principal female owner or owner-manager, who possessed at least 50% ownership or served as the primary decision-maker in investment matters.

Target Population

The target population comprised Micro, small, and medium-sized businesses (MSMEs) in Kaduna Metropolis that are run by women entrepreneurs. To guarantee that the various economic activities in the research region were represented, these businesses were chosen from each of the four LGAs: Kaduna North, Kaduna South, Chikun, and Igabi.

Sampling Technique and Procedure

A multistage probability sampling approach was implemented to ensure a representative sample while addressing the practical challenges of incomplete official business registries. This method enhances coverage and mitigates selection bias more effectively than non-probability techniques like convenience or snowball sampling. The first stage involved cluster sampling, where the four LGAs were designated as primary clusters. Within these clusters, major business hubs were identified to streamline logistical fieldwork.

In the second stage, enterprises within each cluster were stratified by sector into three categories: Trade/Retail, Services, and Production/Agro-processing. This stratification was crucial for controlling the inherent heterogeneity in investment horizons and risk perceptions across different economic activities, thereby improving the statistical precision and representativeness of the sample. Following stratification, a rapid enumeration and review of association rosters were conducted to estimate the total population of women-owned enterprises within each category was denoted as N_h. At the third stage of the sampling procedure, a proportional allocation technique was employed to assign sample units to each stratum. This approach ensured that the selected sample of 150 businesses accurately represented the relative distribution of women entrepreneurs across the different sectors within the Kaduna Metropolis. The sample size corresponding to each stratum, represented as n_h, was derived using the following expression: nh = (Nh / ΣNh) × 150. In the final stage, businesses were selected using systematic random sampling. A sampling interval (k) was calculated for each stratum's list, a random starting point was chosen, and every kth enterprise was selected. To be eligible, a business had to be in operation for at least 12 months, and the respondent had to be the primary female investment decision-maker. To counteract potential non-response and ensure a final usable sample of approximately 150, a 20% oversample was planned, targeting an initial contact list of 180 enterprises.

Instrumentation and Data Collection

Primary data for this research were obtained using a structured questionnaire, carefully developed to capture information on the main study variables: behavioral biases (with a focus on overconfidence and availability), risk aversion, financial literacy, and the effectiveness of investment decisions. The questionnaire employed well-validated Likert-scale items, ranging from five to seven response points, to capture subtle variations in respondents' attitudes and perceptions.

Before administering the questionnaire on a full scale, a pilot study involving roughly 20 participants was conducted. This preliminary testing aimed to enhance the clarity and comprehensibility of the instrument and to evaluate its internal consistency. Reliability was determined through Cronbach's alpha, with a minimum acceptable value of 0.70, while the instrument's face validity was also confirmed.

Data Analysis

The collected data were analyzed using mediation regression techniques in SPSS version 23 to test the proposed hypotheses. This statistical method was chosen because it is particularly effective for exploring the interrelationships among independent variables—behavioral biases, risk aversion, and financial literacy—and their combined effect on the dependent variable, investment decision-making. This approach is consistent with the study's explanatory and causal design, offering insights into how cognitive factors and financial knowledge jointly influence the investment behavior of women entrepreneurs.

Data Analysis and Results

Response Rate

The primary tool for gathering information in this research was a structured questionnaire, which was distributed to a randomly selected group of 180 participants. Out of the total administered, 170 questionnaires were returned, corresponding to an initial retrieval rate of 94.4%. After collection, the returned questionnaires underwent a rigorous data screening process to ensure accuracy, completeness, and suitability for analysis. Each instrument was carefully examined for missing or inconsistent responses. During this review, 20 questionnaires were found to be incomplete and were therefore removed from the dataset.

This left 150 fully completed questionnaires, forming the final sample for the study. Consequently, the effective sample size for data analysis was set at 150, yielding a valid response rate of 83.3% (150 usable responses from the original 180). This level of participation is considered highly satisfactory and provides a solid foundation for subsequent analyses. A comprehensive summary of the response distribution is presented in Table 1.

Table 1: Response Rate Analysis

Questionnaire Administered	Copies Returned/Retrieved	Copies found to be Completely Filled	Response Rate
180	170	150	83.3

Source: Researcher's Response Rate Analysis, 2025

Distributions of Socio-Demographic Characteristics of Respondents:

Table 2: Socio-Demographic Characteristics of Respondents

Variable	Frequency	Percent
Age Category		
Below 25 years	12	8.0
25-34 years	22	14.7
35-44 years	38	25.3
45-54 years	62	41.3
55 years and above	16	10.7
Total	**150**	**100.0**
Educational Qualification		
Secondary School	16	10.7
OND/NCE	49	32.7
HND/Bachelor's Degree	53	35.3
Postgraduate Degree	13	8.7
Others	19	12.7
Total	**150**	**100.0**
Years in Business		
Less than 5 years	24	16.0
5-10 years	34	22.7
11-15 years	42	28.0
16-20 years	37	24.7
Above 20 years	13	8.7
Total	**150**	**100.0**
Business Sector		
Trading	41	27.3
Manufacturing	27	18.0
Services	32	21.3
Agriculture	33	22.0
Others	17	11.3
Total	**150**	**100.0**

Source: Researcher's Field Survey, 2025

Table 2 summarizes the descriptive statistics for the socio-demographic attributes of the 150 participants included in this study. The data indicate that the age group with the highest representation was 45–54 years, comprising 62 respondents (41.3%), while the least represented group was those under 25 years, totaling 12 respondents (8.0%). Regarding educational background, the majority of participants held an HND or bachelor's degree, with 53 respondents 35.3%) possessing this level of qualification (while a postgraduate degree was the least common, held by 13 participants (8.7%).

Regarding business experience, the largest group of entrepreneurs, 42 respondents (28.0%), reported being in business for '11-15 years.' Conversely, the smallest group, comprising 13 respondents (8.7%), had been in business for 'above 20 years.' The sectoral distribution indicates that the trading sector was the most prevalent, with 41 entrepreneurs (27.3%), and the "other sectors" category was the least represented, with 17 respondents (11.3%). These findings suggest that the typical profile of a woman entrepreneur in this Nigerian sample is middle-aged, holds a bachelor's-level degree, has over a decade of business experience, and operates within the trading sector. Following this, a frequency distribution analysis was conducted on questionnaire items related to overconfidence/availability biases, risk aversion, Financial literacy and investment decision-making, with average scores and variability measures computed to summarize participants' responses for each construct.

Descriptive Statistics

This segment provides an overview of the main variables examined in the study, highlighting trends and patterns in the responses and presenting a concise summary of their central tendencies and dispersion as detailed in Table 3. The analysis was conducted to ascertain the central tendency and dispersion of responses related to the independent, mediating, and dependent variables.

Table 3: Descriptive Statistics

Variable	Mean	Standard Deviation	N
Overconfidence/Availability Bias	3.3558	0.7986	150
Risk Aversion	3.4567	0.7738	150
Financial Literacy	3.1693	0.6960	150
Investment Decision-making	3.4933	0.8132	150

Source: Researcher's Descriptive Statistics Analysis Output, 2025

The findings indicate a general agreement among respondents for all constructs measured. Specifically, the independent variable, overconfidence/availability bias, yielded a mean response of 3.3558 with a standard deviation of 0.7986. The second predictor, risk-avoidance, exhibited an average score of 3.4567 with a standard deviation of 0.7738. The mediating construct, financial literacy, had a mean of 3.1693 and a standard deviation of 0.6960. For the outcome variable, investment decision-making, the mean value was 3.4933 with a standard deviation of 0.8132. The relatively small dispersion values across all constructs indicate that participant responses were tightly grouped around their respective averages, reflecting a high degree of agreement among respondents.

Mediation Regression Analysis

To explore the complex interplay among behavioral biases, risk-avoidance, financial literacy, and investment decisions of women entrepreneurs in Kaduna Metropolis, this study applied mediation regression techniques. The analysis aimed to capture both direct and indirect effects, utilizing the PROCESS macro (Model 4) in SPSS to provide a detailed assessment of the mechanisms through which financial literacy and behavioral factors influence investment outcomes. The subsequent tables present the statistical outcomes of this analytical approach, detailing the extent to which mediating variables channel the effects of the predictors on investment decisions.

Table 4: Total Effect Model (Behavioural Bias & Risk Aversion → Investment Decision)

R	R^2	MSE	F(2, 147)	P
0.952	0.906	0.063	710.567	< 0.001

Source: Researcher's Mediation Regression Analysis Output, 2025

As shown in Table 4, a multiple regression analysis was performed to examine the combined effect of behavioral biases and risk-avoidance on the investment decision-making of women entrepreneurs in Kaduna Metropolis. The findings revealed a very strong positive association between the predictors and the outcome variable ($R = 0.952$). The overall regression model was statistically significant ($F(2, 147) = 710.567$, $p < 0.001$) and accounted for 90.6% of the variance in investment decision-making ($R^2 = 0.906$). These results indicate that behavioral biases and risk-avoidance jointly serve as substantial determinants of the investment choices made by this group of entrepreneurs.

Table 5: Coefficients

Predictor	Coeff	SE	t	P
Constant	0.003	0.095	0.026	0.979
Behavioural Bias	0.157	0.051	3.092	0.002
Risk Aversion	0.858	0.052	16.420	0.000

Source: Researcher's Mediation Regression Analysis Output, 2025

Analysis of the total effects model, as detailed in Table 6, This analysis demonstrates the direct effects of behavioral biases and risk-avoidance on the investment decisions of women entrepreneurs in Kaduna Metropolis, without accounting for the mediating role of financial literacy. The findings show that both variables exert significant influences. Behavioral biases were found to have a positive and significant effect on investment decision-making ($\beta = 0.157$, $p = 0.002$), while risk-avoidance exhibited a stronger positive and statistically significant association with investment decisions ($\beta = 0.858$, $p < 0.001$).

Collectively, these findings from the Path 'c' model suggest that, in this context, both a higher degree of behavioral bias and greater risk aversion are associated with improved investment decision-making. The particularly high coefficient for risk aversion underscores its substantial predictive power in the model.

Path 'a' Model (Behavioural Bias & Risk Aversion → Financial Literacy

Table 7: Total Effect Model (Behavioural Bias & Risk Aversion → Investment)

R	R^2	MSE	F(2, 147)	P
0.486	0.236	0.376	22.720	< 0.001

Source: Researcher's Mediation Regression Analysis Output, 2025

The regression findings presented in Table 7 indicate a significant association between the independent variables—availability bias and risk-avoidance—and the dependent variable, financial literacy. The analysis shows a moderate positive relationship (R = 0.486), with the model accounting for 23.6% of the variation in financial literacy among women entrepreneurs in Kaduna Metropolis ($R^2 = 0.236$). The overall regression model was statistically significant, confirming the predictive relevance of the variables ($F(2, 147) = 22.720$, $p < .001$).

Table 8: Coefficients

Predictor	Coeff	SE	t	P
Constant	1.674	0.232	7.200	0.000
Behavioural Bias	0.301	0.124	2.431	0.016
Risk Aversion	0.140	0.128	1.100	0.273

Source: Researcher's Mediation Regression Analysis Output, 2025

Analysis of the direct effects on financial literacy among women entrepreneurs in Kaduna the findings from Kaduna Metropolis indicate that behavioral biases exert a significant positive effect on financial literacy. As shown in Table 8, the path from behavioral bias to financial literacy is statistically significant ($\beta = 0.301$, $p = 0.016$), implying that women who are affected by these biases tend to demonstrate higher levels of financial knowledge. In contrast, the direct impact of risk-avoidance on financial literacy was not statistically significant ($\beta = 0.140$, $p = 0.237$). Although the coefficient is positive, suggesting a potential minor enhancement in financial literacy, the effect is not strong enough to reach significance. lack of statistical significance means this effect cannot be confirmed within the population. Based on these findings for the path 'a' model, it is concluded that only behavioral bias acts as a significant predictor of the mediator variable, financial literacy, for this demographic.

Direct Effect Model: (Behavioural Bias, Risk Aversion → Investment Decision-making

Table 9: Direct Effect Model (Overconfidence/Availability Bias, Risk Aversion, Financial Decision-making → Investment)

R	R^2	MSE	F(3, 146)	P
0.953	0.909	0.062	484.802	< 0.001

Source: Researcher's Mediation Regression Analysis Output, 2025

Table 9 presents findings indicating a robust, positive, and statistically significant association between the predictors—overconfidence and availability biases, risk-avoidance, and financial literacy—and the outcome variable, investment decision-making. A multiple regression was performed to determine the extent to which these combined factors forecast investment choices among women entrepreneurs in Kaduna Metropolis. The analysis revealed a very strong positive association, with a correlation coefficient of R = 0.953.

The coefficient of determination (R^2) indicates that the combined effect of overconfidence/availability bias, risk aversion, and financial literacy accounts for approximately 90.9% of the variability in investment decision-making, highlighting their substantial joint contribution to the investment behaviors of the participants. The overall regression model was found to be statistically significant, $F(3, 146) = 484.802$, $p < .001$, confirming the model's validity in explaining the observed relationships.

Table 10: Coefficients

Predictor	Coeff	SE	t	P
Constant	0.115	0.109	1.04	0.297
OverC/Avail Bias	0.152	0.051	2.980	0.001
Risk Aversion	0.854	0.052	16.423	0.000
Financial Lit	0.067	0.033	2.006	0.047

Source: Researcher's Mediation Regression Analysis Output, 2025

The results summarized in Table 10 highlight the notable direct and indirect effects of behavioral biases on investment decision-making, with financial literacy functioning as a mediating factor.
Specifically, overconfidence and availability biases exhibit a statistically significant direct effect on investment decision-making ($\beta = 0.152$, $p = 0.001$). When financial literacy is introduced into the model as a mediator, the direct effect of these biases decreases from the original coefficient of $\beta = 0.157$. This attenuation indicates that financial literacy partially mediates the relationship between overconfidence/availability bias and investment behavior.

Similarly, risk-aversion exerts a strong and significant direct influence on investment decisions ($\beta = 0.854$, $p < 0.001$). Upon including financial literacy as a mediating variable, the coefficient slightly declines from its initial value of $\beta = 0.858$, further confirming a partial mediating effect. Moreover, financial literacy independently demonstrates a significant direct impact on investment decision-making ($\beta = 0.067$, $p = 0.047$). The reduction in the predictive power of both overconfidence/availability bias and risk-aversion when financial literacy is accounted for emphasizes the pivotal role of this mediator. These findings collectively suggest that among women entrepreneurs in Kaduna Metropolis, enhanced financial literacy can buffer the influence of behavioral biases, fostering more informed and rational investment decisions.

Indirect Effects (Bootstrapping)

Table 12: Indirect Effects (Bootstrapping)

Mediator	Independent Variable	Effect	BootLLCL	BootULCL
Financial Literacy	Behavioural Bias	0.07	0.02	0.14
Financial Literacy	Risk Aversion	0.16	0.07	0.27

Source: Researcher's Mediation Regression Analysis Output, 2025

Financial literacy partially examines the connection between risk aversion and behavioral biases and the investment choices made by female business owners in Kaduna Metropolis. Both bias in behavior (indirect impact = 0.07) and aversion to risk (indirect effect = 0.16) were found to have substantial indirect effects on financial literacy-based investment decision-making. The mediation is incomplete since, even after accounting for financial literacy, the direct impacts of risk aversion and behavioral bias remained substantial. The hypothesis model's explanatory power was marginally enhanced by adding knowledge of finance as a mediator, as evidenced by the R2 value increasing from 0.906 to 0.909. This suggests that a little percentage of the variation in investing choices may be explained by financial knowledge.

Test of Hypotheses
The results above are used in testing the following hypotheses:

Hypothesis (H01): The first hypothesis, which suggested that behavioral biases such as overconfidence and availability exert no significant influence on the investment decisions of women entrepreneurs in Nigeria, is not supported. The results indicate a positive and statistically meaningful relationship, with a coefficient of 0.152 and a p-value of 0.001. This demonstrates that these cognitive biases are important determinants of investment behavior within the studied population.

Hypothesis 2 (H02): Similarly, the second hypothesis, asserting that risk-aversion does not significantly affect the investment decisions of women entrepreneurs, is also rejected. The analysis shows a strong and statistically significant effect, with a coefficient of 0.854 and a p-value below 0.001. These findings confirm that risk-aversion plays a central role in shaping the investment choices of the target group.

Hypothesis 3 (H03): The third hypothesis proposed that financial literacy does not serve as a significant mediator between behavioral biases, risk-aversion, and investment decision-making. To examine this, indirect effects were evaluated using bootstrapping techniques, with detailed results presented in

Table 12: The analysis reveals that the confidence intervals for the indirect effects linking both availability bias and risk-aversion to investment decision-making through financial literacy exclude zero. Consequently, the null hypothesis is rejected, indicating that financial literacy significantly mediates the impact of availability bias and risk-aversion on the investment decisions of women entrepreneurs in Nigeria.

Discussion of Findings
This research explored how financial literacy, cognitive biases, and risk-avoidance collectively influence the investment behaviors of women entrepreneurs in Nigeria. The study employed an explanatory, quantitative, cross-sectional survey design, drawing data from a sample of 180 women-owned enterprises situated across Kaduna Metropolis, including Kaduna North, Kaduna South, Chikun, and Igabi Local Government Areas. Participants were selected using a multistage sampling approach. Primary data were

gathered through a structured questionnaire and analyzed using descriptive statistics—frequencies, percentages, means, and standard deviations—alongside multiple regression mediation analysis conducted via Hayes' PROCESS Macro (Model 4) in SPSS 23. Demographic profiling revealed that the largest proportion of respondents (41.3%) fell within the 45–54-year age range. Educationally, the majority (35.3%) held either a Higher National Diploma (HND) or bachelor's degree. With respect to entrepreneurial experience, the most common duration of business operation was 11–15 years (28.0%). Trading emerged as the predominant business activity, representing 27.3% of the sample.

The mediation regression outcomes highlighted those behavioral biases, particularly overconfidence and availability, exert a significant positive effect on the investment decision-making of women entrepreneurs ($B = 0.152$, $p = 0.001$). This observation aligns with contemporary findings by Seraj et al. (2022), who identified overconfidence as a key moderator linking financial literacy to investment choices, and with Abdin, Qureshi, Iqbal, and Sultana (2022), who reported a significant positive association between overconfidence and investment performance. The positive role of availability bias is also corroborated by Hayati et al. (2022), who noted that decisions are often influenced by information that is easily recalled or recently acquired. This is further supported by the studies of Grima et al. (2025) and JISEM (2025), which demonstrated statistically significant positive effects of availability bias on investment decisions. Nevertheless, these findings contrast with seminal works by Odean (1999) and Barber and Odean (2001), which argued that overconfidence may lead to excessive trading and negatively impact investment outcomes.

Regarding risk-avoidance, the analysis revealed a significant positive effect on investment decision-making ($B = 0.854$, $p < 0.001$), aligning with the studies of Adil et al. (2022) and Subramaniam and Velnampy (2017), which documented that cautious approaches often shape investment strategies. The results are also consistent with Edison and Aisyah (2023), who showed that individuals adjust their investment choices after experiencing regret in prior rounds. Conversely, the findings diverge from Wangzhou and Khan (2021) and Shah and Malik (2021), whose studies reported negative effects of regret aversion on investment activity and trading frequency.

Furthermore, financial literacy was found to serve as a significant mediator in the relationships between both availability bias and risk-aversion and investment decision-making among the sampled women entrepreneurs (CI for Availability Bias: [0.02, 0.14]; CI for Risk-Aversion: [0.07, 0.27]). This supports the findings of Iram et al. (2023), who observed that financial literacy mitigates the distorting effects of overconfidence on investment decisions. The result also aligns with Kasoga (2021), who reported that financially knowledgeable investors are more likely to use a broad range of reliable information sources, whereas those with lower literacy often rely on informal advice, making them more vulnerable to availability bias. Additionally, Iram et al. (2023) emphasized that enhanced financial knowledge and communication skills enable investors to differentiate credible from unreliable information, thereby improving the rationality and quality of their investment decisions.

Conclusion

The findings of this study indicate that financial literacy functions as a significant partial mediator between certain cognitive biases—particularly overconfidence and availability bias—and the investment decisions of women entrepreneurs in Nigeria. Likewise, financial literacy partially mediates the effect of risk-aversion on their investment choices. A notable insight from the research is that availability bias and risk-aversion do not demonstrate a strong direct effect on investment decisions; however, their influence becomes pronounced when filtered through financial literacy. This highlights the crucial role of financial knowledge in enabling women entrepreneurs to navigate complex investment scenarios. Higher levels of financial literacy equip these entrepreneurs to make more informed, rational investment choices, thereby reducing the indirect impact of cognitive biases and risk-related perceptions.

Recommendations

Based on the study's findings, the following measures are proposed to strengthen the investment decision-making capacity of women entrepreneurs in Nigeria:

i. **Focused Financial Literacy Initiatives:** Government bodies, financial institutions, and business development agencies should collaboratively develop and implement specialized programs aimed at enhancing the financial knowledge of women entrepreneurs. These initiatives should comprehensively address topics such as budgeting, investment appraisal, risk management, and personal financial planning to build a robust foundation of financial competence.

ii. **Practical Investment Training:** Considering that financial literacy mediates the effects of availability bias and risk-aversion, it is essential to provide targeted training that emphasizes practical investment skills. Such training should cover strategies for evaluating risk, making well-informed investment choices, and fostering rational financial decision-making. The goal is to enable women entrepreneurs to consciously recognize and mitigate cognitive biases, ensuring more deliberate and effective investment behavior.

iii. **Integration of Financial Literacy into Entrepreneurship Policy:** Policymakers are urged to embed financial literacy development as a core component of national entrepreneurship and SME development policies. By ensuring that women entrepreneurs have access to the necessary cognitive and analytical tools, such policies can foster a more robust and informed investment landscape, ultimately contributing to the growth and sustainability of female-led enterprises in Nigeria.

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APPENDIX

QUESTIONNAIRE

Research Title: Financial Literacy, Behavioral Biases, and Risk Aversion: *Implications for Women Entrepreneurs' Investment Decision-Making in Nigeria*

Section A: Demographic Information

(Please tick ✓ where appropriate)

1. **Age:**
   - Below 25 years
   - 25 – 34 years
   - 35 – 44 years
   - 45 – 54 years
   - 55 years and above

2. **Educational Qualification:**
   - Secondary School
   - OND/NCE
   - HND/Bachelor's Degree
   - Postgraduate Degree
   - Others (Specify) __________

3. **Years in Business:**
   - Less than 5 years
   - 5 – 10 years
   - 11 – 15 years
   - 16 – 20 years
   - Above 20 years
   -

4. **Business Sector:**
   - Trading
   - Manufacturing
   - Services
   - Agriculture
   - Others (Specify) __________

Section B: Behavioral Biases (Independent Variable 1)
(Please use a 5-point Likert scale to indicate how much you agree with each of the following statements: Strongly disagree, disagree, neutral, agree, and strongly agree are represented by the numbers 1 through 5.

Bias in Overconfidence

1. I am certain that I can forecast investment results more accurately than the majority of business owners.
2. I base my financial selections more on my own discretion than on professional guidance.
3. I believe I can manage investment risks more effectively than others.
4. I am certain that my past success in business guarantees future success in investment.

Availability Bias

5. I often base investment decisions on information that is recent or easily recalled.
6. News and media reports influence my investment choices significantly.
7. I give more attention to information that is frequently repeated in the public domain.
8. I tend to invest in opportunities I hear about often, regardless of other alternatives.

Section C: Risk Aversion (Independent Variable 2)

9. Despite the lower profits, I like low-risk investments.
10. I steer clear of ventures with unpredictable results, even when they may yield higher profits.
11. I prefer investments with guaranteed returns over those with high potential but uncertain gains.
12. I often reject investment opportunities if the risk of loss is high, even if profit is possible.

Section D: Financial Literacy (Mediating Variable)

13. I have a clear understanding of fundamental financial principles, including concepts like interest rates, inflation, and the benefits of spreading investment risk.
14. I am capable of evaluating financial statements thoroughly before committing to any investment.
15. I possess knowledge about various investment vehicles, such as equities, bonds, and mutual funds.
16. I am proactive in pursuing financial training or educational opportunities to enhance my investment decision-making abilities.
17. I can efficiently plan, budget, and oversee the financial operations of my business.

Section E: Investment Decision-Making (Dependent Variable)

18. I thoroughly examine all relevant information before making investment choices.
19. I employ diversification strategies to minimize potential investment risks.
20. I take into account both immediate and long-term consequences when making investment decisions.
21. I analyze previous investment experiences to inform and improve future decisions.
22. I ensure that my investment decisions support the overarching growth and strategic goals of my business.

Response Format

- Strongly Disagree = 1
- Disagree = 2
- Neutral = 3
- Agree = 4
- Strongly Agree = 5

This questionnaire directly addresses your objectives & hypotheses of the study:

i. **Ho1 & Obj 1** → Items on **overconfidence & availability bias** (Q1–8).
ii. **Ho2 & Obj 2** → Items on **risk aversion** (Q9–12).
iii. **Ho3 & Obj 3** → Items on **financial literacy as mediator** (Q13–17) and **investment decision-making** (Q18–22).

BANK CONSOLIDATION AND FINANCIAL PERFORMANCE OF QUOTED MERGED BANKS

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Abstract
This study employed cross-sectional panel data to examine the effect of merger and acquisition policies on the performance of quoted commercial banks in Nigeria. Data were obtained from the financial statements and annual reports of selected deposit money banks. Return on equity (ROE) and earnings per share (EPS) were modeled as functions of capital base, bank efficiency, financial intermediation, asset quality, and number of bank branches. The fixed-effects model was adopted after diagnostic testing. The findings revealed that merger and acquisition policy significantly explained variations in bank performance. Capital base and number of bank branches showed positive and significant effects on both ROE and EPS while management efficiency and financial intermediation exhibited negative and significant effects. Asset quality showed mixed but statistically insignificant effects across models. The study concludes that merger and acquisition reforms play a significant role in enhancing bank performance. It recommends strengthening policy implementation and ensuring strict compliance with merger and acquisition guidelines among commercial bank.

Introduction

The Nigerian banking industry witness another era in 2005 with the banking sector reform tagged consolidation by recapitalization through merger and acquisition. It was a strategy of meeting the 1150 percent increase in capital base from N2 billion to N25 billion. The economic objective was to reposition and restructure the banking sector for effective intermediation function and leverage the deteriorating market value of Nigerian banks. It was expected to increase the market value, increase return on investment, maximize shareholders wealth, increase return on assets and capital employed (Nandi, 2009). Mergers and Acquisitions is an important financial tool that enables companies to grow faster and provide returns to owners and investors (Sherman, 2011). Generally, mergers and acquisitions refer to the change in ownership, business mix, assets mix and alliance with the view to maximizing shareholders' value and improve the firms' performance (Pazarkis, Vogiatzoglo, Christodoulou and Drogalas, 2006; Gaughan, 2011; Nakamura, 2015). According to (Pazarkis et al., 2006; Gaughan, 2011; Nakamura, 2015), one of the main elements of improving company performance is the boom in mergers and acquisition.

According to the agency theory by Jensen and Meekling (1976) the agency problems arise when institutions merged and served to reduce agency costs borne by the majority of the owners. However, the challenges in the deteriorating market value of Nigerian banks can be said to be that of management quality rather than merger and acquisition. In the capital adequacy, assets quality, management quality, earnings, liquidity and sensitivity (CAMELS) analysis of banking system soundness, it can be considered that management quality is more important as other variable depend on management quality. For instance, less than five years after merger and acquisition, market value of many banks are still very poor. The banking crisis of the 1980s and 1990s that damaged the market value of Nigerian banks was traced to poor management quality. The 2010 Central Bank of Nigeria banking examination revealed over N1trillion non-performing banks facilities. This will impact negatively to the market value of deposit money banks in Nigeria.

There was existence of eighty-nine (89) banks in the urban centre as at June, 2004, characterized by structural and operational weakness of low capital base, dominance of a few banks insolvency and illiquidity over dependence on public sector deposits and foreign exchange trading. Poor asset quality, weak co-operate governance, a system with low depositor confidence. Furthermore, the vision of consolidation amongst others includes becoming Africa's financial centre and CBN as one of the best in the world. Within ten years, Nigerian bank(s) should be among the top 50 of the 100 banks in the world. Facilitate evolution of a strong and save banking system, improved transparency and accountability in the sector. Drive down the cost structure of banks and make them more competitive and development oriented. A new banking system that depositors can trust and investors can rely upon to usher in a new economy.

Eunice and Ernest (2014) examined the impact of merger on the pre and post profitability and financial performance of the buying firms for the duration 1999 to 2009. Ismail, Abdou and Annis (2010) studies the impact of A&M on firm's corporate performance using selected Egyptian companies for the duration 1996-2005 in the technology and construction sectors. Gwaya and Mungai (2015) examined the impact of bank combinations (BCs) on the financial performance of fourteen (14) Kenyan banks for the period 2000-2014. Olagunju and Obademi (2012) examined the significance of Nigerian commercial banks combinations on their profitability and other accompanying criteria of performance. From the above, this study wants to examine the effect corporate merger and acquisition policy on the financial performance of commercial banks in Nigeria.

Statement of the Problem

The Nigerian banking system has undergone remarkable changes over the years, in terms of the number of institutions, ownership structure, as well as depth and breadth of operations. These changes have been influenced largely by challenges posed by deregulation of the financial sector, globalization of operations, technological innovations and adoption of supervisory and prudential requirements that conform to international standards. Prior to the recent reforms, the state of the Nigerian banking sector was very weak. The Nigerian banking system today is fragile and marginal. The system faces enormous challenges which, if not addressed urgently, could snowball into a crisis in the near future, the problems of the banks, especially those seen as feeble, as persistent illiquidity, unprofitable operations and having a poor assets base (According (Soludo, 2004).

Merger and acquisition are considered an effective and well-known approach adopted by organizations to compete in the current global and dynamic environment (Sherman, 2010). Literature highlights that Merger and acquisition has been an important and critical strategy for firms to achieve growth and efficiency, by creating synergies, reducing costs, acquiring assets and expanding to new markets (Martynova & Rennenborg, 2006; Marques-Ibanez & Altunbas, 2004). Existing studies highlight that there is a positive relationship between Merger and acquisition of the banks and efficiency of the financial sector (De Nicolò et al., 2003). However, the relationship between Merger and acquisition and the performance of the banks has remained ambiguous. Specifically, there is mixed evidence on the effect of Merger and acquisition on the bank's financial performance: some studies report improvement in financial performance after Merger and acquisition (Calomiris & Karenski, 2000; De Nicolo et al., 2003); on the contrary, other studies show a decrease in financial performance (Berger & Humphrey, 1992; Badreldin & Kalhoefer, 2009; Abbas et al., 2014). Then, the relationship between banks undergoing Merger and acquisition and impact of the same on their subsequent performance is trending topic which requires more in-depth investigation (Stahl & Voigt, 2004).

Aim and objectives of the Study

The aim of the study is to investigate the relationship between bank Consolidation and financial performance of merged quoted banks in Nigeria while the specific objectives are to:

i. Examine the relationship between increase in capital base and financial performance of quoted post-merger banks in Nigeria.
ii. Determine the relationship between increase in efficiency and financial performance of quoted post-merger banks in Nigeria.
iii. Investigate the relationship between increase in assets quality and financial performance of quoted post-merger banks in Nigeria.
iv. To examine the relationship between increases financial intermediation and financial performance of quoted post-merger banks in Nigeria.
v. To examine the relationship between increase number of branches and financial performance of quoted post-merger banks in Nigeria.

Research Questions

i. How does increase in capital base relate to financial performance of quoted post-merger banks in Nigeria?
ii. To what extent does relationship between increases in efficiency relate to financial performance of quoted post-merger banks in Nigeria?
iii. What is the relationship between increase between assets quality and financial performance of quoted post-merger banks in Nigeria?
iv. To what extent does increases financial intermediation relate to financial performance of quoted post-merger banks in Nigeria?
v. How does increase number of branches relate to financial performance of quoted post-merger banks in Nigeria?

Review of Related Literature

Mergers and acquisitions have been used interchangeably in some literature. Other literature also considers mergers and acquisitions as am inseparable words and thus considers them as the same. Moctar and Xiaofang (2014) observed that the terms merger and acquisition are often used interchangeably. However, the authors argued that there are some differences. Moctar and Xiaofang (2014) thus defined a merger as the combination of two or more companies into one larger organization. Such actions are normally intentional and mostly lead to a new company name (often combining the names of the original organizations).

Conceptual Review

The Concept of Merger and Acquisitions Policy

Marfo and Agyei (2013) defined a merger as an arrangement whereby the asset of two organizations become vested in or under the control of one company (which may or may not be one of the original two companies), which has all or substantially all, the shareholders of the two companies. Gupta (2012) also argued that a merger is the amalgamation of two firms in which only one firm survives and the merged firms ceases to exist, in which the acquiring company assumes the assets and liabilities of the merged company. In the same vein, Gupta (2012) defines merger as 'a combination of two or more corporations in which only one corporation survives'. On the other hand, according to Moctar and Xiaofang (2014), acquisition is a corporate action in which the acquiring company purchases all of the existing ownership shares of the target company in order to assume all the control and decision rights of the target company. According to the authors, once the acquisition is done, the target company becomes a part of the acquiring company.

Selvam et al. (2009) contend that an acquisition is the purchase of one company by another. In literature, acquisitions are classified as either friendly or hostile depending on whether the target firm is willing to accept the acquiring firm's bid and whether the acquiring firm makes an offer to the target firm's incumbent board of directors and management before announcing its intentions publicly. Acquisition is considered hostile if the incumbent management of the target company is against the acquisition or the acquirer circumvents the incumbent management of the target firm and bids directly for the shares of the target firm.

Sudarsanam (2003) argued that terms such as merger, acquisition, buyout and takeover are used interchangeably and are all part of the parlance of mergers and acquisition. However, the author was quick to point out the differences when he described a merger as the process whereby companies come together to combine and share their resources to achieve common objectives with the owners of the combined firms still holding part of their ownership and this may sometimes lead into a new entity being formed. The author further indicated that acquisition looks more like an arm's length deal, with one company buying the assets or shares of the other and the shareholders of the acquired firm ceasing to be owners of the new firm.

Theoretical Review

Pro-Deconcentration Theories

Findings from a study carried out by Chong (1991) indicated that bank consolidation tends to increase the risk of bank portfolios. Proponents of banking sector deconcentration also argue that concentration will intensify market power and political influence of financial conglomerates, stymie competition in and access to financial services, reduce efficiency, and destabilize financial systems as banks become too big to discipline and use their influence to shape banking regulations and policies (Demirguc-Kunt and Levine, 2000; Beck, Demirgüç-Kunt and Levine, 2004; and Bank for International Settlements, 2001). While excessive competition may create an unstable banking environment, insufficient competition and contestability in the banking sector may breed inefficiencies.

In concentrated banking systems, bigger, politically connected banks may become more leveraged and take on greater risk since they can rely on policymakers to help when adverse shocks hurt their solvency or profitability. Similarly, large, politically influential banks may help shape the policies and regulations influencing banks' activities in ways that help banks, but not necessarily in ways that help the overall economy. For instance, concentrated, powerful banks may argue against granting generous deposit insurance since that levels the playing field for smaller banks that do not enjoy the too-big-to-fail policy of most governments in economies where concentration levels are high.

Concentrated banks may also seek to stymie stock market development by pushing for higher taxes on capital gains and by discouraging regulations that protect the rights of small investors and promote accounting transparency. To boost the profitability of large clients, powerful banks may also seek to control "unruly" markets by weakening anti-trust laws and other policies designed to promote competition. Furthermore, if concentrated powerful banks unduly influence the formation of policies and regulations, this may hinder political integrity and reduce tax compliance (Demirguc-Kunt and Levine, 2000).

Synergies Theory

According to this theory, merging occur broadly because they generate 'synergies' to both the acquirer and the target which, in turn, increases the worth or the value of the firm(Malatesta, 1983;Lubatkin, 1987).The efficiency theory posits, in fact, that merging will only occur when they are expected to lead to abundant realizable synergies to make the deal of importance to both parties; it is the symmetric expectations of gains which results in a 'friendly' merger being put forward and accepted. If the gain in value to the preyed firm was not positive, it is suggested, the target firm's owners would not sell or allow to the acquisition, and if the gains were negative to the bidders' owners, the acquirer would not complete the deal. Efficiency theory predicts creation of value with positive returns to both the acquirer and the target.

Dunis & Klein (2015) evidenced this suggestion that we must, however, differentiate between 'operative synergies' or 'efficiency gains' achieved through economies of scale and scope-and allocative synergies' or 'collusive synergies' as an outcome of increased market power and an improved ability to extract consumer surplus when commenting on value creation in mergers and acquisitions. Most of recent literature concludes that operating synergies are the most significant source of gain and that operating synergies may exist but may not be realised (Bemile & Baugess, 2011). The study supports this study by indicating that mergers bring about financial and resource synergies through improvement of capital base, human resource capacity and market control.

Application of Theory

This study is built on the synergic theory of business combinations. The operating synergy theories postulate economies of scale or of scope and those mergers help achieve levels of activities at which they can be obtained. It includes the concept of complementary of capabilities, the financial synergy theory hypothesis complementarities between merging firms, not in management capabilities, but in the availability of investment opportunities an internal cash flow. A firm in a declining industry will produces large cash flows since there are few attractive investment opportunities. A growth industry has more investment opportunities than cash with which to finance the. The merged firm will have a lower cost of capital due to the lower cost of internal funds as well as possible risk reduction, savings in flotation costs, and improvements in capital allocation.

Empirical Review

Goet (2020) used accounting ratios has been used to analyze the financial performance of Citizens Bank International Ltd. in Nepal before and after merger. I have analyzed their financial statements for six years by using various ratios. In spite of certain limitations, accounting ratios are still considered as a convenient and reliable analytical tool. Ratio analysis, being a time-tested technique, is most frequently employed in all financial decision-making processes. The results show that the financial performance of CBI Ltd. in the areas of profitability and stability has been most satisfactory after merger. It means that merger deal success to improve the financial performance of the ban.

Ojha, and Walsh (2016) have expected that merger and acquisition of money related relationship in Nepal has been advanced in the consistent years and is in expanding plan. It is in light of the way that Merger in the ceaseless years has helped a broad fragment of the money related establishments to build the capital likewise as help them to finish being powerfully commanding. The most gigantic outcome after a merger is the additional security of consumers' right. Together with it, the budgetary part itself has wound up being acceptably arranged to verify itself even in fundamental money related position. This demonstrates the achievability of merger and getting framework acknowledged in Nepal.

Singh (2015) has been attempted to separate whether the ICICI Bank has accomplished money related execution capability in the midst of the post-merger period in the district of profitability, budgetary impact, liquidity, and capital market measures. The examination has followings destinations, to analyze the impact of the merger of Bank of Rajasthan on the financial performance of ICICI Bank. To separate the effect of merger of Sangli Bank on the money related execution of ICICI Bank. The Major disclosures were the examination of table present that, in Profitability, Standards expect ROE and Ratio of Operating Profit to Total Assets each other extent Net Profit Margin, ROA, ROI and Return on Advances the p-value is merely unmistakable than 5 percent. Along these lines the invalid hypothesis "There is no huge distinction in Profitability Standards among pre and post-M and A" in regard of these proportions is recognized. It is contemplated that there has been a critical distinction in the estimation of ROE and Ratio of Operating Profit to Total Assets after converging with Sangli Bank.

Tajalli and Amir (2014) examined the impact of business combinations on ten selected Pakistani banks using six financial ratios (debt to equity ratio, profit after tax, deposit to equity ratio, EPS, return on equity and asset) for the duration 2007-2010. Three-year pre-merger and three-year post-merger data were estimated using paired sample t-test in SPSS. The conclusion of the analysis shows that only ROE is significantly affected by the business combinations while other ratios have not improved post-merger. Smita and Pushpender (2014) examined the long-term implications of business combinations (BC) on the financial performance (Net Profit margin, operating Profit margin, return on equity and capital employed, dividend per share, earnings per share, capital adequacy ratio) of three leading banks in India from 2000-2013. By comparing the prior and post-merger financial performance, their findings allude that to some extent A&Ms has been fruitful in Indian banking sector.

Dionysios and Thanasis (2016) considered post-A&M performance (profitability and enterprise value) of corporations in the maritime transport sector that participated in business combinations for the period 1998-2009. Their findings portend deterioration in the profitability of the buying firm and there were no statistically significant proof that the enterprise worth of the acquirer increased between pre and post- merger interval. Obaid-ullah, Sabeeh-ullah & Usman, (2010) investigated the effects of mergers on the financial performance of Atlas Investment and Al-Faysal Investment Bank Ltd from Pakistan. Study employed three financial measures; profitability and earning, capital adequacy and solvency. It found that for Faysal bank limited average improvement is recorded in the post-merger period. It is concluded that in post-merger period of sample both the banks improved their financial performance. Authors commented that M&A is a good strategy to increase the performance of the bank. Merger increase the financial performance due to improved attention to business, improved management, better credit assessment, and easy access to the new and expensive technology. Kemal (2011) discussed post-merger profitability for Royal Bank of Scotland. Researcher used accounting ratios to analyze the financial performance of Royal Bank of Scotland (RBS) after merger. Study analyzed financial statements for four years (2006-2009) by using 20 vital ratios. Results shown that the financial performance of RBS in the areas of profitability, liquidity, assets management, leverage, and cash flows have been quite satisfactory before the merger deal. It means that merger fails to improve the financial performance of the bank.

Gap in Literature

Combination in Nigeria commercial banks is a component of corporate restructuring aimed at repositioning the organization for better performance. It involves a critical analysis of the financial statue of the target firm which considers the cash flow implication. The approach includes the economic value approach, the book value approach, market to book value premiums, earnings per share approach and revaluation approach. The combination in Nigeria commercial banks lead to reductions in costs for a variety of reasons as the emerging large banks are expected to enjoy both scale and scope economies on the one hand, and avoid cost duplication, on the other hand. It led to increased revenues through its effects on firm size, firm scope (through either product or geographic diversification), or market power. Research suggests that mergers may provide some opportunities for revenue enhancement either from efficiency gains or from increased market power. Increase competition has helped to squeeze profit margins, resulting in shareholders' pressure to improve performance.

Discussion of Findings

One of the pillars of the merger and acquisition policy was the increase in capital base of the commercial banks from 2 billion naira to 25 billion naira. The studies found that increase in capital base of the commercial banks have positive and significant effect on the financial performance of the post-merger commercial banks. Value of the variable indicates that further increase in capital base of the banks 0.2 and 0.3 percent on return on equity and earnings per share. The findings confirm our a-priori expectations and the objectives of the bank consolidations, the findings also supported by the synergic theory. The findings confirm other empirical studies such as Zama (2011), Korosifar (2010), Kunt (2009), Akani, (2013) found that the mean of key profitability ratio such as the Yield on earning asset (YEA), Return on Equity (ROE) and Return on Asset (ROA) were significant meaning that there is statistical difference between the mean of the bank before 2001 recapitalization and after 2001 recapitalization. It is also in line with the findings of Oleka and Mgbodile (2014), Alajekwu, and Obialor, (2014), Alani, (2013), Taiwo and Musa (2014), Anthonia (2013), Aminu and Hassan (2015), Alalade, Adekunle and Oguntodu (2016) and the findings of Ifechiand Akani, (2015).

The findings negate our a-priori expectations and the objectives of the bank consolidations, the findings also negate by the synergic theory. The findings contradict other empirical studies such as Zama (2011), Korosifar (2010), Kunt (2009), Akani,(2013) found that the mean of key profitability ratio such as the Yield on earning asset (YEA), Return on Equity (ROE) and Return on Asset (ROA) were significant meaning that there is statistical difference between the mean of the bank before 2001 recapitalization and after 2001 recapitalization. The objective of the consolidation reforms was to reposition Nigerian banking industry to be an active player in the global financial market and not a spectator. This finding confirms the reforms objectives. Prior to the merger and acquisition, it was discovered that the total assets and liabilities of the 89 existing banks were less than one bank in Malaysia and South Africa, no Nigerian bank was among the first 1000 in the world. This finding is confirmed to the expectation of the result and the objective of the banking sector merger and acquisition.

Conclusion

The study conclude that there is significant relationship between increase in capital base and return on equity of quoted post-merger banks in Nigeria and that there is significant relationship between increase in capital base and earnings per share of quoted post-merger banks in Nigeria. That there is significant relationship between increase in bank efficiency and return on equity of quoted post-merger banks in Nigeria and that there is no significant relationship between increase in bank efficiency and earnings per share of quoted post-merger banks in Nigeria.

From the findings, the researcher concludes that there is no significant relationship between increase in financial intermediation and return on equity of quoted post-merger banks in Nigeria and that there is no significant relationship between increase in financial intermediation and earnings per share of quoted post-merger banks in Nigeria. That there is significant relationship between increase in number of bank branches and return on equity of quoted post-merger banks in Nigeria and that there is significant relationship between increase in number of bank branches and earnings per share of quoted post-merger banks in Nigeria.

2.7 Recommendations

i. Based on the positive effect of the variables on the return on equity of quoted Nigerian post-merger banks, the study found that they are significant in the performance of the Nigerian banks in the post consolidation reforms. The study therefore recommends that more policies should be put in place to deepen the merger and acquisition to enhance the performance of Nigerian banks.

ii. The study recommends a comprehensive overhaul in the bank business environment to enhance the performance of Nigerian banks and the regulatory authorities. The regulatory authorities should partner with the banking management to manage monetary and macroeconomic shocks that can affect negatively to the banks.

iii. Since the merger and acquisition policy brought about banks with adequate capital base as well as increase in credit to private sector, the management of banks on their part must ensure that they are not carried away by the act of granting of credit simply because banks are more liquid in recent times. To this end, banks and the CBN must work together to see that a very sound corporate governance framework as well as effective risk management systems are in place to check the level of non-performing loans which at the moment still seems to be predominant in the Nigerian banking industry and Efforts must be made also to improve the quality of advances as well as the recovery procedures of the growing amount of bank credit to the private sector of the economy.

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