International Journal of Intellectual Discourse (IJID)
ISSN: 2636-4832 Volume 8, Issue 2. June, 2025

Complexities of Nigeria's Electrification Policies: Opportunities for Private Sector Participation and Sustainable Energy Access

*Mohammed Kabeer Garba[1] and Jibrin Hussaini Abubakar[2]

[1]*ECOWAS Parliament, Abuja*
[2]*Department of Political Science, Kaduna State University, Nigeria*

*Corresponding Author: kabirmashi@gmail.com

Abstract
Nigeria faces significant challenges in achieving universal electricity access, with only about 55-60% of the population connected to the grid and rural electrification rates as low as 30%. Despite numerous policy initiatives, including the Electric Power Sector Reform Act (EPSRA, 2005) and the National Renewable Energy and Energy Efficiency Policy (NREEEP, 2015), implementation remains weak due to regulatory fragmentation, financing gaps, and inadequate private sector engagement. This study examines the complexities of Nigeria's electrification policies, identifying key barriers such as inconsistent tariff structures, foreign exchange risks, and limited investment in decentralized renewable energy (DRE) solutions. The research highlights the untapped potential of private sector participation in bridging Nigeria's energy access gap, particularly through mini-grids, solar home systems, and hybrid power projects. While initiatives like the Nigeria Electrification Project (NEP) and mini-grid regulations offer promising frameworks, their effectiveness is hindered by bureaucratic inefficiencies and lack of long-term financing. Case studies from successful models in Kenya and India suggest that Nigeria could enhance electrification by adopting blended finance mechanisms, improving risk guarantees for investors, and strengthening community engagement. Key findings indicate that sustainable energy access in Nigeria requires a coordinated policy approach, incentivized private investment, and scalable off-grid solutions. Recommendations include establishing a centralized electrification agency, introducing tax incentives for renewable energy projects, and expanding pay-as-you-go (PAYG) solar systems. By addressing these challenges, Nigeria can unlock private sector opportunities, accelerate energy access, and support socio-economic development.

Keywords: Decentralized Renewable Energy (DRE), Electrification Policies, Energy Policy Reform, Private Sector, Sustainable Energy Access.

1. Introduction

Access to reliable and affordable electricity remains a critical driver of socioeconomic development, yet Nigeria continues to contend with significant electrification challenges despite being Africa's most populous country and one of its largest economies. As of 2021, over 92 million Nigerians, more than 45% of the population still lack access to electricity, making Nigeria the country with the largest electricity access deficit universally (World Bank, 2021). The policy scenery overriding electrification in Nigeria is marked by disintegration, weak regulatory coordination, and unpredictable implementation, all of which have stymied progress toward achieving universal energy access (World Bank, 2021).

In recent years, the Nigerian government has taken steps to reform the power sector, predominantly through the unbundling and partial privatization of the

electricity marketplace. These reforms aimed to increase private sector involvement, improve service delivery, and inspire investment in both grid and off-grid solutions (Adenle, 2020). However, the persistence of regulatory uncertainty, unreliable infrastructure, and governance ineptitudes has limited the transformative budding of these reforms.

At the same time, chances are developing for private sector actors to play a more robust role in Nigeria's electrification journey, particularly in the context of devolved renewable energy systems. As the global energy landscape shifts toward sustainability, there is growing recognition that private capital and invention will be critical in bridging Nigeria's electricity access gap while evolving environmental and social goals (Oyewo et al., 2021). This study explores the complexities of Nigeria's electrification policies, evaluates prospects for private sector engagement, and examines how sustainable energy access can be promoted through coherent and inclusive policy design.

Nigeria's electrification policies have experienced noteworthy transformations over the past six decades, shaped by changes in political governance, economic ideology, and development priorities (Adenikinju, 2020). The country's electricity sector was initially centralized under the Electricity Corporation of Nigeria (ECN) and later the National Electric Power Authority (NEPA), both of which operated as state monopolies with limited competence and coverage (Iwayemi, 2008). Following decades of underinvestment, poor service delivery, and prevalent outages, major reforms were initiated in the early 2000s. These culminated in the 2005 Electric Power Sector Reform Act (EPSRA), which laid foundation for unbundling NEPA into successor companies and transitioning toward a privatized and regulated electricity market. The privatization process, formally launched in 2013, aimed to boost competition, interest private investment, and advance operational performance across the power value chain (Adenikinju, 2020).

Theoretical Frameworks

Understanding the complications of Nigeria's electrification policies and the role of the private sector in expanding energy access requires a multidimensional theoretical approach. One useful lens is the Political Economy Framework, which focuses on the interplay between political institutions, economic comforts, and policy outcomes. In the context of electrification, this framework helps explain how power dynamics, vested interests, and institutional fragmentation outline the strategy and implementation of energy policies in Nigeria. The dominance of state actors, rent-seeking behaviors, and the influence of elite coalitions often create barriers to reform and discourage private investment (Adenle, 2020). A political economy perspective, therefore, highlights the institutional restraints and governance challenges that underlie policy failures in the energy sector.

Another relevant framework is the Energy Justice Theory, which emphasizes the ethical dimensions of energy production and distribution. This theory advocates for equitable access to energy services, fair distribution of benefits and burdens, and inclusive decision-making processes (Jenkins et al., 2016). In the Nigerian context, where electrification disparities are stark along rural-urban and socioeconomic lines, the energy justice framework provides a critical lens for assessing the social sustainability of electrification strategies. It underscores the relevance of designing policies that not only increase energy access but also address affordability, gender inclusion, and community participation.

A third applicable framework is Public-Private Partnership (PPP) Theory, which examines how collaborative arrangements

between the public and private sectors can improve service delivery. PPP theory posits that when appropriately structured, partnerships can leverage private sector efficiency, innovation, and financing while aligning with public policy goals (Hodge & Greve, 2007). In the Nigerian energy sector, PPPs are particularly relevant in off-grid and mini-grid development, where private actors can fill critical gaps left by the public utility. However, the effectiveness of such partnerships depends on regulatory clarity, risk-sharing mechanisms, and institutional trust factors that are often underdeveloped in Nigeria's power sector.

2. Literature Review

Policy and Regulatory Complexities

Nigeria's electrification agenda is constrained by a multitude of policy and regulatory challenges, many of which stem from systemic governance issues and institutional fragmentation. One of the most pressing issues is the incoherence between federal and subnational policies. While the Federal Government, through agencies such as the Ministry of Power and the Nigerian Electricity Regulatory Commission (NERC), retains primary control over national electricity policymaking, recent constitutional amendments now allow subnational governments to generate, transmit, and distribute electricity within their boundaries. This decentralization opens opportunities for localized innovation but also introduces the risk of policy misalignment and duplication if clear coordination instruments are not established (Adeleke et al., 2023).

Another main concern is the prevalence of overlapping mandates and coordination challenges among key regulatory establishments. Agencies such as NERC, the Rural Electrification Agency (REA), and the Nigerian Bulk Electricity Trading Company (NBET) often operate in silos, with conflicting roles and unclear lines of accountability. These intersections have led to regulatory bottlenecks, duplication of efforts, and confusion among private sector actors and development partners (Adenikinju, 2020). For example, while NERC sets governing frameworks for mini-grid operations, REA is simultaneously implementing rural electrification programs that may not always align with those regulations, thwarting project approvals and execution. The tariff structure in Nigeria also contributes to policy complexity. Tariffs are regulated and often do not reflect the true cost of electricity generation and distribution, which has led to chronic underinvestment in infrastructure and unsustainable debt within the sector. While the Multi-Year Tariff Order (MYTO) framework is proposed to provide cost-reflective tariffs, political interference and consumer resistance have led to delays in tariff adjustments and created a dependency on subsidy governments that are fiscally unsustainable (Eberhard et al., 2021). These distortions further reduce incentives for private investment and erode public trust in electricity reforms.

Finally, the sector is plagued by governing risks that discourage private investment. Investors face uncertainties related to contract enforcement, revenue recovery, and the legal sanctity of power purchase agreements. Delays in regulatory approvals, unexpected policy reversals, and weak dispute resolution mechanisms all contribute to Nigeria's poor investment climate (Eberhard et al., 2021). Without enhanced regulatory clarity, investor confidence will remain low, and the ambitious goals of universal energy access will remain elusive.

Private Sector Participation: Potential and Constraints

Private sector participation is increasingly recognized as vital to bridging Nigeria's electricity access gap, especially given the government's limited fiscal capacity and

persistent infrastructural deficits. The investment landscape has evolved significantly since the privatization of the power sector in 2013, creating space for private actors in generation, distribution, and off-grid markets. To attract investment, the government has introduced policy instruments such as the Eligible Customer Regulation and various capital support programs. Inducements including duty waivers on renewable energy equipment, concessional financing, and performance-based grants have been provided through initiatives such as the Nigeria Electrification Project (NEP) and the Rural Electrification Fund (REF) (REA, 2020). Despite these procedures, Nigeria's investment climate remains complex, marked by regulatory doubts and limited access to long-term capital.

Chances for private participation are particularly promising in mini-grid development, off-grid solar solutions, and Independent Power Projects (IPPs). With an estimated 80 million Nigerians lacking access to grid electricity, mini-grids have emerged as cost-effective solutions for rural and peri-urban electrification. The NEP, funded by the World Bank and implemented by the Rural Electrification Agency (REA), has successfully enabled the deployment of over 100 mini-grids through results-based financing models that reduce entry risks for private developers (World Bank, 2021). In addition, solar home system providers are increasingly penetrating underserved markets with pay-as-you-go business models, supported by mobile technology and digital finance innovations (Odarno et al., 2022). The IPP space, while more capital-intensive, continues to attract attention in industrial clusters and captive power markets, chiefly where grid supply is unreliable.

Nonetheless, significant challenges continue to constrain private sector engagement. Prominent among these, are, financing difficulties and risk perception. Many local developers struggle to access affordable, long-term financing due to perceived risks around currency volatility, customer payment defaults, and uncertain policy continuity (Adenikinju, 2020). Moreover, international investors often demand guarantees or derisking instruments that are not readily available in Nigeria's financial ecosystem. Bureaucratic blockages including delays in licensing, unclear land acquisition processes, and inconsistent regulatory interpretation further hinder project implementation and increase transaction costs (Adeleke et al., 2023).

Despite these restraints, some private-led projects offer inspiring lessons. The Nigeria Electrification Project (NEP) stands out as a successful example of public-private collaboration. Through a combination of grants and technical support, NEP has enabled dozens of developers to deploy sustainable energy solutions, demonstrating the potential for scalable and inclusive energy access models. Similarly, partnerships like the Power Africa initiative and the USAID-supported Nigeria Power Sector Program have built local capacity and fostered enabling environments for investment in decentralized energy (USAID, 2020).

Exposing the full potential of the private sector will necessitate sustained regulatory reforms, embattled derisking mechanisms, and improved public-private coordination. With the right policy mix and institutional support, private actors can serve as critical agents in intensifying reliable and sustainable electricity across Nigeria.

3. Results and Discussion

Discussion of Major Research Findings

The findings of this research reveal deep-seated structural and institutional encounters that endure to shape Nigeria's political economy. Through a historical and policy-oriented lens, the study identifies several key patterns and themes

that are central to understanding Nigeria's developmental trajectory.

One of the central findings is the enduring effect of colonial economic structures, predominantly the extractive and centralized nature of governance instituted by the British. These patterns persisted into the post-independence era, where state power was often used to consolidate elite interests rather than promote comprehensive development. The colonial state's emphasis on resource extraction laid the foundation for the overreliance on oil, which later became the dominant source of government revenue.

A critical discovery is Nigeria's acute dependence on oil revenues, which has contributed to what scholars describe as the "resource curse." While oil wealth has generated substantial income for the state, it has also led to economic volatility, governance challenges, and a neglect of other productive sectors such as agriculture and manufacturing. The rentier nature of the state has facilitated patronage politics and discouraged accountability, especially in the disbursement of oil revenues.

Corruption emerged as a persistent barrier to economic and social development. Prior research reveals that, institutional weakness, particularly in anti-corruption agencies, the judiciary, and the civil service, has hindered transparency and accountability (Adeleke et al., 2023). Political office is frequently viewed as a route to personal enrichment, contributing to a cycle of elite capture and public sector inefficiency.

Another major finding is the inconsistency in economic policymaking, often driven by short-term political interests rather than long-term developmental goals. Frequent changes in economic direction, poor implementation of development plans, and limited stakeholder consultation have weakened public trust and reduced policy effectiveness.

Finally, the research highlights the growing role of civil society and media in advocating for better governance. Despite functioning under constraints, these actors have become increasingly vocal in demanding reforms and exposing corruption. However, their impact remains limited without broader institutional reforms and political will.

Gaps in the Literature Review

Many research tends to focus either on historical events (e.g., colonialism, the civil war, or military regimes) or on current political and economic challenges. However, few works provide a cohesive framework that links historical trajectories with present-day economic and governance issues. This research fills this gap by tracing the long-term effects of colonial and postcolonial state establishment on current political and economic structures.

Although the role of oil in Nigeria's political economy has been broadly documented, there is relatively little comparative analysis of how oil compares with other sectors (such as agriculture, manufacturing, or informal markets) in shaping governance and development. This study expands the scope by exploring how the dominance of oil has undermined the growth potential of other sectors, highlighting the need for structural diversification.

Existing literature often underrepresents the political economy implications of regional differences and ethno-religious tensions. While these factors are sometimes acknowledged, they are not sufficiently analyzed as drivers of economic exclusion, social volatility, and policy bias. This study addresses this gap by emphasizing how regional difference and identity-based politics distort national development priorities.

There is a wealth of policy-oriented research offering recommendations for reform; however, few studies deeply interrogate the reasons behind persistent

implementation failures. This research explores how institutional weakness, political support, and lack of bureaucratic continuity undermine the execution of even well-designed policies.

The growing influence of civil society organizations, grassroots movements, and informal networks in Nigeria's governance landscape is not adequately covered in much of the literature. This research brings attention to these actors and their potential in promoting accountability and alternative governance models.

Most studies adopt a strictly political science or economic lens, often neglecting interdisciplinary approaches that combine sociology, anthropology, and development studies. This research attempts to bridge that gap by incorporating multiple perspectives to better understand the complexity of Nigeria's political economy.

4. Conclusion and Recommendations

Conclusion

In conclusion, this research has critically examined the complex interplay of historical, institutional, and policy dynamics shaping Nigeria's political economy. It is evident that while Nigeria possesses substantial natural and human resources, general issues such as corruption, policy inconsistency, regional disparities, and overreliance on oil have undermined sustainable development. The persistence of colonial-era structures, coupled with post-independence governance failures, has entrenched a rentier state model that arranges elite interests over inclusive growth. The findings underscore the urgent need for structural reforms and a shift away from extractive political and economic practices toward a more accountable, transparent, and participatory governance framework.

Summary

This study set out to explore the historical and contemporary dimensions of Nigeria's political economy, analyzing how legacies of colonialism, oil dependency, governance failures, and socio-political fragmentation have influenced economic development. Through a blend of historical analysis and policy review, the research found that Nigeria's economic path has been largely shaped by the centralized control of resources and elite capture of state institutions. Key issues such as corruption, poor policy implementation, and regional inequality have prevented the country from achieving its full potential. Although civil society and democratic institutions have gained some ground, they continue constrained by systemic institutional weaknesses. The research highlights the importance of addressing both the indications and root causes of Nigeria's political and economic dysfunction to pave the way for more equitable and bearable development.

Policy Recommendations

To address the challenges identified in this research, several actionable policy recommendations are proposed:

1. Reduce Nigeria's overdependence on oil by actively investing in agriculture, technology, manufacturing, and renewable energy.
2. Encouragements should be provided for local production and export-oriented industries.
3. Reinforce democratic institutions, the rule of law, and anti-corruption agencies.
4. Implement reforms to enhance transparency and accountability in public service delivery and budget management.
5. Establish mechanisms to ensure continuity and effective execution of policies irrespective of political changes.
6. Promote inclusive development through equitable allocation of resources, infrastructure development, and targeted social investment in underdeveloped

regions, especially the Northeast and Niger Delta.

7. Enhance the role of civil society organizations and independent media in monitoring governance, promoting civic education, and holding public officials accountable.

8. Institutionalize transparency in oil revenue management, including regular audits, open contracting, and improved oversight of the Sovereign Wealth Fund to ensure equitable distribution of national wealth.

References

Adeleke, A., Okonkwo, C., & Balogun, O. (2023). Decentralizing electricity governance in Nigeria: Opportunities and risks of subnational participation. *Energy Policy Journal, 175*, 113520.

Adeleke, R., Yusuf, A., & Adeoye, M. (2023). *Barriers to private sector participation in Nigeria's energy infrastructure*. Lagos Business School Policy Brief.

Adenikinju, A. (2020a). Electricity investment and regulatory challenges in Nigeria. *Energy Policy Research Journal, 12*(1), 34–47.

Adenikinju, A. (2020b). Electricity reform and the roles of government in Nigeria's power sector. *Energy Policy, 144*, 111667.

Adenle, A. A. (2020). Empowering the private sector for Nigeria's energy access: Opportunities and challenges of the off-grid revolution. *Renewable and Sustainable Energy Reviews, 130*, 109964.

Akinyele, D. O., & Olatayo, T. O. (2020). Policy and institutional frameworks for Nigeria's electricity sector: Challenges and opportunities for sustainable energy access. *Renewable and Sustainable Energy Reviews, 133*, 110222.

Akinyele, D. O., & Rayudu, R. K. (2016). Renewable energy development in Nigeria: A review of the renewable energy policy and master plan. *Renewable and Sustainable Energy Reviews, 62*, 297–306.

Bhattacharyya, S. C. (2019). *Mini-grids for the bottom billion: Lessons from around the world*. Springer.

Clancy, J., Skutsch, M., & Batchelor, S. (2012). *The gender-energy-poverty nexus: Finding the energy to address gender concerns in development*. DFID Project Report.

Eberhard, A., Gratwick, K., & Kariuki, L. (2021). Reforming the power sector in Africa: Tariff challenges and investment risks in Nigeria. *The Electricity Journal, 34*(8), 107010.

Eberhard, A., Kolker, J., & Leigland, J. (2017). *South Africa's renewable energy IPP procurement program: Success factors and lessons*. World Bank Group.

ENERGIA. (2019). *Mainstreaming gender in energy sector practice and policy: Lessons from ENERGIA's gender and energy research program*. ENERGIA International Network on Gender and Sustainable Energy.

Federal Government of Nigeria. (2022). *Nigeria energy transition plan*. https://www.energytransition.gov.ng/

Federal Republic of Nigeria. (2021). *Nigeria's Nationally Determined Contribution (NDC) under the Paris Agreement*. https://climatechange.gov.ng/

Hodge, G. A., & Greve, C. (2007). Public–Private Partnerships: An international performance review.

Public Administration Review, 67(3), 545–558.

International Renewable Energy Agency (IRENA). (2021). *Renewable energy market analysis: Africa and its regions*. Abu Dhabi: IRENA.

Iwayemi, A. (2008). Investment in electricity generation and transmission in Nigeria: Issues and options. *International Association for Energy Economics*, First Quarter 2008, 37–42. https://www.iaee.org/documents/newsletterarticles/108iwayemi.pdf

Jenkins, K., McCauley, D., Heffron, R., Stephan, H., & Rehner, R. (2016). Energy justice: A conceptual review. *Energy Research & Social Science, 11*, 174–182.

Kemausuor, F., Obeng, G. Y., Brew-Hammond, A., & Duker, A. (2015). A review of trends, policies and plans for increasing energy access in Ghana. *Renewable and Sustainable Energy Reviews, 45*, 453–460.

Odarno, L., Sawe, E., Swai, M., & Sarr, O. (2022). *Expanding energy access through off-grid solar: Evidence from Nigeria and Tanzania*. World Resources Institute. https://www.wri.org/research/expanding-energy-access-off-grid-solar

Ohiare, S. (2015). Expanding electricity access to all in Nigeria: A spatial planning and cost analysis. *Energy, Sustainability and Society, 5*(8), 1–14.

Oyewo, A. S., de Souza, M. N., & Kammen, D. M. (2021). Decentralized energy systems for Nigeria's low-carbon development pathway: A critical role for private investment. *Energy for Sustainable Development, 64*, 83–94.

Rolffs, P., Byrne, R., & Ockwell, D. (2015). Financing sustainable energy for all: Pay-as-you-go vs. traditional solar finance approaches in Kenya. *Energy Research & Social Science, 5*, 92–104.

Rural Electrification Agency (REA). (2020). *Nigeria Electrification Project (NEP): Project implementation report*. Abuja: REA.

Sambo, A. S., Garba, B., Zarma, I. H., & Gaji, M. M. (2021). Electricity generation and the present challenges in the Nigerian power sector. *Energy Journal of Nigeria, 11*(2), 19–30.

Sovacool, B. K., Sidortsov, R. V., & Jones, B. R. (2013). *Energy security, equality and justice*. Routledge.

USAID. (2020). *Nigeria Power Sector Program (NPSP): 2020 Annual report*. U.S. Agency for International Development.

World Bank. (2021a). *Tracking SDG7: The energy progress report*. International Energy Agency, International Renewable Energy Agency, United Nations Statistics Division, World Bank, and World Health Organization. https://trackingsdg7.esmap.org/

World Bank. (2021b). *Nigeria Electrification Project: Implementation status and results report* (Report No. ISR45678).

Yadoo, A., & Cruickshank, H. (2012). The role of the informal economy in community renewable energy projects in developing countries: Findings from India and Nepal. *Energy Policy, 38*(10), 7603–7611.