



The Socio-Political and Economic Impact of Energy Transition in Nigeria

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Abstract

This study examines the relationship between sociopolitical and economic effects on Nigeria's energy transition. In particular, it looked at the connection between sociopolitical factors and the effectiveness of Nigeria's shift to renewable energy as well as the connection between economic factors and the effectiveness of Nigeria's shift to renewable energy. The study attempts to answer the questions: What is the relationship between the sociopolitical variables and the success of the renewable energy transition in Nigeria? To what extent do economic variables affect the success of renewable energy transition in Nigeria? The study adopted a quantitative descriptive design, and a sample size of 600 respondents was selected from energy sector organisations (PHED, NNPC, NDDC, GPPA) and commercial renewable energy companies in Port Harcourt; 520 were returned and sampled using purposive sampling procedures. The study used descriptive statistical tools such as tables, charts, and basic percentages to analyse the data collected through the use of the Statistical Package for the Social Sciences (SPSS). The Pearson Product Moment Correlation (PPMC) was used to evaluate the hypothesis at a 0.05 significance level. According to the analysed results, the study found that Nigeria's renewable energy transition has been impacted by sociopolitical factors such as a high level of corruption, an excessive reliance on crude oil, an unfavourable business environment, poor national orientation towards renewable energy, negative political power struggles, and the influence of fuel energy generating set importers. Similarly, the success of Nigeria's transition to renewable energy is greatly impacted by economic factors like high capital costs, the oil economy and energy subsidy regime, inconsistent and poor policy implementation, inadequate public funding, private sector concessionary scepticism, and exchange rate volatility. The study concluded that sociopolitical and economic factors affect Nigeria's energy transformation. The study recommends that in order to properly coordinate the nation's sociopolitical environment, authorities and citizens need to adhere to or adopt a suitable mindset about renewable energy. The Nigerian economy should consciously diversify in order to ease its overreliance on petroleum, which has been the scourge of our country's progress.

Keywords: Sociopolitical Variables, Economic Variables, Renewable Energy Transition, Sociopolitical Environment Reliance

Introduction

Nigeria's growth depends heavily on the energy transition, as it is anticipated to provide chances for the nation to go from a hydrocarbon-dependent economy to a greener energy (Animashaun, 2023). This is significant since Nigeria's economy now depends heavily on energy, especially gas and oil energy. According to Shao, Yang, Yan, Israilova, Khan, and Chang (2025), everything that impacts Nigeria's energy sector, especially its oil and gas, affects every other aspect of the country's sociopolitical and economic life. Despite Nigeria's enormous energy potential, which includes alternative energies like solar, biomass, hydropower, wind, and so on, greater focus is placed on hydrocarbon energy (crude oil) at the expense of other greener energy sources that the rest of the world is moving toward. Consequently, a significant portion of the nation's income comes from the oil and gas sector. Despite its importance to Nigeria, the

energy industry has bottlenecks and drawbacks. It is an area that has contributed to Nigeria's underdevelopment and laziness. After more than 50 years of the nation's discovery and production of petroleum, a massive energy component, one cannot help but wonder why a sizable portion of its population still lives in abject poverty. With natural gas providing around 70% of the nation's electricity output and renewable energy sources like solar, wind, and hydropower providing less than 10%, Nigeria's inefficient electrical industry is still mostly dependent on fossil fuels. In addition to exacerbating environmental issues like greenhouse gas emissions, this high reliance on fossil fuels leaves the electrical supply susceptible to changes in the economy as a whole, and the productivity of industries and small enterprises in particular suffers from the regular power system failures. Nigerian society is also severely impacted by the absence of dependable electricity, especially in the areas of social welfare, healthcare, and education. The price of oil globally and inefficiencies in local infrastructure. The economy as a whole and the productivity of industries and small enterprises in particular suffer from the regular power system failures. Nigerian society is also severely impacted by the absence of dependable electricity, especially in the areas of social welfare, healthcare, and education.

Ironically, while the oil and gas industry contribute significantly to the nation's export revenues, other industries are being exploited as substitutes, leaving government income heavily reliant on oil prices. Consequently, the public suffers from the government's antagonistic economic and political policies, while the political and economic elites profit from the underdeveloped energy sector. Nigeria faces the risk of losing its place in the global energy economy unless it embraces the energy transmission gospel. This is because the current world trend in energy transmission is moving focus away from hydrocarbon energy sources like fossil fuels and toward greener energy (renewable energy) sources like solar and biomass energy, and other deliberate energy structure and plan of action needed towards renewable energy alternatives that are necessary for this change to occur. Given that even the most basic facilities, such as refineries, are not operating in a sector that represents the nation's economic hope, the expected impact of the energy sector on the socioeconomic development of the nation is currently uncertain, making it imperative for Nigeria to take the issue of energy transmission seriously. The nation could not have claimed to have any operational refineries of its own, with the exception of the privately held Dangote plant. Nearly every month, the grid collapses that provide energy in the form of electricity. The fact that Nigeria's government relies so heavily on imported petroleum products, despite the fact that young people from oil-rich communities possess the local labour, expertise, and indigenous technology to produce the same final product that the government spends billions of Naira on each year, is another marvel of the country's energy-oil and gas sector. However, the government criminalised and labeled these local youngsters as "bunkery boys, illegal boys, crude oil thieves, kpo fire boys," and other derogatory terms that must be eradicated at all costs, rather than considering ways to harness their abilities and utilise them to bridge the output gap in the industry. Under the joint task force on illicit crude production, Nigerian security services often assault, detain, bomb, murder, and demolish these lads' varied production camps and places, which contributes to the degree of environmental degradation and human rights abuses. Although the author does not defend the illicit activities of the Niger Delta youths, the author believes that the government ought to have recognized the positive aspects of these young people, brought them into the system, trained and equipped them with modern refinery facilities, and grouped them into clusters in order to use them to make up for the production deficit that has caused the cost of energy to skyrocket, which has had unbearable multiplier effects on the masses. The fact that this is taking place at a time when the whole globe is shifting toward renewable energy and away from the oil economy we brag about is quite unusual.

Therefore, the necessity to continuously bring the socio-political and economic forces' attention to this crucial energy transition in order to prevent falling far behind the global energy community serves as the rationale for this research. Nigeria cannot continue to play the type of backward politics we have been playing in the oil and gas business with the energy transmission orientation, and this has to be repeatedly reiterated to the pertinent players in the energy sector. The author believes that if we keep approaching the energy transition problem in the same manner as we have approached the oil and gas industry so far, we may eventually have to "drink our oil" since there will be no market for it on the global energy scene. When creating workable strategies for energy transition initiatives, we must use deliberateness. By doing this, the government would have made the system more accessible to more people, creating jobs, income, foreign currency profits, electricity, and many other benefits associated with energy diversification initiatives.

Concept of Energy Transition

According to research, the term "energy transition" is a strategic roadmap aimed at eliminating energy poverty by 2030 and achieving net-zero carbon emissions by 2060 (Shao, 2025). The concept uniquely balances urgent climate

goals with critical socio-economic needs, recognising natural gas as a transition fuel while scaling up renewable energy. Nigeria has the chance to move away from a hydrocarbon-dependent economy that depends on oil and petroleum to cleaner, safer and greener energy, thanks to the energy transition. This entails diversification for Nigeria. Even while both development partners want to diversify from fossil fuels to greener energy, it mostly entails defossilisation of energy. Even though these energy transition objectives are generally good, they are greatly impacted by sociopolitical and economic issues that have already had some impact on the agenda. The notion of energy transition is restricted to Nigeria's renewable energy orientation for the purposes of this research.

Concept of Renewable Energy in Nigeria

Nigeria has enormous potential for the development of renewable energy. The renewable energy industry is still in its infancy despite its promise and resources. Despite having an abundance of renewable energy resources, such as solar, wind, hydro, and biomass, the nation's dependence on fossil fuels, particularly natural gas and crude oil, has overshadowed investments in renewable energy, leading to notable gaps in energy access and sustainability. Solar radiation levels in the nation are high, ranging from 3.5 to 7.0 kWh/m²/day. Because of this, solar energy is a viable option for producing electricity, especially in remote and rural locations. Only around 2000 MW of the 21,250 MW of small and big hydropower potential are now being used. Similarly, with an average wind speed of 2.0 to 4.0 m/s at a height of 10 m, Nigeria has a substantial potential for wind energy. Wind energy is still mostly unrealised despite its promise (World Bank, 2022).

Similarly, with 91.4 million tonnes of agricultural leftovers and 30 million tonnes of urban solid waste generated yearly, biomass/bioenergy also has a lot of potential for Nigeria (World Bank, 2022). However, because of a lack of infrastructure and inconsistent policies, the use of these resources is still quite low. Nigeria has worked to include renewable energy in its national energy mix in recent years. A framework for increasing the use of renewable energy was provided by the Renewable Energy Master Plan (REMP), which was first presented in 2005 and revised in 2011. To encourage investments in renewable energy, the National Renewable Energy and Energy Efficiency Policy (NREEEP) was subsequently introduced. Nigeria also endorsed the Energy Transition Plan (ETP) of 2022 and the Paris Climate Agreement of 2017. The Renewable Energy Master Plan (REMP) is another initiative that aims to raise power production from 13% to 23% by 2025 and 36% by 2030. The Niger Delta Development Commission's (NDDC) solar street light project is now underway in all nine Niger Delta states. Other energy projects include the Lower Usman Dam 1.52 MW water treatment plant, the Federal University of Agriculture Makurdi 8.25 MW solar power project, the Katsina 10 MW wind farm, the Gurara II 50 MW wind farm and others. Implementation of these policies and programs has been sluggish, hampered by a lack of technical competence, poor institutional coordination, and insufficient funding. Fossil fuels continue to dominate Nigeria's energy production, with renewable energy making up less than 10% of the country's power system. The bulk of renewable energy is generated by hydropower, although solar and wind energy are still underrepresented in our energy mix.

The idea of sociopolitical factors, including a fragile and unstable political environment with unpatriotic elites, inconsistent and badly executed policies, corruption, a lack of technical expertise, inadequate infrastructure, restricted access to financing for renewable energy projects, high upfront costs of technology, and political and public misconceptions about the transition to sustainable energy, are some of the sociopolitical factors influencing Nigeria's energy transition. These kinds of factors have over time made the environment unsuitable for significant structural changes, impeded the completion of projects, and prevented the widespread use of cleaner energy sources. While financing and regulatory discrepancies have hampered renewable energy projects, the government's attempts to liberalise the energy industry and draw in private investment have encountered operational obstacles. Politicians often use power plays to thwart the advancement of the energy transition agenda by politicising energy transition programs to suit their own self-interest. According to Avelino and Wittmayer (2016), industry participants and policymakers are always engaged in power conflicts and abuses at the expense of the majority, especially civil society and the energy community. For instance, in order to thwart changes, businesses and industry players use corporate political power via agenda-setting, lobbying, and even institutional tactics to influence the government. They control the politics and the power that either encourages or inhibits transformations (Geels, 2011). According to Stenzel and Frenzel (2008), trade unions and civil society organisations play a significant role in promoting positive change, such as the energy transition, but they are frequently thrown off balance when confronted with vested political interests that represent unpopular alternative ideas within the political power play cycle. Strong political blocs have the ability to hinder the government's transitional efforts by forming a shadow economy that includes traffickers, smugglers, money laundering groups, and others. High-ranking political and economic players in Nigeria's energy sector, including

importers of diesel plants, generators, and refined petroleum products, have been charged with abusing their power to prevent the realisation of energy diversification initiatives. This may be the reason why neither climate change nor the energy transition were included in the PIA of 2021, despite the fact that it was a top political concern. Previous initiatives, such as privatisation, failed because they favoured powerful individuals who belong to the ruling political party or are active or retired senior military generals who are also members of the ruling political party. This was the case when energy generation systems were sold to independent power-producing companies (Brock, 2012; Izuora & Akwaja, 2014). According to Izuora and Akwaja (2014), these players are also the biggest importers of diesel and gasoline-producing sets, which provide Nigerian customers with a less expensive short-term option. According to several researchers, such as Gillies (2009), Sotubo (2014), and Ijewereme (2015), corruption is the main obstacle to Nigeria's energy transformation initiatives. Because of the aforementioned, Nigeria's energy industry has long been organised under a sociopolitical economy that is reliant on crude oil (Idris et al., 2013; Okoro & Chikuni, 2007). Nigeria must thus address structural challenges in its energy sociopolitical orientation and infrastructure governance priorities in addition to increasing the deployment of renewable energy if it is to accomplish a sustainable energy transition.

Concept of economic variables

With possible socioeconomic effects such as job losses in fossil fuels, job creation in new sectors, decreased energy poverty, economic diversification, and the possibility of rising inequality if policies are not inclusive, Nigeria's energy transition offers both tremendous opportunities and challenges. High capital costs, exchange rate volatility, inadequate public funding, the regime of energy subsidies and the oil economy, inconsistent and poorly implemented policies, inflation, scepticism from the private and concessionary sectors, fiscal tools (taxes, tariffs, and other levies), and so forth are the main economic factors influencing the success of renewable energy. While social obstacles include managing employment changes, guaranteeing fair access to clean energy, and empowering disadvantaged groups, economic rewards include significant investment and possible fuel savings (Animashaun, 2023). The nation's weak physical and economic capacities have been one of the main barriers to effectively addressing social and economic concerns as well as political reforms in the energy industry.

Theoretical framework

There are some underpinning theories upon which this paper is built; these theories include the multi-level perspective (MLP) theory, sometimes referred to as the multi-level socio-technical transitions theory, which provides theoretical support for this investigation. Johan Schot and other sustainability-focused theorists, like Frank W. Geels, advanced this idea in the late 1990s and early 2000s. Geels (2011). This theory looks at sociocultural aspects in transition pathways in addition to explaining changes in terms of technical innovation and user habits. It examines the transitions between dominating structures in key systems such as food, transportation, energy, and communication (Geels, 2011; Schot & Geels, 2008). Three stages of transition processes are distinguished by the MLP theory, and they are as follows:

- (i) The Niche Level: This refers to a network of emerging technologies that are in the incubation or nurturing phase and are often propelled by researchers, activists, entrepreneurs, inventors, and so forth.
- (ii) The Regime Level: Composed of the sociopolitical and economic organisations, associations, and governance structures that are part of the prevailing energy system and may be endangered or challenged by new innovations, this level serves as the engine of current energy systems.
- (iii) The Landscape Level: These include the several external forces that impact transition processes, such as changes in economic circumstances or social values, as well as shocks to the price of oil. Adopting this theory is justified by the way it illustrates the inevitable interplay between sociopolitical factors (the struggle of vested interests), economic factors, and other environmental peculiarities that impact the energy transition in particular and the sustainability orientation in general.

Several studies on energy transition have been conducted; Akinwola (2022) provides an example of some of these studies. He found that people are looking for safer and cleaner energy sources in the modern world. If the nation does not diversify its economy, oil-exporting nations like Nigeria, which mostly depend on fossil fuels for economic development, are likely to see further disruption from this shift. Although Nigeria has attempted a lot of strategies and put in place a number of regulations to deal with its energy problems, he pointed out that the nation has not made much headway so far. Due to these energy concerns, many companies have been compelled to move to more developed and ecologically friendly nations. According to the report, Nigeria's power industry is significantly impacted by the worldwide energy shift. With an emphasis on energy conservation and emission reduction (ECER)

via organisational management, technical innovation, and energy system improvements, Shao (2025) examined the methods for attaining sustainable road transport in Nigeria. According to their findings, Nigeria relies heavily on fossil fuels, with solar power making up less than 10% of the country's overall energy mix. The study used a multi-method approach, including scenario modelling, data analysis, and literature evaluation. With more emphasis on hydrogen and biogas, key results showed how smart traffic systems, flexible fuel substitution programs, and urban planning changes may maximise economic and environmental benefits. In their study, Udoka et al. (2018) examined the economic effects of Nigeria's transition to renewable energy (RE) by tying the impact of macroeconomic variables like energy costs and investments, industrial competitiveness, energy efficiency (EE), GDP fluctuations, employment, income level, and standard of living to the transition's advancement. According to the report, worries about the depletion and environmental effects of fossil fuels, energy security, and the volatility of crude oil prices are driving the global energy system's shift to renewable energy (RE). Despite this, policy inconsistencies have caused Nigeria's transition to RE to go slowly. In order to address the social, economic, and environmental concerns of the energy transition programs, they suggested a multidisciplinary approach.

Okereke et al. (2020) used a multistage sampling technique across nine power distribution firms in Nigeria to investigate the socio-political factors behind the country's energy problem. Structured questionnaires were used to survey 900 individuals in South-South and South Eastern Nigeria (270 distributors and 630 customers). Descriptive statistics, factor analysis, and structural equation modelling (SEM) were used to analyse the data using SPSS and Jamovi. Key issues in Nigeria's energy industry were identified by the research, including the irregular supply of power, which 66% of respondents said was often available but 45.8% said was of unsatisfactory quality. Additionally, 94.6% of respondents think that energy poverty has a negative effect on job chances, 68.9% say that their firms have been disrupted, and 69.1% blame increasing prices on energy poverty. Given that 91.9% of respondents see corruption as a key cause and 81.3% rate government administration as poor, governance concerns are a serious concern. According to the results of the Structural Equation Model (SEM), the biggest cause of the crisis is political patronage ($\beta = 0.99$), followed by regulatory difficulties ($\beta = 0.58$) and infrastructure deterioration ($\beta = 0.65$). Consistent government policies ($\beta = 0.96$), the engagement of foreign investors because of favourable policies ($\beta = 0.46$), the development of energy consumption awareness campaigns, and the proper installation of energy distribution infrastructure were found to be important factors in reducing the sociopolitical issues facing the Nigerian energy sector. The results point to the urgent need for extensive legislative changes to address issues facing Nigeria's energy industry. Using Nigeria as a case study, Osunwuyiwa et al. (2018) examined renewable energy transitions in Africa to clarify the methodological and analytical difficulties that sustainability transition studies encounter in developing nations, especially rentier governments. They embraced the notion of socio-technical changes known as the multi-level perspective (MLP). According to the report, Nigeria's energy transition is hampered by political aspects of energy transitions, which highlight the connection between political elites and common client-patron relationships. Oludamilare et al. (2020) conducted a study on the opportunities and obstacles of Nigeria's sustainable energy transition, drawing on the experiences of other nations. The report emphasised how crucial it is for Nigeria and other African nations to have an equal right to embrace sustainable energy in order to achieve the deadline for the UN SDGs. During the discussion of reform initiatives aimed at enhancing Nigeria's energy sector, it was discovered that more than half of the world's reported poor people dwell in sub-Saharan Africa (SSA), with up to 400 million of them residing in Nigeria. It was also discovered that Nigeria's social and economic advancement is highly dependent on how well-functioning its energy industry is.

After more than 50 years of the nation's discovery and production of petroleum, a massive energy component, the economy as a whole, and the productivity of industries and small enterprises in particular suffer from regular power system failures. Nigerian society has been severely impacted by the absence of dependable electricity, especially in the areas of social welfare, healthcare, and education. Also, given that even the most basic facilities, such as refineries, are not working or operating in a sector that represents the nation's economic hope, the expected impact of the energy sector on the socioeconomic development of the nation is currently uncertain, making it imperative for Nigeria to take the issue of energy transmission seriously. It is concerning that the oil and gas industry has been the sole element of the energy sector influencing Nigeria's political and economic behaviour for more than 50 years after the discovery of oil in Oloibiri, in what is now Bayelsa State. It is even more pathetically obnoxious that the oil and gas economy has caused other promising industries, including mining, tourism, solid minerals, renewable energy, and agriculture, to become dormant rather than contributing to the country's growth. In many Niger Delta areas, it has also resulted in a significant degree of environmental degradation, poverty (caused by the loss of livelihood resources including land and water), youth unrest, and overall instability. The worst concern is that, despite the world's present need for cleaner,

safer and greener energy, we continue to depend significantly on our undeveloped oil economy. Fortunately, we have abundant natural resources such as (sunlight, water bodies, wind, biomaterials, etc.) to create this cleaner, safer and greener energy. Unfortunately, however, we are not giving the energy transition trend enough attention. The author believes that despite the government's numerous sociopolitical and economic initiatives (such as the Sustainable Development Goals (SDG) -7 programs, privatizations, the 2021 PIA, the National Integrated Power Project (NIPP), the National Renewable Energy and Energy Efficiency Policy (NREEEP), compressed Natural Gas (CNG) initiatives, and other scholarly postulations regarding Nigeria's energy transition, the efforts made thus far are insufficient, which is why the energy crisis still exists. The author acknowledged that although researchers like Akinwale (2022), Animashaun (2023), Udoka et al. (2018), Shao et al. (2025), and many others have studied the Nigerian energy sector, more research should be done on the sociopolitical and economic effects of the country's energy transition. Therefore, it is necessary to use this study to highlight to pertinent stakeholders that Nigeria must address systemic sociopolitical and economic issues in its energy governance and infrastructural development to increase the adoption of renewable energy if it is to achieve a sustainable energy transition.

The aim of this study was to examine the socio-political and economic impact of energy transition in Nigeria. The specific objectives are to:

- i. Investigate the relationship between sociopolitical variables and renewable energy and the success of energy transition in Nigeria.
- ii. Examine the relationship between economic variables and the success of renewable energy transition in Nigeria.

The following relevant questions are posed to guide the study:

- i. What is the relationship between the sociopolitical variables and the success of renewable energy transition in Nigeria?
- ii. To what extent does an economic variable affect the success of renewable energy transition in Nigeria?

The study was guided by the following hypotheses:

H0₁: There is no significant relationship between sociopolitical variables and the success of renewable energy transition in Nigeria.

H0₂: There is no significant relationship between economic variables and the success of renewable energy transition in Nigeria.

Methodology

The research design is a framework used to guide the collection and analysis of data for the study. The research adopted a descriptive research design using quantitative statistical tools. The researcher used real data and facts gathered from field respondents as justification for choosing this approach. All relevant parties involved in the energy industry make up the study's population. Because the stakeholders were explicitly selected based on their accessibility and willingness to cooperate and collaborate with the researcher, purposive and convenience sampling procedures were used. A sample of 600 people was drawn from the population. The perspectives of the sampled respondents from certain energy sector organisations, including PHED, NNPC, NDDC, and GPPA, as well as a few chosen renewable energy companies in Port Harcourt, served as the major source of data. Conversely, the secondary data came from empirical evidence from earlier researchers' work as well as recorded information on energy transition from pertinent organisations, including the National Bureau of Statistics (NBS) and the Federal Ministry of Power. The major data gathering method was through a questionnaire. Six research assistants assisted with the distribution and retrieval of the surveys. The researcher created the questions and had them validated by energy industry specialists in order to determine the validity of the survey instrument. The study's reliability was assessed using the test-retest approach. After a few days, the respondents received a second copy of the tabulated data to validate their answers to the different questionnaire questions. Additionally, the dependability of the secondary data (from previous writers) was tested using content reliability. The statistical software for social sciences (SPSS) was used to further correlate the data using Cronbach's alpha coefficients. Therefore, the researcher regarded only as dependable items those that had an alpha value of 0.7 or above. The quantitative data analysis techniques, which included descriptive statistics such as frequency tables, simple percentages, graphs, criteria means, and charts, were used to analyse the data. The Likert-Scale framework of SA=Strongly Agreed; A=Agreed; D=Disagreed; and SD=Strongly Disagreed at the 2.5 criteria mean cutoff point guided the development and calculation of the basic percentage study questionnaire questions. Excel and

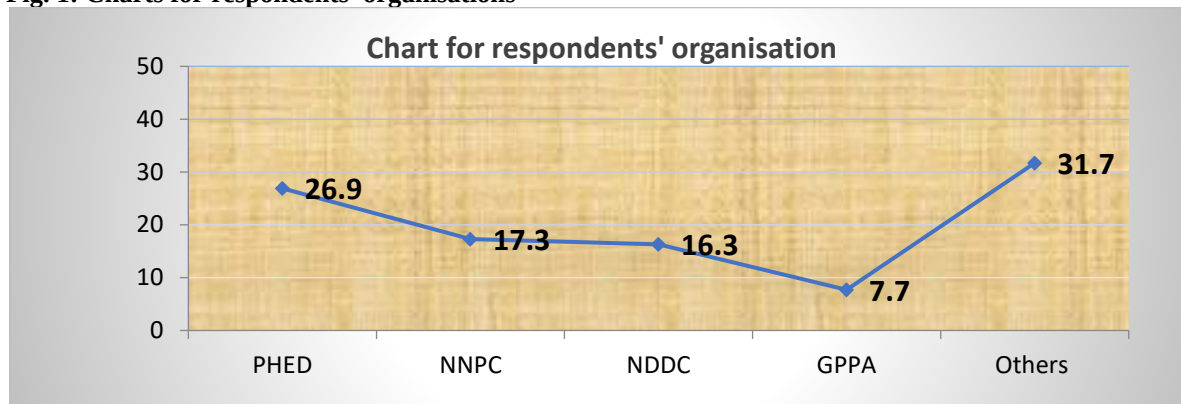
SPSS were used to evaluate the hypothesis using the Pearson Product Moment Correlation (PPMC) analysis (at 0.05 significant levels).

Results

Analysis of Respondents Demographic Data

This analysis is done in line with respondents' variables such as name of organisation, qualifications and gender.

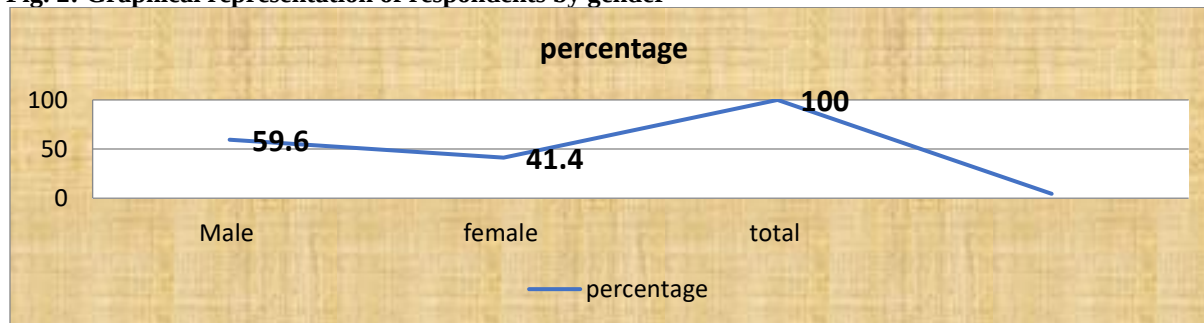
Fig. 1: Charts for respondents' organisations



Source: Researcher's field survey

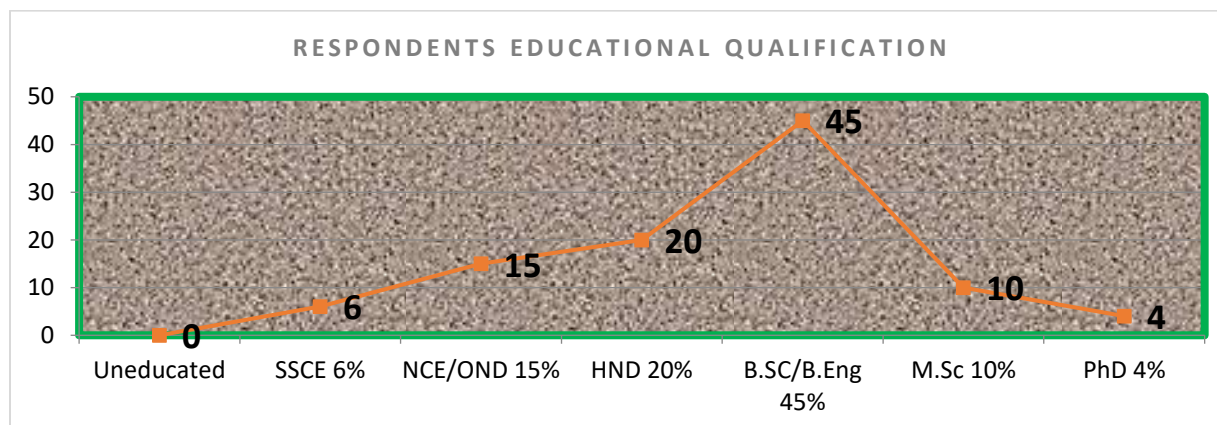
The results of Fig. 1 above show that 90 respondents, or 17.3% of the total, are NNPC employees, whereas 140 respondents, or 26.9% of the total, are PHED personnel. An additional 85 respondents, or 16.3%, are employed by the NDDC, and 40 respondents, or 7.7%, are employed by the Geometric Power Plant Aba (GPPA). The remaining 165 respondents, or 31.7%, work for a few Port Harcourt-based commercial renewable energy companies. The aforementioned study shows that the researcher gathered the viewpoints of a variety of sample stakeholders.

Fig. 2: Graphical representation of respondents by gender



Source: Author's computation (2025).

Fig. 3: Percentage of respondents' qualifications



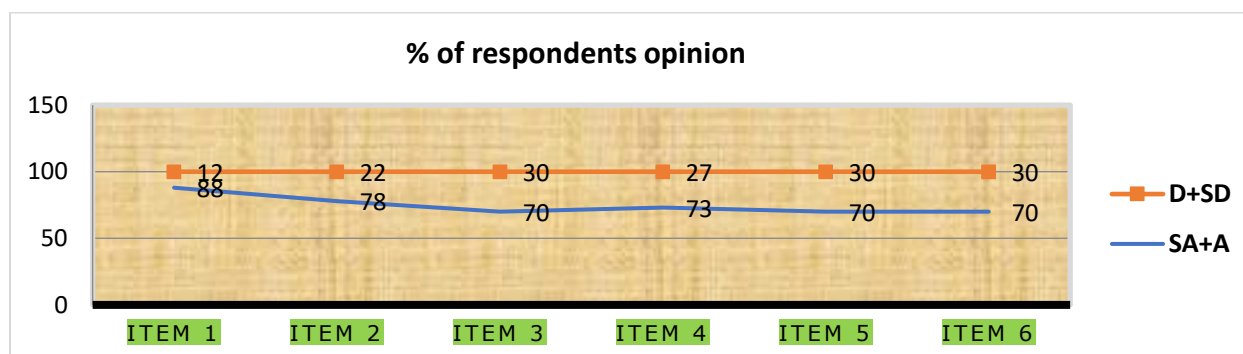
Source: Researcher's field survey (2025)

According to the report in Figure 4, every respondent has a formal education. Thus, 26 respondents in all, or 6% of the sample, held an SSCE certificate. Similarly, 78 respondents, or 15% of the sample, had an NCE or OND. In a similar vein, 100 individuals (20%) possess the HND certificate. Additionally, 234 respondents (45%) possess a B.Sc., B.A., or B.Eng. degree. Furthermore, twenty respondents (4%) possess a PhD, whereas 52 respondents (10%) hold an M.Sc. This suggests that the majority of respondents are educated and can thus understand and reply to the pertinent questions on the questionnaire.

Table 1: Analysis of Research Objectives one: What is the relationship between sociopolitical variables and the success of the energy transition in Nigeria?

S/n	Questionnaire items : Sociopolitical variables	SA	A	D	SD	Mean score	Remark
Item 1	Huge corruption	320	135	35	30	4.08	Accepted
Item 2	Over-dependent on crude oil	260	140	55	65	3.54	Accepted
Item 3	Unfriendly business environment	120	250	70	80	3.42	Accepted
Item 4	National orientation towards renewable energy	145	230	75	70	3.40	Accepted
Item 5	Negative political power play & struggle	120	250	70	80	3.42	Accepted
Item 6	Importer of fuel & energy generating sets	260	140	55	65	3.54	Accepted

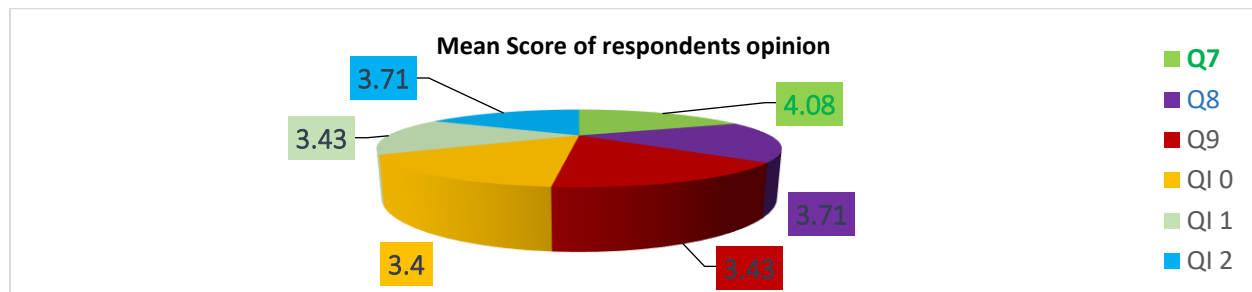
Source: Author's computation from field survey (2025)



Source: Researcher's computation from field survey (2025)

Fig. 4: Chart for sociopolitical variables and the success of energy transition

According to questionnaire item one above, 455 (88%) of the respondents agreed that massive corruption is one of the main sociopolitical factors influencing Nigeria's energy transition success, while 65 (12%) disagreed. Regarding the second item on the questionnaire, 405 (78%) of the respondents agreed that a significant sociopolitical factor influencing the success of the energy transition is an excessive reliance on crude oil, while 115 (22%) disagreed. Additionally, in response to item three of the questionnaire, 370 respondents (71.2%) said that a hostile business climate was one of the main geopolitical factors influencing the success of the energy transition, whereas 150 respondents (28.8%) disagreed. Regarding item four, 145 respondents (21.9%) disagreed with the 375 respondents (72.1%) who said that the main factor influencing the success of the energy transition was restricted access to funding. About 150 respondents, or 28.8%, disagreed with the majority of 370 respondents (71.2%) who said that unfavourable political power struggles and play were the main factors influencing the success of the energy transition. Regarding item six of the poll, 400 respondents (77%) agreed that the importer of fuel and energy-generating equipment is one of the main factors influencing the effectiveness of the energy transition, whereas 120 respondents (23%) disagreed.



Source: Researcher's computation

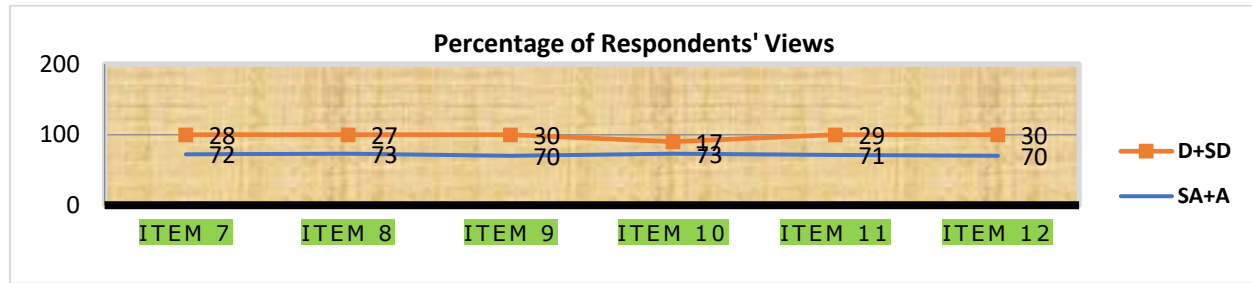
Fig. 5: Mean Score for relationship between the sociopolitical variables and the success of energy transition in Nigeria

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Table 2: The relationship between government policies, programmes and investment in renewable energy and the success of energy transition in Nigeria

S/n	Questionnaire items for economic variables impacting renewable energy transition	SA	A	D	SD	Mean score	Remark
Item 7	High cost of capital	120	250	70	80	3.42	Accepted
Item 8	Energy subsidy regime and oil economy	145	230	145	230	3.40	Accepted
Item 9	Inconsistency and poor policy implementation	232	130	79	79	3.30	Accepted
Item 10	Poor public financing	258	120	72	70	3.49	Accepted
Item 11	Concessionary and private sector skepticism	240	122	78	80	3.47	Accepted
Item 12	Exchange rate volatility	237	133	76	64	3.36	Accepted

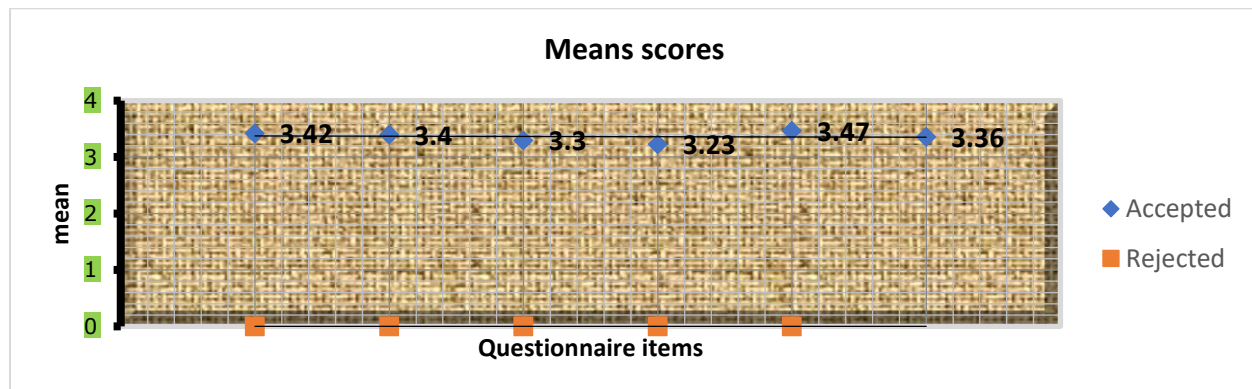
Source: Author's computation from field survey (2025)



Source: Researcher's computation from field survey (2025)

Fig. 6: Chart for the relationship between economic variables and success of renewable energy transition in Nigeria.

According to item seven above, 370 respondents (71.2%) agreed that the shift to renewable energy is impacted by high capital costs, whereas 150 respondents (28.8%) disagreed. Regarding issue eight, 375 respondents (72.1%) acknowledged that the oil economy and energy subsidy system had an influence on the transition to renewable energy, whilst 145 respondents (21.9%) disagreed. 362 (69.6%) respondents to questionnaire nine agreed that inconsistent and poorly implemented policies had an influence on the transition to renewable energy. The remaining 148 people, or 28.4%, refused to admit. Regarding item nine of the questionnaire, 378 (72.7%) of the respondents agreed that inadequate public funding had an influence on the transition to renewable energy, while 142 (27.3%) disagreed. Additionally, 362 respondents (69.6%) acknowledged that the shift to renewable energy is impacted by concessionary and private sector scepticism, whereas 148 respondents (28.4%) disagreed. A total of 370 respondents (71.2%) to the query twelve agreed that the shift to renewable energy is impacted by exchange rate volatility. The remaining 150 people, or 28.8%, disagreed.



Source: Researcher's computation

Fig. 7: Mean Score for the relationship between economic variables and the success of renewable energy transition in Nigeria.

From the study above, the mean value of 3.42 (i.e., $3.42 > 2.50$) led to the approval of the view of respondents who indicated that high cost of capital influences renewable energy transition. Additionally, the respondents' opinion that the oil economy and energy subsidy regime have an impact on the transition to renewable energy was accepted due to the mean score of 3.40 (i.e., $3.40 > 2.50$). Furthermore, the respondents' belief that inconsistent and poorly implemented policies have an influence on the transition to renewable energy was accepted due to the mean value of 3.47 (i.e., $3.47 > 2.50$). Additionally, a mean score of 3.25 (i.e., $3.25 > 2.50$) qualifies for acceptance of the fact that inadequate public financing has an impact on the transition to renewable energy. Additionally, the mean value of 3.30 (i.e., $3.30 > 2.50$) supported the respondents' assertion that the transition to renewable energy is impacted by concessionary and private sector scepticism. Also, the men's score of 3.36 is a criterion for the acknowledgement of the idea that exchange rate volatility influence on renewable energy transition (ie. $3.36s > 2.50$).

Test of Hypotheses

The hypothesis was tested using the Pearson's Moment-Product Correlation Coefficient analysis (at 0.05 significant levels) with the aid of MS excel and SPSS statistical software.

Hypothesis 1: There is no significant relationship between the sociopolitical variables and the success of renewal energy transition in Nigeria

Table 3: Sociopolitical variables and the success of renewal energy transition

Correlations		Sociopolitical variables		Renewal energy transition
Sociopolitical variables	Pearson	Product-Moment	1	.882**
	Correlation(PPMC)			
	Sig. (2-tailed)			.000
Renewable energy transition	N		520	520
	Pearson	Product-Moment		
	Correlation(PPMC)		.882**	1
	Sig. (2-tailed)		.000	
	N		520	520

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

Source: Field data, 2025

The results of the data analysis indicate a strong correlation between the respondents' assessments of the success of the renewable energy transition and sociopolitical factors (such as widespread corruption, an excessive reliance on crude oil, an unfavourable business environment, restricted access to financing, negative political power struggles, and importers of fuel and energy generating sets). The P-value of .000, which is below the 0.05 significance limit as seen in $p < 0.05$ ($0.000 < 0.05$), provides proof of this. The sociopolitical factors and the performance of Nigeria's renewed energy transition are strongly positively correlated ($R = 0.882$). As a result, the null hypothesis—which holds that sociopolitical factors and Nigeria's renewable energy transitions do not statistically significantly correlate—is now rejected. Therefore, the study acknowledges that sociopolitical factors like widespread corruption, an excessive reliance on crude oil, an unfavourable business climate, a national focus on renewable energy, unfavourable political power dynamics and conflicts, and fuel and energy generating set importers have been affecting Nigeria's renewable energy transition.

Hypothesis 2: There is no significant relationship between economic variables and renewable energy transition in Nigeria.

Table 4: Relationship between economic variables and renewable energy transition.

Correlations		Economic variables	Renewable transition	energy
Economic variables	Pearson	Product Moment		
	Correlation(PPMC)	1	.783	
	Sig. (2-tailed)		.002	
Renewable energy transition	N		520	
	Pearson	Product-Moment		
	Correlation(PPMC)	.783	1	
	Sig. (2-tailed)		.002	
	N		520	520

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

Source: Field data, 2025

The data analysis's conclusion demonstrates a strong and positive correlation between economic variables (such as high capital costs, the oil economy and energy subsidy regime, inconsistent and subpar policy implementation, inadequate public funding, scepticism from the private and concessionary sectors, and exchange rate volatility). As seen in $p < 0.05$ ($0.002 < 0.05$), this is supported by the P-value of .002, which is below the 0.05 significance threshold. The economic factors and the renewable energy transition have a positive and substantial link ($R = 0.783$). Thus, the null hypothesis—which holds that economic factors and the renewable energy transition do not significantly correlate—is now disproved. Therefore, the study acknowledges that economic factors like high capital costs, the oil economy and energy subsidy regime, inconsistent and subpar policy implementation, inadequate public funding, scepticism from the private and concessionary sectors, and exchange rate volatility have been affecting Nigeria's renewable energy transition.

Discussion

In order to accomplish this goal, the data collected and calculated from the opinions of the respondents reveal that sociopolitical factors such as high levels of corruption, an excessive reliance on crude oil, an unfavourable business environment, a national focus on renewable energy, negative political power struggles, and fuel and energy generating set importers have been affecting Nigeria's renewable energy transition. These opinions align with those of Okereke et al. (2020); Osunwuyiwa et al. (2018); and Avelino and Wittmayer (2016) who found that the shift to renewable energy is hampered by political factors, power battles, and the use of force by industry participants and policymakers. The findings also support those of Brock (2012), Izuora and Akwaja (2014), Sotubo (2014), and Ijewereme (2015), who highlighted importers of diesel and gasoline generating sets, as well as Idris et al. (2013), who identified corruption as the main obstacle to Nigeria's energy transformation initiatives. Shao et al. (2025) also supported this viewpoint. In pursuing this goal, it was discovered that economic factors like high capital costs, the oil economy and energy subsidy regime, inconsistent and subpar policy implementation, inadequate public funding, scepticism from the private and concessionary sectors, and exchange rate volatility significantly impact Nigeria's ability to successfully transition to renewable energy. Scholars such as Animashaun (2023), Shao et al. (2023), Oludamilare et al. (2020), and Udoka et al. (2018) have found that economic variables like the oil and gas economy, the energy subsidy regime, inconsistent and poorly implemented policies, inadequate public financing, and so on are factors that hinder the success of renewable energy transactions in Nigeria. This finding is consistent with their findings.

Conclusion

The study examines the sociopolitical and economic effects of Nigeria's energy transition. The relationship between the dimensions of sociopolitical and economic variables was analysed using descriptive statistics such as tables, charts and basic percentages. The results show that sociopolitical and economic variables had a negative relationship with energy transition in Nigeria. Based on the research's analysis and results, it was discovered that the success of Nigeria's renewable energy transition has been negatively impacted by sociopolitical factors such as the country's high level of corruption, excessive reliance on crude oil, unfavourable business environment, national orientation towards renewable energy, negative political power struggles, and importers of fuel and energy generating sets. Similarly, the success of Nigeria's transition to renewable energy is greatly impacted by economic factors like high capital costs, the oil economy and energy subsidy regime, inconsistent and poor policy implementation, inadequate public funding, private sector and concessionary scepticism, and exchange rate volatility.

Recommendations

In view of the analysis, research findings and conclusions drawn, the following recommendations were put forward:

1. There is a need for efficient coordination of the sociopolitical environment of the country by developing the correct renewable energy orientation in the thinking of the leaders and public.
2. Nigeria's economy has to consciously diversify in order to abandon its reliance on petroleum, which has been the scourge of our country's progress.

References

- Akinwale, A. (2022). *The impact of global energy transition on the Nigerian power sector*.
- Animashaun, M. A. (2023). *Socio-economic and political dimensions of energy transition in a developing economy: The case of Nigeria*.
- Avelino, F., & Wittmayer, J. M. (2016). Shifting power relations in sustainability transitions: a multi-actor perspective. *Journal of environmental policy & planning*, 18(5), 628-649.

- Brock, J. (2012). *The political economy of power sector privatization in Nigeria*.
- Geels, F. W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), 24–40.
- Gillies, A. (2009). *Corruption and the Nigerian oil sector*.
- Idris, I., Kura, S. Y., Ahmed, A., & Abba, M. (2013). *The political economy of crude oil development*
- Ijewereme, et al (2015). Anatomy of corruption in the Nigerian public sector: Theoretical perspectives and some empirical explanations. *SAGE Open*, 5(2).
- Izuora, C., & Akwaja, M. (2014). *Diesel imports and the political economy of Nigeria's energy sector*.
- Okereke, E. J., Ukanwa, J. K., & Agu, C. (2020). Socio-political dynamics of Nigeria's energy crisis: A structural equation modeling approach. *International Journal of Energy Economics and Policy*, 10(6), 392–402.
- Okoro, O. I., & Chikuni, E. (2007). Power sector reforms in Nigeria: Opportunities and challenges. *Journal of Energy in Southern Africa*, 18(3), 52–57.
- Oludamilare, B. D., Kiptoo, M. K., Afolayan, A. F., Amara, T., Alawode, O. I., & Senjyu, T. (2020). Challenges and prospects of Nigeria's sustainable energy transition with lessons from other countries' experiences. *Energy Reports*, 6, 993–1009.
- Osunwuyi, O., Biermann, M., & Kalfagianni, A. (2018). The politics of energy transitions in Africa: A multi-level perspective of Nigeria's rentier state. *Energy Research & Social Science*, 41, 61–69.
- Schot, J., & Geels, F. W. (2008). Strategic niche management and sustainable innovation journeys: Theory, findings, research agenda, and policy. *Technology Analysis & Strategic Management*, 20(5), 537–554.
- Shao, Y., Yang, L., Yan, H., Israilova, N., Khan, A., & Chang, H. (2025). *Strategies for achieving sustainable road transport in Nigeria: Energy conservation and emission reduction through technological innovation*.
- Sotubo, O. (2014). *Corruption as the core impediment to energy transition in Nigeria*.
- Stenzel, T., & Frenzel, A. (2008). Regulating technological change-The strategic reactions of utility companies towards subsidy policies in the German, Spanish and UK electricity markets. *Energy Policy*, 36(7), 2645–2657.
- Udoka, C. O., Moffat, I. U., & Akpan, E. E. (2018). *Economic implications of renewable energy transition in Nigeria: A macroeconomic analysis*.
- World Bank. (2022). *Nigeria: Renewable energy potential and investment opportunities*. World Bank Group.