

Regulatory Compliance and Government-Business Relations in the Oil and Gas Sector: Lessons from Nigeria for United States Energy Policy and Global Trade (2022)

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Abstract: In Nigeria, the oil and gas sector is essential to global economic stability, powering industries, transportation, and trade. The oil and gas revenues make up a major share of government income and exports, but the sector has long suffered from weak regulation, corruption, and overlapping institutional mandates that discouraged investment and slowed growth. However, this review paper examines Nigeria's regulatory reforms, with a focus on the Petroleum Industry Act (PIA) 2021, which streamlined agencies, improved fiscal transparency, and introduced Host Community Development Trusts to promote local benefits and reduce conflict. These measures have strengthened investor confidence, enhanced policy coordination, and encouraged new investment in the gas infrastructure, refining, and local content development. Hence, the study also draws lessons for United States energy policy, with emphasis on the importance of regulatory certainty, stakeholder engagement, and transparent governance in balancing energy security with climate goals. Furthermore, Nigeria's experience shows that efficient regulation and strong government-business collaboration can speed up project delivery, reduce conflict, and turn natural resource wealth into a driver of sustainable economic growth.

Keywords: Regulatory compliance, oil and gas sector, Nigeria, United States energy policy, global trade, governance, local content

I. Introduction

The oil and gas sector is one of the pillars of the global economy. It fuels industries, powers transportation, and provides raw materials for industries, ranging from plastics to fertilizers. According to the International Energy Agency (IEA, 2022), oil and natural gas together account for about one-third of global energy consumption, thus; making them an important drive for economic stability and international trade. However, for many resource-rich countries, oil and gas revenues is the foundation of their national gross domestic production (GDP).

For example, Nigeria is a country whose economic well-being is tied to its oil and gas industry. Since the discovery of oil in Oloibiri in 1956, the sector has contributed about 6-7% of Nigeria's Gross Domestic Product (GDP), but more than 90% of its export earnings (Nigerian National Petroleum Company Limited (NNPCL), 2022). Despite this, Nigeria is still struggling with regulatory uncertainty, overlapping institutional mandates, corruption, and a lack of transparency.

Conversely, regulatory compliance is essential for maximizing the benefits of natural resource extraction. For instance, effective compliance frameworks ensure that companies pay their taxes, follow environmental rules, and engage fairly with host communities. In 2021, Nigeria's drive to improve regulatory oversight resulted in the passage of the Petroleum Industry Act (PIA). This was a landmark piece of legislation that took nearly twenty years to pass (Eze and Adebayo, 2022).

In Nigeria, the state-owned Nigerian National Petroleum Company Limited (NNPCL) historically dominated the industry, often creating tensions with private investors (Okonkwo and Idowu, 2021). On top of that, government-business relations also play a decisive role in shaping the performance of the oil and gas industry. Therefore, the PIA aims to commercialize NNPCL, thereby; making it more competitive and encourage private sector participation. This shift is expected to improve efficiency, and attract foreign direct investment (FDI).

Despite the fact that the United States is the world's largest oil and gas producer, as well as a global leader in clean energy transition, they can still learn from Nigeria's experience. Therefore, to strike a balance between regulation, investor confidence, and community welfare is not only unique to Nigeria, it is a challenge faced worldwide. As the United States policymakers are struggling with issues including methane emissions standards, permit processing delays, and balancing domestic production with climate commitments, these can serve as valuable lessons for them.

This review paper therefore explores Nigeria's regulatory compliance mechanisms and government-business relations, using the PIA 2021 as a reference point. It also examines how these reforms impact investor confidence, host community development, and the country's position in global energy trade. Furthermore, it draws lessons for United States energy policy, offering recommendations for strengthening regulatory compliance, promote inclusive growth, and strengthen America's leadership in global energy markets.

Regulatory Compliance in Nigeria's Oil and Gas Sector

Regulatory compliance can be defined as the extent to which companies follow the rules, standards, and regulations set by government agencies to ensure proper conduct in the industry. For instance, in Nigeria's oil and gas sector, compliance is a difficult, but important issue because, the industry accounts for the majority of the country's foreign exchange earnings. Therefore, it is important to note that for several years, Nigeria has struggled with poor enforcement, conflicting oversight agencies, and limited capacity to monitor production and collect revenues effectively.

Historical Challenges in Regulatory Oversight

Before the passing of the Petroleum Industry Act (PIA) 2021, Nigeria's oil and gas regulatory framework was broken and outdated. According to Okonkwo and Idowu, (2021), the main legislation guiding the industry was the Petroleum Act of 1969, which did not adequately address modern challenges including gas flaring, environmental degradation, and the need for community participation. Hence, regulatory functions were shared among various agencies including the Department of Petroleum Resources (DPR).

These structural weaknesses contributed to significant inefficiencies, including revenue leakages from underreported crude oil production and pipeline theft. According to NEITI (2022), Nigeria lost an estimated amount of \$1.5 billion annually due to poor metering infrastructure, crude theft, and inadequate monitoring. This made the industry vulnerable to corruption and discouraged long-term investment by international oil companies (IOCs).

The Petroleum Industry Act (PIA) 2021 and Reform Objectives

The passage of the PIA 2021 was a landmark moment after nearly twenty years of failed reform attempts. The Act was designed to create a more transparent, and inclusive investor-friendly environment by restructuring the regulatory framework. It established two new major regulators such as:

- i. **The Nigerian Upstream Petroleum Regulatory Commission (NUPRC):** They are responsible for technical and commercial regulation of upstream operations, including exploration, drilling, production monitoring, and compliance with safety and environment.
- ii. **The Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA):** They are tasked with regulating the midstream (processing, gas infrastructure) and downstream (refining, marketing, and distribution) segments, ensuring fair market competition and energy security.

Furthermore, the Act also introduced fiscal reforms, including a new royalty and tax regime designed to encourage investment in deepwater projects and natural gas development. Most importantly, the PIA mandated the creation of a Host Community Development Trust Fund (HCDTF), requiring companies to contribute about 3% of their operating expenses to fund projects that benefit communities in oil-producing regions (Eze and Adebayo, 2022). This provision aims to reduce tensions, sabotage, and militancy in the Niger Delta.

Compliance Requirements under the PIA

Under the new legal framework, oil and gas companies are now subject to more robust compliance obligations, including:

- i. Timely payment of royalties, taxes, and profit oil shares to the government.
- ii. Adherence to gas flare reduction targets, environmental impact assessment (EIA) regulations, and decommissioning obligations.
- iii. Meeting local content requirements under the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, which promotes Nigerian participation in the value chain.
- iv. Mandatory disclosure of production data, payments, and beneficial ownership information, that agrees with Extractive Industries Transparency Initiative (EITI) standards.

Going further, these requirements are intended to improve accountability and restore investor confidence in the sector.

Ongoing Challenges and Compliance Gaps

Compliance enforcement still remains an issue in Nigeria. Despite these reforms, regulatory compliance is still developing, and there are concerns about conflicting environmental regulations between the NUPRC, NMDPRA, and other agencies such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) (Okafor, 2022). However, international oil companies (IOCs) have expressed reservations about the cost implications of the new fiscal terms and the administrative burden of compliance (Eze and Adebayo, 2022).

Additionally, crude oil theft, illegal refining, and pipeline vandalism continue to undermine the effectiveness of regulatory oversight, thereby; resulting in lost of revenue and environmental degradation (NEITI, 2022). These challenges demonstrates the need for a firm institutional capacity, improved security infrastructure, and a strong collaboration between government agencies and private operators.

II. Building a Culture of Compliance

While Nigeria's regulatory system is not yet perfect, the PIA represents a significant step toward putting together fiscal, environmental, and governance frameworks. The introduction of host community development funds, gas flare penalties, and transparent licensing processes points to a gradual shift toward a more sustainable and inclusive industry. The challenge faced by the government now is to ensure full implementation, build enforcement capacity, and strengthen a culture where compliance is not just a legal obligation, but a fiscal reality.

How government and businesses work together to shape policy

Government-business relations form the bedrock of a stable and productive oil and gas sector. These relations determine how policies are designed, implemented, and enforced, and whether they create a conducive environment for private investment. Hence, a strong and transparent collaboration between government institutions, and industry players can lead to a more stable markets, fair competition, and long-term economic growth. Conversely, poor relations often result in policy uncertainty, investor flight, and under-performance.

A Look Back at Government and Business in Nigeria

For several years, the Nigerian government has maintained a dominant role in the oil and gas sector through the Nigerian National Petroleum Corporation (NNPC), which acted as both industry regulator, and commercial operator. This dual role brought about conflicts of interest and market distortions, as the NNPC was simultaneously competing with private companies, while also influencing policy and regulation (Okonkwo and Idowu, 2021).

This dominance often discouraged private sector participation, most especially in refining and midstream infrastructure development. However, Nigeria has become heavily dependent on crude oil exports, and reliant on imports for refined petroleum products, despite having significant refining capacity that remained under-tapped (Akinwumi, 2021). Furthermore, foreign investors were also hesitant to commit long-term capital due to the perception of government interference, and the lack of transparency in contract awards and licensing round.

How the Petroleum Industry Act (PIA) of 2021 changed things

The Petroleum Industry Act (PIA) 2021 introduced a major structural shift by commercializing the NNPC and renaming it the Nigerian National Petroleum Company Limited (NNPCL). As a fully incorporated company under the Companies and Allied Matters Act (CAMA), NNPCL is now expected to operate as a profit-oriented commercial organization with greater efficiency and accountability (Eze and Adebayo, 2022). This commercialization move is important for creating a balance for government-business relations.

How institutions collaborate to create and implement policy

The PIA also redefined institutional responsibilities by creating distinct regulatory bodies including the Nigerian Upstream Petroleum Regulatory Commission (NUPRC), and the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) to handle technical, and commercial regulation. This reform has improved policy coordination, as it removed the conflict of interest that existed when NNPC regulated the same industry in which it operated (NEITI, 2022).

How the public and private sectors can work together

A major development in government-business relations is the growing demand on Public-Private Dialogue (PPD) platforms. These has brought together regulators, government officials, international oil companies (IOCs), indigenous operators, and civil society groups to discuss challenges and co-create solutions. For instance, the NEITI Multi-Stakeholder Group (MSG) includes representatives from government, companies, and civil society to ensure that revenue reporting and policy decisions are transparent.

III. Challenges and Opportunities

Despite the progress made, challenges still persist. Policy inconsistency such as sudden changes in fuel subsidy systems, multiple taxation layers at federal and state levels, and slow decision-making process continues to create uncertainty for investors (Okafor, 2022). Additionally, bureaucratic delays and overlapping mandates with other agencies including the Ministry of Environment, and Federal Inland Revenue Service sometimes complicate project execution.

How this affects investor confidence

A strong government-business relations contribute to improved investor confidence by ensuring predictable policies and a level playing field. Investors are more likely to commit long-term capital when they trust that regulatory frameworks are stable and contracts will be honored. For instance, the PIA's transparency provisions, dispute resolution mechanisms, and stakeholder engagement processes are expected to reduce contract disputes, attract foreign direct investment (FDI), and boost Nigeria's global competitiveness in the global market.

How United States Energy Policy Can Be Improved

The Nigerian oil and gas sector's reform experience provides several practical lessons for United States energy policy, most especially in an attempt to balancing energy security, climate transition, and global competitiveness. While Nigeria faces several governance challenges, its Petroleum Industry Act (PIA) 2021 demonstrates the importance of regulatory clarity, local participation, and transparency in strengthening investor confidence and sustainable development.

Making rules and policies clear and reliable

One of the most important lessons from Nigeria is the value of regulatory certainty. For nearly twenty years, the country struggled with a patchwork of petroleum laws and inconsistent fiscal policies that delayed investment decisions and caused billions of dollars in deferred projects (Adewuyi and Akinyemi, 2021). The passage of the PIA in 2021 ended years of uncertainty, unifying fiscal, environmental, and governance frameworks into a single legal instrument.

The United States, as the world's leading producer of oil and gas, also faces regulatory debates over issues relating to methane emissions, carbon pricing, and permitting of new energy infrastructure (United States Energy Information Administration (EIA), 2023).

Moreso, one important lesson is to establish a clear, time-bound regulatory processes that provide investors with predictable timelines. For example, streamlined permitting for LNG terminals, and carbon capture projects could reduce capital flight and attract global partners, while ensuring that energy transition policies do not undermine domestic competitiveness.

Promoting local businesses and local ownership

Nigeria's Local Content Act (2010) significantly changed the participation of local companies in oil and gas projects, increasing their share from less than 5% to over 30% in 10 years (Nigerian Content Development and Monitoring Board (NCDMB), 2021). This was achieved through a deliberate combination of policies that included training programs, mandatory use of local goods and services, and financial support for indigenous operators.

However, the United States can apply the same principles in its clean energy transition by prioritizing domestic manufacturing of renewable energy components, supporting workforce retraining programs, and promoting minority-owned businesses in the energy value chain. Furthermore, the Inflation Reduction Act of 2022 (IRA) already includes tax incentives for United States-made solar panels, wind turbines, and electric vehicle components (White House, 2022).

Hence, through the adoption of a comprehensive local participation framework, modeled after that of Nigeria, could further strengthen job creation, enhance energy resilience, and ensure that rural and historically disadvantaged communities benefit from the transition.

Openness, Integrity, and Public Responsibility

Nigeria's participation in the Extractive Industries Transparency Initiative (EITI), and its adoption of beneficial ownership disclosures under the PIA have improved governance and reduced unlawful financial flows in the sector (NEITI, 2022). Also, the public disclosure of oil contracts, production data, and revenue allocations has enhanced trust between the government, industry, and civil society.

For the United States, strengthening transparency in energy supply chains is becoming increasingly important, most especially in the procurement of important minerals used for batteries and renewable technologies. Enhanced EITI compliance, mandatory disclosure of beneficial owners of supply chain contractors, and open contracting systems could help reduce corruption risks, and improve public trust in federal clean energy programs if not eliminated (Natural Resource Governance Institute (NRGI), 2023).

Involving Local Communities in the Transition

Another important lesson is Nigeria's inclusion of Host Community Development Trusts under the PIA, which require oil companies to contribute about 3% of their operating expenditure to fund local development projects (NUPRC, 2022). This approach has helped in reducing conflict in oil-producing regions, improves security, and ensures that local populations share in the benefits of extraction.

Consequently, the United States can replicate this model in communities affected by coal plant closures, and or fossil fuel phaseouts by funding local economic diversification, retraining displaced workers, and investing in social infrastructure. This approach would help to strengthen the political, and social sustainability of the energy transition and reduce resistance from vulnerable communities.

Conclusively, Nigeria's experience highlights that effective energy governance requires predictable regulations, inclusive economic participation, and a sound transparency mechanisms. These lessons can help the United States balance energy security with its climate goals, while maintaining global competitiveness and ensuring a fair transition for its citizens.

Global Trade and the Energy Transition

As countries commit to reducing greenhouse gas emissions, and transition toward low-carbon energy systems, global trade continues to experience major shifts . These structural changes has helped in reshaping demand patterns, investment flows, and

international relations. For resource-rich nations such as Nigeria, this transition creates both opportunities and risks, depending on how effectively they adapt their production, infrastructure, and trade policies to meet evolving global standards.

Nigeria's Strategy in the Global Energy Market

Nigeria has positioned natural gas as its “transition fuel,” recognizing its potential to generate export revenue, while contributing to global decarbonization goals. According to (International Energy Agency (IEA), 2022), gas emits roughly 50% less carbon dioxide (CO₂) than coal, and 30% less than oil when used for power generation. However, the Nigerian government's years of Gas Initiative (2021–2030) is terminated to boost domestic gas utilization, expand LNG exports, and eliminate routine flaring by 2030 (Nigerian National Petroleum Company Limited (NNPCL), 2022).

This approach aligns with global climate frameworks such as the Paris Agreement, which encourages gradual decarbonization, while safeguarding energy access in developing countries. Additionally, Nigeria's strategy has also attracted new foreign investment into LNG infrastructure including the Train 7 expansion of Nigeria LNG, which is expected to increase the country's LNG production capacity by more than 35% (NNPC, 2022).

United States LNG Export Strategy and Global Competitiveness

For the United States, Nigeria's experience provides valuable insights into maintaining competitiveness in the global LNG market. The United States has rapidly emerged as the world's largest LNG exporter as of 2023 (United States Energy Information Administration (EIA), 2023), and its ability to maintain this position will depend on investments in infrastructure such as liquefaction capacity, shipping terminals, and ESG-compliant financing mechanisms that appeal to climate-conscious investors.

Furthermore, the United States LNG exporters continue to face growing pressure to address methane emissions, and carbon intensity in their supply chains. Nigeria's introduction of gas flare penalties, and methane monitoring requirements under the Petroleum Industry Act (PIA) demonstrates how regulatory action can drive environmental performance (NUPRC, 2022).

Hence, the United States can strengthen its own policies by adopting a firm, but predictable methane rules, incentivizing carbon capture, utilization, and storage (CCUS) technologies, and ensuring that its LNG exports meet European Union (EU) and Asian buyers' low-carbon standards.

The Role of OPEC+ and Multilateral Coordination

Nigeria's engagement with the Organization of the Petroleum Exporting Countries, and its allies (OPEC+) reveals how resource-dependent countries coordinate production levels in order to balance global supply and demand, stabilize prices, and protect fiscal revenues (OPEC, 2023).

While the United States is not a member of OPEC+, its production decisions, especially regarding shale oil have global price implications. Also, coordinating informally with major producers during crises such as the 2020 COVID-19 demand shock, can help reduce volatility and support stable trade relationships.

Furthermore, in the context of the energy transition, multilateral forums can also serve as platforms to negotiate carbon border adjustment mechanisms (CBAMs), and standards for traded energy products. For instance, Nigeria's experience in balancing production quotas with domestic economic needs is a testament of the importance of flexible, but strategic participation in global energy governance.

Implications for the United States Global Trade Policy

As the United States seeks to strengthen its role as a secure supplier of low-carbon energy, it must integrate trade, climate, and industrial policies. This could include negotiating preferential trade agreements for clean energy technologies, aligning domestic production standards with international carbon disclosure rules, and expanding export credit support for low-emission energy infrastructures.

Additionally, the United States can draw from Nigeria's efforts to link energy trade with local development by tying export revenues to innovation, job creation, and regional growth. Such an approach can enhance the political sustainability of energy exports, while meeting domestic expectations for a “fair transition.”

Nigeria's gas-focused strategy, its regulatory measures to curtail emissions, and its participation in OPEC+ provide important lessons for the United States as it manages the double goals of energy security, and climate leadership. Furthermore, coordinated policy, infrastructure investment, and transparent trade practices will be essential to ensuring that the United States remains a trusted and competitive energy supplier in the decarbonizing global economy.

IV. Conclusion

In conclusion, Nigeria's recent regulatory reforms, most especially the passage of the Petroleum Industry Act (PIA) 2021 have become a landmark in its economic and governance history. For several years, the country has continue to struggle with outdated petroleum regulations, poor enforcement, and revenue leakages that discouraged investment. Also, the PIA represents a bold attempt to solve these challenges by providing clear measures, improved fiscal frameworks, and better community engagement mechanisms.

Going further, one of the most important outcomes of the PIA is its focus on regulatory clarity. Hence, by streamlining multiple, overlapping agencies into the Nigerian Upstream Petroleum Regulatory Commission (NUPRC), and the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), the government has reduced bureaucracy delays, and has made it easier for investors to manage the system. This clarity has already begun restoring investor confidence, with new projects in gas monetization, and refining receiving renewed interest.

Conversely, the Act also promotes inclusive growth through mechanisms like the Host Community Development Trusts, which ensure that oil-producing communities receive a share of industry benefits. This approach does not only reduce conflict in the Niger Delta, but also encourages a sense of shared responsibility for protecting infrastructure. Similarly, the continued implementation of Nigeria's Local Content Act has grown local participation in the sector, and created new opportunities for skilled employment and entrepreneurship.

For the United States, these reforms carry valuable lessons. As the world's top producer of oil and natural gas, as well as a leader in the global energy transition; the United States must find a way to maintain policy stability, while advancing its climate goals. Hence, Nigeria's experience shows that delayed reforms can hold back the entire sector for years, while timely and coordinated policy action can unlock investment and innovation opportunities.

In addition, the United States can equally learn from Nigeria's efforts to boost domestic participation in supply chains, and direct resource revenues toward community development. Hence, similar strategies could strengthen United States clean energy manufacturing, create new jobs, and ensure a "fair transition" for workers and communities affected by fossil fuel phaseouts.

Nigeria's commitment to transparency and environmental responsibility through measures like gas flare penalties and open reporting reveals the importance of aligning economic growth with sustainability. Therefore, as the United States expands LNG exports and clean energy projects, embedding transparency, emissions tracking, and public accountability into policy design will help to build public trust and global credibility.

Conclusively, Nigeria's experience demonstrates that effective energy sector reform is not just about attracting investors, it is about balancing economic growth, environmental protection, and social inclusion. Hence, for the United States, adopting these lessons can strengthen its energy policy, make its transition fairer and more competitive, and position it as a global leader in shaping a sustainable future for energy production and trade.

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