

NEW FRONTIERS FOR DOWNSTREAM PETROLEUM SECTOR COMPETITION AND MARKET ACCESS IN AFRICA

Prof Billy Okoye,
University of Abuja Business School
billy.okoye@uniabuja.edu.ng

DOI: <https://doi.org/10.70118/ajbam-01-2026-016>

Abstract

The downstream petroleum sector in Africa is undergoing a profound structural transformation, driven by market liberalisation, technological innovation, and regional integration. Long-standing market structures characterised by state monopolies and multinational dominance are giving way to diversified competition involving indigenous firms, private equity, and digitised supply chains. This paper uses Nigeria as a focal case, supplemented by comparative insights from Ghana, Kenya, and South Africa, to examine how reforms in regulation, infrastructure investment and business strategy are redefining competition and market access. It identifies persistent barriers, including regulatory uncertainty, foreign-exchange constraints, and infrastructure deficits. The paper proposes a framework of policy and strategic actions to deepen competitiveness, facilitate market access, and align downstream markets with broader sustainability and trade ambitions. The findings have implications for industry stakeholders, regulators, students, policymakers and consumers in shaping the future of Africa's downstream energy markets.

Keywords: Downstream Petroleum, Competition, Market access, Africa, Liberalisation, Energy infrastructure, AfCFTA.

1. INTRODUCTION

The Petroleum industry is divided into three main sectors: Upstream, Midstream and Downstream. The Downstream sector, comprising refining, storage, distribution and retail of refined petroleum products, stands at a critical juncture in Africa. Historically, many African downstream systems were characterised by monopolistic state ownership by national oil companies (NOCs), heavy subsidy regimes, and significant import dependence (African Union – AFREC, 2022). In recent years, however, sweeping changes are underway. Deregulation agendas, including the removal of fuel subsidies and liberalisation, the entry of private capital, the proliferation of modular refineries, and advances in digital supply chains, have begun to reconfigure market structures and access across the continent. In Nigeria, the continent's largest market, the launch of the Dangote Group Refinery (650,000 b/d capacity) in late 2024 and the Bua Energy expansion signalled a milestone in the move towards import replacement and enhanced domestic capacity

(Nigeria Downstream Industry Report, 2025). Similar shifts are underway in Kenya, Ghana, and South Africa, prompting both opportunities and uncertainties about how competition and access will evolve as a strategic rebalancing from reliance on imports to self-sufficiency. This changing landscape has transformed the downstream industry from a "regulated utility" to a competitive, customer-driven marketplace, where supply reliability, brand trust, and operational excellence define winners. This paper seeks to probe these shifts through a dual lens of competition (how market participants vie for advantage) and market access (the ability to enter, operate and scale), to articulate the "new frontier" of downstream energy in Africa.

Study Objectives

The main objective of this paper is to examine how reforms in regulation, infrastructure investment and business strategy are redefining competition and market access.

The specific objectives are:

1. To analyse the emerging competitive dynamics within Africa's downstream petroleum markets as subsidy removal, deregulation, and new refining capacities reshape traditional market structures.
2. To examine the evolving nature of market access, including entry barriers, infrastructure constraints, regulatory reforms, and the role of private capital in enabling or limiting participation.
3. To assess the impact of new refining capacities, such as the Dangote Refinery and the proliferation of modular refineries, on import substitution, price formation, supply reliability, and industry competitiveness.
4. To identify policy and regulatory interventions capable of balancing competition, efficiency, consumer welfare, and long-term investment in the downstream energy sector.

Research Gap: What Is Not Yet Known and Why It Matters

Although the Downstream petroleum sector in Africa has attracted growing scholarly and policy attention, several critical gaps remain:

a. Limited empirical understanding of post-deregulation competitive behaviour

Much of the existing literature focuses on subsidy regimes, inefficiencies, or import dependence. What remains inadequately explored is how competition actually unfolds after deregulation, and how firms adjust their pricing strategies, supply chains, branding, and customer acquisition in newly liberalised environments.

b. Insufficient analysis of market access conditions under emerging domestic refining capacity

While the Dangote Refinery and other domestic projects have been widely discussed in policy circles, academic studies have not yet articulated how these new capacities alter entry conditions, logistical dynamics, and competitive power relations between NOCs, independents, and new entrants.

c. Underdeveloped scholarship on digitalisation and supply chain innovations in Africa's downstream

Despite the rapid adoption of digital fleet management, app-based fuel ordering, automated depots, and electronic tracking systems, few studies examine how these innovations enable or constrain competitive advantage and access.

d. Lack of integrated frameworks comparing regional experiences (Nigeria, Kenya, Ghana, South Africa)

Existing research rarely provides a comparative, cross-country perspective on how different regulatory approaches produce varied market outcomes.

Why it matters

These gaps hinder policymakers, investors, and operators from understanding how the ongoing shift from import dependence to domestic production will reshape competitive conduct, market performance, and consumer outcomes. Without such insight, regulatory reforms risk being misaligned, investments may misinterpret risk profiles, and operators may struggle to position competitively in an evolving landscape.

Significance of the Study

a. For Policymakers

The study provides evidence-based insights on:

- Designing regulatory frameworks that encourage fair competition while attracting long-term investment
- Managing the transition from subsidy regimes to full deregulation
- Facilitating market access for independents and SMEs

- Planning infrastructure and logistics development aligned with new refining capacities

This supports more effective policymaking in a sector central to economic growth and national energy security.

b. For Investors and Industry Operators

The analysis helps investors understand:

- Emerging competitive pressures and opportunities
- Shifting risk environments in pricing, supply, and regulatory regimes
- The impact of modular and mega-refineries on margins and market entry
- Where value is migrating within the downstream chain - retail, logistics, storage, or trading

It therefore improves capital allocation decisions and strategic positioning.

c. For Scholars and Researchers

The paper contributes to an underdeveloped academic field by:

- Providing comparative regional insights
- Integrating digitalisation, new refinery projects, and regulatory changes into downstream market analysis
- Offering a theoretically grounded framework for future empirical studies

It lays a foundation for expanded scholarly inquiry into African petroleum markets.

2. THEORETICAL CONTEXT: COMPETITION & MARKET ACCESS IN DOWNSTREAM ENERGY

From an economic perspective, effective competition in energy markets hinges on open access to supply infrastructure, transparent pricing mechanisms, and the presence of multiple efficient actors (Joskow, 2008). Market access, meanwhile, involves not just geography but institutional, regulatory and financial entry conditions (Kibuebu, 2024). In the African downstream context, legacy barriers such as state control of terminals, import quotas, and subsidies have inhibited competition and access. External elements

such as industry practices, market competition, media narratives, customer expectations, and global economic conditions can pressure businesses to compromise their ethics to remain competitive or meet targets (Okoye, 2025). As reforms proceed, competitiveness is increasingly defined by capability differentiation (logistics, distribution, brand), technological adoption, and responsiveness to global transition pressures. This paper thus treats competition and access as complementary parts of a structural transformation: competition reshapes market structure, while access defines the enabling environment for new entrants and business models.

Conceptual/Analytical Framework

This study is grounded in a multi-theoretical analytical lens:

a. Industrial Organisation (IO) Theory

IO theory provides a foundation for examining how changes in market structure, such as the transition from monopoly or oligopoly to more open markets, affect conduct (pricing, strategies, supply chain decisions) and performance (efficiency, reliability, consumer welfare).

b. Market Liberalisation Theory

This framework helps analyse how deregulation, subsidy removal, and privatisation influence competition, investment behaviour, incentives, and the entry of new market participants. It also explains the shift from state-controlled systems to market-responsive mechanisms.

c. Porter's Five Competitive Forces

Porter's framework is used to interpret evolving competitive pressures in the downstream sector:

- Threat of new entrants driven by modular refineries and deregulation
- Bargaining power of suppliers shifting as domestic refining reduces reliance on imports
- Bargaining power of buyers increasing due to brand competition and improved access

- Threat of substitutes (LPG, CNG, EVs) gradually influencing fuel retail
- Industry rivalry intensifying with digitalisation, branding, and customer-centric models

Using this blended framework allows the paper to connect theoretical insights with the unique realities of African downstream markets.

3. Evolving Competitive Structure in Africa's Downstream

The structure of competition in Africa's downstream has shifted significantly over the last decade. The historical dominance of IOCs and state-owned entities such as NNPC Retail, Engen, and TotalEnergies is being eroded by agile, indigenous players.

IOC Divestments and Indigenous Emergence

Major international oil companies (IOCs) have increasingly repositioned their downstream portfolios in Africa, often divesting downstream assets due to margin pressure, security issues and regulatory complexity. This trend has opened opportunities for indigenous and regional marketers to gain share. In Nigeria, firms such as Prudent, Rainoil, A.Y. Shaffa, A.A. Rano, Mainland, and Pinnacle Oil & Gas Ltd are expanding their footprints, leveraging local insight and supply agility (Africa Oil & Gas Report, 2025).

Retail Consolidation and Brand Competition

Retail networks are increasingly standardised and consolidated, with franchise models and brand partnerships becoming common. For example, the partnerships between multinationals and local franchisees in Kenya and Ghana illustrate how logistics, brand and customer service are now part of competitive strategy rather than mere commodity throughput.

Regional Expansion & Supply Corridor Competition

The implementation of the African Continental Free Trade Area (AfCFTA) creates new dynamics for cross-border supply, with regional trade corridors (West Africa, East Africa) enabling marketers to supply landlocked markets via coastal depots. This

regionalisation introduces competition not only at the national level but across borders. Accordingly, upstream access to terminals, pipelines and ports becomes a key element of competitive advantage.

Diversified Product Portfolios: The growing inclusion of Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG), lubricants, and cleaner fuels has expanded competition beyond gasoline, kerosene and diesel. Most fuel stations have now expanded their non-fuel revenue businesses, which attract as much patronage as the fuel revenue business.

Consumer-Centric Branding: Retailers are emphasising brand differentiation, forecourt experience, and loyalty programs to build stickier customer bases. Hence, the beautiful, well-lit stations that are nowadays the order of the day, with each station trying to outshine the other.

In essence, competition has shifted from price wars to performance differentiation, anchored on supply chain efficiency, innovation, and brand trust.

4. Market Access & Regional Integration

Market access in Africa's downstream petroleum sector is increasingly determined by infrastructure capacity, cross-border policy alignment, and logistics integration.

Infrastructure Investment as a Gateway to Access

Logistics infrastructure, such as pipelines, depots, jetties, and inland distribution, fundamentally enables access to markets in the downstream value chain. Major investments, such as Nigeria's Pinnacle Lekki terminal and Kenya Pipeline Company expansions, are reducing cost to serve and enhancing reach. These are unlocking regional markets and reducing import bottlenecks. Nigeria's 2025 Downstream Report notes that the full operation of the Dangote Refinery is expected to significantly reduce reliance on imports, improving access stability (Nigeria Downstream Industry Report, 2025). The West African coast is gradually emerging as a supply hub for landlocked markets such as Niger, Mali, and Burkina Faso.

Trade Facilitation and AfCFTA Impacts

The AfCFTA framework is a game-changer for downstream trade. The AfCFTA provides a framework for harmonising tariffs, quality standards, and border procedures, which are critical for downstream product flows. It facilitates the free movement of petroleum products, the standardisation of quality specifications, and the harmonisation of tariffs. However, many non-tariff barriers remain (UNECA, 2023). Harmonised fuel specifications, streamlined customs procedures, safety standards across borders, and coordinated regulatory frameworks remain uneven.

Financial and Institutional Access

Beyond physical infrastructure, market access depends on financial inclusion (credit, FX), regulatory clarity (licensing, anti-trust) and institutional frameworks (contract enforceability, transparency). A Nigerian study found that outdated legal regimes impeded competition and supply security (Kibuebu, 2024). Therefore, creating a level playing field means reducing entry barriers, simplifying licensing, and stabilising currency risk. However, the Nigeria Petroleum Industry Act of 2021 is one of the boldest attempts to overhaul Nigeria's petroleum sector (Okoye, 2023).

Private Sector Integration: Private capital is increasingly driving downstream logistics. Firms are investing in coastal storage, trucking fleets, and inland distribution depots, giving them control over end-to-end delivery. Such vertical integration is critical to ensuring both market access and margin protection in a liberalised environment

5. Emerging Business Models and Innovation

The new downstream order is being shaped by innovation in structure, technology, and partnerships.

Digital Logistics & Retail Technology

Modern downstream players are embedding technology in operations, from mobile payment at forecourts and remote inventory tracking to AI-based logistics routing. These capabilities improve margin control and supply reliability, becoming differentiators in competitive markets. Automation, electronic payment systems, and real-time inventory

management have revolutionised downstream operations. We now have Apps like the Aptfuel Digital App, which connect suppliers, transporters, and retailers, enabling transparency and efficiency.

Backwards Integration & Supply Ownership

Several players are integrating upstream or midstream functions, including owning terminals, blending plants, and refining capacity, to enhance supply security, reduce margin leakage, and build competitive advantage. This approach is exemplified by Dangote Refinery's marketing arms and distribution network, which aim to minimise supply vulnerability and stabilise product prices. This trend reflects a shift from being purely a marketer to becoming an energy value-chain integrator.

Green Diversification & Sustainability

As the global energy transition accelerates, downstream businesses are diversifying into LPG, CNG, solarised forecourts, and adopting alternative fuels as part of low-carbon transitions. These strategies reflect a recognition that downstream models must evolve beyond fossil fuel throughput to remain competitive in the medium term. Kenya's pilot of EV-charging forecourts and Nigeria's push for autogas adoption highlight a strategic shift toward sustainability.

Retail Consolidation and Franchising:

Retailers are expanding through franchise models, bringing standardisation and efficiency to independent operators. For example, TotalEnergies' Bonjour outlets and NNPC Retail's franchise network illustrate how scale and consistency can coexist with local ownership

6. Conceptual Model: The Competition–Market Access Reconfiguration Framework (CMARF)

Africa's downstream petroleum sector is undergoing a profound structural transition shaped by deregulation, the rise of domestic refining, and digitalisation. To interpret these shifts, this paper proposes the Competition–Market Access Reconfiguration Framework (CMARF), a conceptual model designed to explain how structural changes, access

conditions, competitive behaviour, and market outcomes interact in a liberalising downstream environment. Drawing on the industrial organisation (IO) structure, Structure–Conduct–Performance (SCP) paradigm (Joskow, 2008), market liberalisation theory, and Porter's competitive forces, the model provides an integrated lens for analysing how competition and market access co-evolve under Africa's emerging downstream realities.

Rationale for the Model

Existing scholarship has extensively documented the prevalence of state control, subsidies, and import dependence across African downstream systems (African Union – AFREC, 2022). However, far less attention has been given to the post-deregulation competitive environment, specifically, how supply rebalancing from imports to domestic refining, combined with shifting access conditions, reconfigures competitive advantage and market performance. The launch of the Dangote Refinery and BUA expansion in Nigeria (Nigeria Downstream Industry Report, 2025), along with the uptake of modular refineries and the adoption of digital supply chains in Kenya, Ghana, and South Africa, has introduced new competitive logics that existing models do not adequately explain.

CMARF addresses this gap by reframing downstream transformation as a reconfiguration of access pathways rather than merely a shift in pricing regimes or ownership structures.

Core Proposition of CMARF

The central proposition of the framework is as follows:

Market performance in Africa's downstream sector is increasingly driven by the openness, clarity, and functionality of market access mechanisms - physical, regulatory, contractual, and digital - rather than by market structure alone.

This perspective extends classic IO theory by elevating the mediating role of access conditions in the relationship between structural change and competitive behaviour.

Components of the Model

CMARF comprises three analytic layers and a dynamic feedback loop.

Layer 1: Structural Conditions

Following the Structure–Conduct–Performance (SCP) paradigm, structural conditions encompass:

1. **Supply and Asset Structure**
 - Domestic refining capacity versus import reliance
 - Mega-refinery scale and influence
 - Proliferation of modular refineries (African Union – AFREC, 2022; Nigeria Downstream Industry Report, 2025)
2. **Regulatory Regime**
 - Degree of price liberalisation
 - Import licensing systems
 - Subsidy removal and transition policies (Kibuebu, 2024)
3. **Ownership and Market Concentration**
 - NOC dominance
 - Share of independents and international players
 - Entry barriers linked to capital intensity and infrastructure

This layer corresponds to Porter's "industry structure" and the "structure" component of SCP.

Layer 2: Market Access Mechanisms (CMARF's Novel Contribution)

The distinctive innovation of this model is its detailed articulation of market access mechanisms. CMARF identifies four categories through which actors connect to supply and customers:

1. **Physical Access**
 - Geographical distribution of depots, terminals, pipelines, and retail stations
 - Logistics corridors and coastal–inland connectivity
2. **Regulatory Access**
 - Transparency and stability of licensing

- Clarity of rules governing importation, loading rights, and third-party access
 - Government policy predictability (Kibuebu, 2024)
3. **Contractual Access**
- Offtake arrangements
 - Throughput agreements for storage and refining
 - Exclusivity clauses and preferential supply relationships
4. **Digital Access**
- Real-time pricing, truck tracking, and inventory data
 - Digital ordering platforms and automated depot systems
 - Integration of station-level digital tools for stock management and customer loyalty

CMARF posits that these four access pathways mediate how structural shifts (e.g., new refining capacity) translate into actual competitive behaviour.

Even in fully deregulated environments, opaque or restricted access can reproduce de facto monopolies and limit competition, an issue under-examined in existing literature.

Layer 3: Competitive Conduct and Market Outcomes

Once structure and access are established, competitive conduct follows:

1. **Competitive Conduct**
 - Pricing strategies in deregulated settings
 - Branding and customer loyalty programmes
 - Retail network expansion and non-fuel diversification
 - Digital optimisation of logistics, routing, and stock replenishment (African Union – AFREC, 2022)
2. **Market Outcomes**
 - Price stability or volatility
 - Supply reliability and reduction in stock-outs

- Consumer welfare and distributional fairness
- Participation of indigenous firms and SMEs
- Innovation and energy transition readiness

According to the model, open-access environments promote greater innovation and inclusiveness, while closed-access environments foster concentration, rent-seeking, and supply distortions.

Dynamic Feedback Loop

A defining feature of CMARF is a built-in feedback mechanism:

- **Observed outcomes** (e.g., volatility, exclusion, inefficiencies, or perceived profiteering) trigger regulatory interventions—new pricing rules, licensing reforms, or state re-entry into imports.
- These responses reshape structural conditions and access mechanisms, leading to a new competitive equilibrium.

Significant structural shocks, such as the 650,000 b/d Dangote Refinery coming online, accelerate the cycle, shifting the epicentre of market power from importation to access to domestic refinery output and inland logistics (Nigeria Downstream Industry Report, 2025).

Scholarly Contribution of the Model

CMARF contributes to the academic literature in four ways:

Extends industrial organisation theory

By introducing market access as an independent mediating layer, CMARF enhances the predictive power of the SCP framework (Joskow, 2008) in liberalising energy markets.

Connects deregulation to practical competitive realities

Instead of viewing deregulation as a discrete policy event, the model frames downstream transformation as an ongoing reconfiguration of access pathways, consistent with observed African market dynamics.

Bridges competition studies with digitalisation literature

By elevating digital access to a central analytical element, the model incorporates modern supply-chain digitalisation trends absent from earlier downstream analyses.

Provides a testable analytical toolkit

Scholars can use CMARF to examine empirically:

- How new refining capacity alters market concentration,
- How the openness of access affects retail competition,
- How digital tools mediate supply reliability,
- How licensing regimes shape entry and scale of indigenous firms.

The model therefore offers a replicable, generalisable, and Africa-specific theoretical contribution.

7. Structural Barriers and Policy Asymmetries

While liberalisation has unleashed opportunities, several constraints persist. Despite the momentum of change, significant constraints remain:

- a) **Unhealthy Competition:** The Nigerian public is constantly inundated with media coverage of the brawl between the new Dangote refinery and the petroleum product marketers. This is absolutely unnecessary and unhealthy for the downstream sector.
- b) **Regulatory instability:** Frequent policy reversals, duplicative mandates, and delayed guidelines create uncertainty, discouraging long-term investment. Overlapping roles among regulators (e.g., NMDPRA, SON, NESREA) often lead to delays and compliance conflicts.
- c) **Infrastructure deficits:** Many countries still lack adequate pipelines, depots and reliable power for operations. Poor pipeline connectivity limits distribution efficiency.

- d) **Currency and financing constraints:** Import-dependent supply chains face liquidity and exchange-rate challenges due to forex volatility and limited access to credit.
- e) **Market concentration and dominance risks:** Some large players hold disproportionate control over terminals, raising anti-trust concerns (Africa Oil & Gas Report, 2025).
- f) **Uneven regional harmonisation:** Differences in fuel specification, regulatory regimes and tariff regimes across neighbouring states impede cross-border access.

Addressing these barriers is essential to unlocking the full potential of the downstream sector as a growth engine. A sustainable competitive frontier demands policy coherence, transparent regulation, and incentive-driven infrastructure funding.

8. Policy & Strategic Recommendations

To deepen competition, expand market access and position Africa's downstream energy markets for sustainable competitiveness and inclusive growth, the following are proposed:

1. **Healthy Competition:** For the sake of the consuming public and the sector's survival, all stakeholders must make every effort to end this fight and allow Nigerians to enjoy the benefits of deregulation we all fought for.
2. **Institutional Reforms:** Regulators must harmonise mandates and enforce consistent, transparent, and quality frameworks
3. **Regulatory Harmonisation:** Align downstream, trade, and competition policies across regions; create unified licensing, quality, and tariff frameworks.
4. **Infrastructure Financing and PPPs:** Encourage public-private partnerships for terminals, pipelines and inland logistics, backed by regional development banks.
5. **Access to Finance and FX:** Establish special credit windows and FX hedging instruments for downstream operators, especially indigenous marketers. We are excited about the new Energy Bank that's coming to assist Afexim.

6. **Technology & Sustainability Incentives:** Offer tax and grant incentives for digitalisation, alternative fuels and logistics innovation in the downstream chain.
7. **AfCFTA Implementation:** Standardise fuel quality, safety standards, and tariffs across African markets
8. **Capacity Development:** Expand training in energy trading, logistics, and sustainability through regional academies and institutions to prepare skilled personnel and promote best practices. Thankfully, the International Energies Academy is launching very soon with certified courses and programmes for the oil and gas industry.

These actions will help transform downstream markets from supply-driven, oligopolistic systems into efficient, inclusive, competitive platforms.

9. Conclusion

Africa's downstream energy industry is undergoing a structural transformation that extends beyond new refining capacity or deregulation; it reflects a deeper reconfiguration of competitive dynamics, market access pathways, and technological capabilities. The findings of this study reinforce and extend established theoretical perspectives. From an industrial organisation (IO) standpoint, the emerging market landscape illustrates how shifts in structure, such as domestic refining growth, reduced import dependence, and evolving ownership configurations, reshape firm conduct and market outcomes in ways consistent with the SCP paradigm. From a market liberalisation perspective, the continent's ongoing transition confirms the potential of deregulated, transparent environments to stimulate efficiency, attract investment, and diversify participation. Finally, drawing on innovation systems theory, the integration of digital logistics, data transparency, and customer-centric platforms demonstrates how innovation, not merely infrastructure, is becoming the decisive source of competitive advantage.

The "new frontier" is therefore defined not by which actors control the largest physical assets but by which actors can orchestrate the most reliable, efficient, and integrated value chains across borders. Firms that leverage technological tools, adopt flexible business models, and align with evolving trade and sustainability frameworks are best positioned to lead in the next decade. Competitive advantage is shifting decisively in favour of those who can combine agility, digital capability, and proactive policy engagement.

For regulators and policymakers, the implications are clear. Building competitive downstream markets will require:

1. Institutionalising transparent and non-discriminatory access rules for refineries, depots, pipelines, and coastal terminals;
2. Strengthening regulatory predictability to encourage long-term investment and reduce policy-induced risks;
3. Supporting digital infrastructure expansion, including data standards, automated loading systems, and cross-border information platforms;
4. Coordinating regional frameworks to harmonise product specifications, licensing processes, and transit regimes; and
5. Encouraging innovation and SME participation, particularly in logistics, retail, and digital services.

These steps are not merely administrative adjustments but strategic choices that shape the continent's competitive trajectory. Ultimately, the real contest ahead lies not only between firms but also between regulatory visions: those that maintain legacy models of control and subsidy and those that promote openness, efficiency, and innovation.

Despite its contributions, this study has limitations. It is primarily conceptual and relies on secondary data, leaving room for detailed empirical testing across different country contexts. Future research should empirically evaluate the propositions embedded in the Competition–Market Access Reconfiguration Framework (CMARF), particularly the role of digital access in

reducing price disparities, the effects of refinery access rules on market concentration, and the comparative performance of liberalised versus semi-regulated environments. Cross-country case studies, firm-level surveys, and econometric analyses can further validate, refine, or challenge the proposed framework.

In conclusion, the future of Africa's downstream energy sector will be defined not by who controls the pumps, but by who builds the platforms - physical, regulatory, contractual, and digital - that power an integrated, competitive, and innovation-driven marketplace.

References

- African Union – AFREC. (2022). *Africa Oil & Gas Domestic Market: Just Energy Transition*. Addis Ababa: AU-AFREC.
- Joskow, P. L. (2008). Lessons learned from electricity market liberalisation. *The Energy Journal*, 29(S11), 9–42.
- Kibuebu, J. F. (2024). Competition/market regulation: Security of supply issues in Nigeria's oil & gas sector. *African Journal of International Energy & Environmental Law*, 9, 119–141.
- Nigeria Downstream Industry Report. (2025, 5th May). *Downstream Industry Report – Nigeria 2024/2025*. MONAM (Nigeria).
- Okoye, O. B. (2023). *Insight into crude oil marketing*. UniAbuja Press Ltd. ISBN 978-978-784-096-2, p. 157.
- Okoye, O.B. (2025). *Fundamentals of the Oil, Gas & Energy Industry*. Amazon KDP. ISBN 9798293308392. <https://a.co/d/3iuy3tj>, p. 363-364.
- UNECA. (2023). *AfCFTA and the Transformation of African Energy Markets*. Addis Ababa: United Nations Economic Commission for Africa.
- Africa Oil & Gas Report. (2025, 13th August). "Major marketers caution against 'unchecked dominance' as Dangote moves towards free delivery of petroleum products." *Africa Oil & Gas Report / Downstream Section*.