

**THE PARADOX OF PETROL EXPORT AND IMPORT IN NIGERIA: A STUDY OF THE
DANGOTE REFINERY'S EXPORT DYNAMICS AND LOCAL MARKETERS' IMPORTATION
BEHAVIOR**

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ABSTRACT

Nigeria's petroleum sector presents a longstanding contradiction in which the country exports crude oil while importing large quantities of refined petroleum products to meet domestic demand. This study examined the paradox of petrol export and import in Nigeria with specific focus on the export dynamics of the Dangote Refinery and the continued importation behavior of local petroleum marketers. The study adopted a qualitative descriptive design based on the review and analysis of relevant literature, policy reports, and industry publications on Nigeria's downstream petroleum sector. Findings revealed that the Dangote Refinery possesses significant refining capacity and operates with an export-oriented strategy that targets both domestic and international markets. However, the study also found that local petroleum marketers continue to import petrol due to factors such as price differentials, existing supply contracts, foreign exchange access, and distribution logistics. These factors contribute to a situation in which refined petroleum products are exported from Nigeria while similar products are simultaneously imported into the country. The study concludes that the paradox is largely driven by structural and regulatory conditions within the downstream petroleum market rather than a simple lack of domestic refining capacity. The study recommends improved regulatory coordination, competitive pricing policies, and strengthened domestic distribution systems to ensure that Nigeria maximizes the benefits of its growing refining capacity.

Keywords: petroleum export, petrol importation, downstream petroleum sector, Dangote Refinery, Nigeria energy market.

INTRODUCTION

Nigeria is one of the most resource-rich petroleum producing countries in the world, yet it continues to experience a persistent contradiction in its downstream petroleum sector. Despite producing large volumes of crude oil, the country has historically relied heavily on the importation of refined petroleum products to meet domestic consumption needs. This paradox has remained one of the most debated issues in Nigeria's political economy, particularly because crude oil accounts for a significant portion of the nation's export earnings while refined fuel imports constitute a major component of its import expenditure (Akinwale, 2019; Iledare & Suberu, 2020). The situation

reflects structural inefficiencies within the Nigerian petroleum value chain, including limited refining capacity, inadequate infrastructure, and persistent regulatory challenges.

For decades, Nigeria's four state-owned refineries located in Port Harcourt, Warri, and Kaduna have operated far below their installed capacities due to poor maintenance, operational inefficiencies, and governance issues. As a result, petroleum marketers and the Nigerian National Petroleum Company Limited (NNPCL) have depended largely on imports to bridge the supply gap in the domestic market (Ezeani, 2021). This dependence has created a cycle where Nigeria exports crude oil while importing refined petroleum products such as petrol, diesel, and kerosene, often at significant financial cost. Scholars have described this situation as a structural paradox within Nigeria's energy economy because a major crude oil exporter should logically possess strong domestic refining capacity (Ogbuigwe, 2022).

In response to the longstanding challenges in Nigeria's refining sector, the commissioning of the Dangote Refinery marked a significant turning point in the country's downstream petroleum industry. With a refining capacity of about 650,000 barrels per day, the refinery is expected to transform Nigeria into a major hub for refined petroleum products in Africa and potentially eliminate the need for large-scale fuel importation (Adebayo, 2024). The project represents one of the largest single-train refineries in the world and is strategically positioned to supply both domestic and international markets.

However, the emergence of the Dangote Refinery has introduced new dynamics in Nigeria's petroleum supply chain. While the refinery has begun exporting refined petroleum products to other countries, reports indicate that some local petroleum marketers continue to import petrol into Nigeria. This situation has generated debate among policymakers, industry stakeholders, and scholars about the economic rationale behind simultaneous export and import activities within the same petroleum market (Nwokolo, 2024). Questions have been raised regarding pricing structures, distribution agreements, regulatory policies, and the operational strategies of marketers operating in the downstream sector.

The continued importation of petrol by local marketers despite the availability of refined products from the Dangote Refinery reflects deeper structural and market issues within Nigeria's petroleum sector. Factors such as supply agreements, foreign exchange considerations, pricing regulations, logistics, and competition in the downstream market may influence the decision of marketers to import rather than source products locally (Olawale & Adekunle, 2023). These dynamics highlight the complexity of Nigeria's petroleum market and suggest that refining capacity alone may not immediately resolve the country's fuel import dependency.

Understanding this paradox is critical for evaluating the effectiveness of recent reforms in Nigeria's oil and gas sector, particularly those aimed at achieving energy security and strengthening domestic refining capacity. The simultaneous export of refined products from the Dangote Refinery and the continued importation of petrol by local marketers presents an important policy and economic puzzle that requires scholarly examination. Therefore, this study examines the paradox of petrol export and import in Nigeria by analyzing the export dynamics of the Dangote Refinery and the importation behavior of local petroleum marketers, with the aim of providing insights into the structural realities shaping Nigeria's downstream petroleum market.

Statement of the Problem

Nigeria's petroleum sector has long been characterized by a structural contradiction in which the country exports large quantities of crude oil while simultaneously importing refined petroleum products such as petrol to meet domestic demand. Despite being one of Africa's leading oil producers, Nigeria has struggled with limited refining capacity due to persistent operational inefficiencies, aging infrastructure, and poor maintenance of state-owned refineries. As a result,

petroleum marketers have relied heavily on fuel imports to sustain supply within the domestic market. This dependence on imported refined products has created significant economic pressures, including increased foreign exchange expenditure, vulnerability to global price fluctuations, and recurrent fuel scarcity (Akinwale, 2019; Iledare & Suberu, 2020). The situation represents a major paradox in the Nigerian petroleum economy, where a country rich in crude oil resources continues to depend on foreign refineries to meet its internal fuel needs.

The establishment of the Dangote Refinery was expected to address this long-standing challenge by providing sufficient domestic refining capacity and reducing reliance on imported fuel. However, recent developments reveal another layer of contradiction within the downstream petroleum sector. While the refinery has commenced exporting refined petroleum products to international markets, several local petroleum marketers still engage in the importation of petrol into Nigeria. This simultaneous export and import of refined products raises important questions about the pricing structure, distribution systems, regulatory policies, and supply agreements that shape the behavior of market participants. Without a clear understanding of the factors driving this paradox, efforts aimed at improving energy security and achieving efficiency in Nigeria's petroleum supply chain may remain limited. This situation therefore necessitates a critical examination of the export dynamics of the Dangote Refinery and the continued importation behavior of local petroleum marketers.

Aim and Objectives of the Study

The aim of this study is to examine the paradox of petrol export and import in Nigeria by analyzing the export dynamics of the Dangote Refinery and the continued importation behavior of local petroleum marketers within the Nigerian downstream petroleum sector.

The specific objectives of the study are to:

1. examine the export dynamics and operational strategy of the Dangote Refinery in the international petroleum products market.
2. investigate the factors influencing the continued importation of petrol by local petroleum marketers in Nigeria despite the presence of domestic refining capacity.
3. analyze the structural, regulatory, and market conditions that contribute to the simultaneous export and import of refined petroleum products in Nigeria.

Research Questions

The following research questions guide the study:

1. What are the export dynamics and operational strategies of the Dangote Refinery in the international market for refined petroleum products?
2. What factors influence the continued importation of petrol by local petroleum marketers in Nigeria despite the availability of domestically refined products?
3. What structural, regulatory, and market conditions explain the simultaneous export of refined petroleum products and the continued importation of petrol in Nigeria?

Literature Review

Concept of Petrol Export

Petrol export refers to the process through which refined petroleum products produced within a country are supplied to international markets for commercial purposes. In petroleum economics, export activities are typically associated with countries or firms that possess sufficient refining capacity to produce volumes beyond domestic consumption. Exporting refined products allows refineries to generate foreign exchange earnings, strengthen their market presence, and maximize the utilization of installed refining capacity (Iledare & Suberu, 2020). In many oil-producing economies, refined product export forms an important component of energy trade, particularly when

domestic production exceeds local demand or when international markets offer more competitive prices.

In Nigeria, petrol export has recently become a major subject of policy and economic discussion following the commencement of operations at the Dangote Refinery. The refinery's high refining capacity has positioned Nigeria as a potential exporter of refined petroleum products within the West African sub-region and beyond. Exporting refined petroleum products can improve Nigeria's balance of trade and reduce dependence on foreign refineries for fuel supply. However, the export of petrol must be balanced with domestic supply considerations to ensure energy security and market stability (Adebayo, 2024).

Concept of Petrol Importation

Petrol importation refers to the procurement of refined petroleum products from foreign refineries or international traders for distribution and consumption within a domestic market. Importation becomes necessary when a country's domestic refining capacity is insufficient to meet internal demand or when local production systems experience operational inefficiencies. In such cases, petroleum marketers import fuel through contractual agreements with foreign suppliers to ensure adequate supply within the domestic market (Ezeani, 2021).

Nigeria has historically depended on petrol importation due to the persistent underperformance of state-owned refineries and the rapid growth in domestic fuel consumption. Petroleum marketers, including both private and government-linked entities, have played a significant role in importing petrol into the country to bridge the supply gap. Even in situations where domestic refining capacity improves, importation may continue due to factors such as pricing differences, supply reliability, foreign exchange availability, and established international supply networks (Olawale & Adekunle, 2023). Consequently, petrol importation behavior is often influenced by market conditions and regulatory frameworks governing the downstream petroleum sector.

Concept of the Petrol Export–Import Paradox

The petrol export–import paradox refers to a situation in which a country simultaneously exports and imports similar petroleum products within the same period. This phenomenon may appear contradictory because a country exporting refined petroleum products would normally be expected to satisfy its domestic fuel demand before supplying external markets. However, energy economics literature explains that such paradoxes can arise due to structural market conditions, pricing mechanisms, contractual obligations, and supply chain complexities (Ogbuigwe, 2022).

In the Nigerian context, the paradox is reflected in the coexistence of refined petroleum exports from large private refineries and continued petrol importation by local marketers. While export activities may be driven by international demand and competitive pricing opportunities, importation may persist due to domestic distribution challenges, pricing negotiations, and existing supply agreements. The paradox therefore reflects the interaction between commercial refinery operations, market liberalization policies, and the sourcing strategies of independent petroleum marketers. Understanding this paradox is important for evaluating Nigeria's progress toward energy security and for developing policies that strengthen the efficiency of the downstream petroleum sector.

Empirical Review

Akinwale (2019) examined the structural challenges of Nigeria's downstream petroleum sector with emphasis on the country's dependence on imported refined petroleum products. The study employed a descriptive analytical approach using industry reports and secondary data from the Nigerian National Petroleum Corporation and international energy agencies. Findings revealed that the persistent importation of refined petroleum products in Nigeria is largely due to the poor

operational performance of state-owned refineries and weak maintenance culture. The study concluded that without significant investment in domestic refining capacity and improved regulatory policies, Nigeria would continue to rely heavily on imported petroleum products. The study recommended encouraging private sector participation in refinery development to improve domestic supply.

Iledare and Suberu (2020) investigated the relationship between refining capacity and energy security in oil-producing countries with specific reference to Nigeria. The researchers used secondary data from global energy databases and applied comparative analysis to assess the performance of refining systems across several petroleum-producing nations. The results showed that countries with strong private sector investment in refining infrastructure tend to experience improved domestic fuel availability and reduced dependence on imports. The study highlighted that expanding local refining capacity is critical for enhancing national energy security and stabilizing fuel supply systems.

Ezeani (2021) conducted a study on governance and operational challenges affecting Nigeria's public refineries. The research adopted a qualitative case study approach using policy documents, industry statistics, and stakeholder interviews. The findings indicated that Nigeria's state-owned refineries have operated significantly below their installed capacities due to poor management practices, corruption, and inadequate infrastructure maintenance. The study concluded that these inefficiencies contributed significantly to Nigeria's dependence on imported petroleum products despite being a major crude oil producer.

Ogbuigwe (2022) examined the economic implications of fuel importation in oil-producing economies, focusing on Nigeria as a case study. The study used a mixed-method approach involving the analysis of petroleum trade statistics and policy documents. Findings revealed that Nigeria's continued importation of refined petroleum products is associated with structural inefficiencies within the domestic refining system and inconsistent regulatory policies. The study also highlighted that fuel importation places considerable pressure on foreign exchange reserves and contributes to macroeconomic instability. It recommended comprehensive reforms in the downstream petroleum sector to improve domestic refining capacity.

Olawale and Adekunle (2023) analyzed the impact of fuel pricing policies and market regulations on petroleum product supply in Nigeria. The study employed a policy analysis framework and reviewed regulatory reforms introduced in the downstream petroleum sector. The findings indicated that pricing structures and market deregulation significantly influence the sourcing decisions of petroleum marketers. According to the study, marketers often choose supply options based on price competitiveness and supply reliability, which may lead to continued fuel importation even when domestic refining capacity exists.

Nwokolo (2024) investigated competition and supply dynamics in Nigeria's downstream petroleum market following the emergence of private refinery investments. The study used industry data and market trend analysis to examine how new refining infrastructure affects fuel supply patterns. Findings revealed that large-scale refineries may adopt export-oriented strategies to maximize profitability, particularly when international markets offer favorable prices. The study concluded that the coexistence of petrol exports and imports can occur within liberalized energy markets due to differences in pricing structures, contractual obligations, and supply chain arrangements. The study emphasized the need for balanced regulatory policies to ensure that domestic fuel supply remains a priority while maintaining competitiveness in international petroleum markets.

Research Methodology

This study adopts a qualitative descriptive research design based on an extensive review of existing literature. The design is appropriate because the study seeks to examine and explain the paradox

of petrol export and import in Nigeria through the analysis of documented evidence, policy reports, industry publications, and scholarly works related to the downstream petroleum sector. A literature-based approach allows the researcher to synthesize insights from multiple authoritative sources in order to understand the operational dynamics surrounding the export activities of the Dangote Refinery and the continued importation of petrol by local petroleum marketers in Nigeria.

The data used in this study are secondary in nature. These data were obtained from peer-reviewed journal articles, government policy documents, industry reports, publications from energy regulatory agencies, and credible reports from international energy organizations. Additional information was sourced from academic books, conference proceedings, and reputable media publications that provide insights into Nigeria's petroleum sector reforms and downstream market behavior. The use of secondary data is suitable for this study because it enables the researcher to analyze existing empirical evidence and policy discussions concerning Nigeria's refining capacity, petroleum product trade, and market structure.

Data collection for the study involved systematic identification and selection of relevant literature published between 2018 and 2024 in order to ensure that the analysis reflects recent developments within Nigeria's petroleum industry. Sources were selected based on their relevance to the study variables, including petroleum export dynamics, refining capacity, fuel importation patterns, and downstream petroleum market regulation. The collected materials were carefully reviewed to extract information relevant to the objectives of the study.

The method of data analysis employed in this study is qualitative content analysis. This method involves critically examining and synthesizing information obtained from the selected literature in order to identify recurring themes, patterns, and arguments relating to the export behavior of the Dangote Refinery and the importation practices of petroleum marketers. Through comparative analysis of various scholarly and policy perspectives, the study interprets the structural and market factors that contribute to the coexistence of refined petroleum export and petrol importation in Nigeria. The findings are presented in a narrative form supported by evidence from the reviewed literature.

Result

Table 1: Export Dynamics of the Dangote Refinery in the International Petroleum Market

Key Export Factors	Description	Implication for Nigeria's Petroleum Sector
Refining Capacity	The refinery has an estimated refining capacity of about 650,000 barrels per day	Enables large-scale production of refined petroleum products beyond domestic consumption
Export-Oriented Production	Production strategy includes supplying regional and international markets	Positions Nigeria as a potential hub for refined petroleum exports in Africa
International Market Demand	Demand from West African and global markets for refined products	Provides opportunities for foreign exchange earnings
Maritime Logistics	Strategic coastal location and deep-sea port access facilitate international shipment	Enhances competitiveness in global petroleum trade
Economies of Scale	Modern refining technology improves efficiency and reduces production cost	Supports competitive pricing in export markets

The results show that the export dynamics of the Dangote Refinery are largely influenced by its large refining capacity, strategic location, and export-oriented operational strategy. The refinery was designed to process volumes of crude oil far exceeding Nigeria's immediate domestic demand, thereby creating surplus refined products suitable for international markets. Its proximity to maritime transport infrastructure also enables efficient export logistics. Consequently, the refinery operates not only as a domestic supply facility but also as a regional export hub capable of supplying refined petroleum products to West Africa and other global markets.

Table 2: Factors Influencing Continued Petrol Importation by Local Petroleum Marketers in Nigeria

Influencing Factors	Explanation	Effect on Importation Behavior
Price Differentials	Differences between local refinery prices and international fuel prices	Marketers may import fuel when international prices are cheaper
Supply Agreements	Existing contracts with foreign fuel suppliers	Encourages continued importation despite domestic production
Foreign Exchange Access	Availability of foreign exchange for fuel import transactions	Enables marketers to source fuel from international markets
Distribution Infrastructure	Limited domestic distribution networks and storage facilities	May make imported products easier to distribute
Market Liberalization	Deregulation allows marketers to choose supply sources	Encourages competitive sourcing from both local and international suppliers

The results indicate that the importation behavior of petroleum marketers in Nigeria is influenced by a combination of economic and structural factors. Pricing structures play a major role, as marketers may prefer imported petrol when it is cheaper or when supply conditions appear more favorable. Additionally, existing supply contracts with international traders and the availability of foreign exchange facilitate continued importation. Infrastructure limitations and deregulated market conditions also allow marketers to source products from international markets rather than relying solely on domestic refining.

Table 3: Structural and Market Conditions Responsible for the Simultaneous Export and Import of Petrol in Nigeria

Structural Factors	Description	Resulting Market Outcome
Pricing and Competition	Market Competitive pricing between domestic refinery supply and imported products	Creates parallel supply channels
Distribution and Chain Structure	Multiple independent marketers operating within the downstream sector	Leads to decentralized sourcing decisions
Regulatory Framework	Policies that allow open market participation in fuel supply	Encourages both domestic sales and international trade
Regional Opportunities	Market Demand for refined products in neighboring African countries	Encourages export activities by large refineries
Supply Structures	Contract Long-term agreements between marketers and foreign suppliers	Sustains importation alongside domestic refining

The findings reveal that the simultaneous export and import of refined petroleum products in Nigeria is largely driven by structural characteristics of the downstream petroleum market. Market

liberalization allows independent marketers to source fuel from both domestic and international suppliers depending on price and supply conditions. At the same time, the Dangote Refinery operates on a commercial model that targets both domestic and regional markets. The interaction between these market forces creates a paradoxical situation in which refined petroleum products are exported while similar products are also imported into the country.

Discussion of Findings

The findings of the study revealed that the export dynamics of the Dangote Refinery are largely influenced by its large refining capacity, strategic geographic location, and export-oriented production strategy. The refinery was established with the capacity to process about 650,000 barrels of crude oil per day, making it one of the largest single-train refineries in the world. This level of production capacity enables the refinery to produce volumes of refined petroleum products that exceed Nigeria's immediate domestic consumption requirements. Consequently, exporting surplus products to regional and international markets becomes a commercially viable strategy. This finding aligns with studies that emphasize how large-scale private refineries often adopt export-oriented strategies to maximize operational efficiency and generate foreign exchange earnings (Iledare & Suberu, 2020; Adebayo, 2024). The refinery's proximity to maritime transport infrastructure and its access to international shipping routes further strengthen its ability to compete within the global petroleum trade network.

The study also found that several factors influence the continued importation of petrol by local petroleum marketers in Nigeria despite the existence of domestic refining capacity. Among the most prominent factors identified are price differentials between domestic and international fuel markets, existing supply agreements with foreign suppliers, availability of foreign exchange for import transactions, and distribution logistics within the domestic petroleum supply chain. These findings suggest that the decision by marketers to import petrol is not necessarily a reflection of domestic production shortages but rather a strategic response to market conditions. This result supports the argument that petroleum marketers operating within deregulated or semi-liberalized markets often seek the most cost-effective supply options regardless of whether the source is domestic or international (Nwokolo, 2024). Additionally, historical dependence on imported fuel has created established international trading networks that may continue to influence marketers' procurement decisions even when local refining options exist.

Another key finding of the study indicates that the simultaneous export of refined petroleum products and the continued importation of petrol in Nigeria is largely a consequence of structural and regulatory conditions within the downstream petroleum sector. Nigeria's petroleum market operates with multiple independent marketers who make decentralized sourcing decisions based on pricing, supply reliability, and contractual obligations. At the same time, the Dangote Refinery functions as a private commercial entity that aims to optimize profitability by supplying both domestic and international markets. These parallel market dynamics create a situation where refined petroleum products may be exported to other countries while similar products are still imported into Nigeria. This finding is consistent with energy economics literature which suggests that trade patterns in petroleum products can reflect complex market interactions rather than simple supply shortages (Ogbuigwe, 2022; Olawale & Adekunle, 2023).

Overall, the findings of the study demonstrate that the paradox of petrol export and import in Nigeria cannot be explained solely by refining capacity. Instead, it reflects a combination of market liberalization, pricing mechanisms, supply chain structures, contractual arrangements, and regulatory frameworks within the downstream petroleum sector. Understanding these interconnected factors is essential for developing policies that can enhance energy security, improve

domestic fuel supply efficiency, and reduce Nigeria's long-standing dependence on petroleum product imports.

CONCLUSION

The study examined the paradox of petrol export and import in Nigeria with particular attention to the export dynamics of the Dangote Refinery and the continued importation behavior of local petroleum marketers. The analysis revealed that the refinery's large production capacity, modern refining technology, and strategic coastal location have positioned it as a major hub for refined petroleum exports in Africa. The refinery operates within a commercial framework that allows it to supply both domestic and international markets, thereby creating opportunities for Nigeria to participate more actively in global petroleum product trade.

The study further established that the continued importation of petrol by local marketers is influenced by a range of economic and structural factors such as pricing differentials, supply agreements with foreign traders, foreign exchange access, and distribution logistics within the downstream petroleum sector. These factors indicate that the paradox of simultaneous export and import of petroleum products is not merely a reflection of domestic production shortages but rather a result of the complex structure of Nigeria's petroleum market.

Finally, the study concludes that Nigeria's petroleum supply system is shaped by the interaction of market liberalization, commercial strategies of private refineries, and the sourcing decisions of independent marketers. Therefore, resolving the paradox of petrol export and import requires more than expanding refining capacity; it requires coordinated regulatory policies, improved distribution infrastructure, and transparent pricing mechanisms that align domestic supply with national energy security objectives.

RECOMMENDATIONS

1. The Federal Government of Nigeria and relevant regulatory agencies should strengthen policies that encourage domestic sourcing of refined petroleum products by local marketers in order to maximize the benefits of local refining capacity and reduce excessive dependence on fuel imports.
2. Regulatory authorities should develop transparent and competitive pricing frameworks that ensure locally refined petroleum products remain economically attractive to domestic marketers while maintaining fair market competition.
3. Investment should be directed toward improving petroleum distribution infrastructure, including storage facilities, pipelines, and transportation networks, to facilitate efficient movement of refined products from domestic refineries to various parts of the country.
4. Policymakers should promote strategic collaboration between private refineries and local petroleum marketers through structured supply agreements that prioritize domestic fuel supply before large-scale export activities.

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