



# State Capture or Industrial Transformation? The Case of the Dangote Refinery

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## Abstract

## Case Studies

This study empirically investigated whether the Dangote Refinery represents industrial transformation or state capture in Nigeria's downstream petroleum sector, using a convergent mixed-methods case study design covering 2020 to 2026. Nigeria historically spent an estimated \$14 billion annually importing refined petroleum products, a structural weakness the refinery with a capacity of 650,000 barrels per day, exceeding the combined 445,000 bpd of all NNPC refineries was built to address. Quantitative data and qualitative documentary evidence drawn from institutional reports, policy documents, and media sources are triangulated to produce the findings. The refinery has generated approximately 29,000 jobs against NNPC's 5,700, commands a 43.1 per cent market share, reduced petroleum import expenditure by 28.88 per cent between 2024 and 2025, and produced \$5.85 billion in refined exports in 2025. However, concerns persist over preferential crude allocation, the March 2026 price increase made without prior regulatory notification, and the concentration of refining capacity within a single private entity. The study concludes that the refinery is driving measurable economic progress while simultaneously creating governance risks that demand stronger competition regulation, regulatory independence, and institutional transparency.

**Keywords:** Dangote Refinery, Downstream petroleum, Industrial transformation, Mixed methods, Nigeria, Political economy, State capture.

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## I. INTRODUCTION

### 1.1 Background of the study

Nigeria is widely recognized as Africa's largest crude oil producer and one of the most resource-rich countries in the global energy sector. Despite this enormous natural resource advantage, the country has historically relied heavily on the importation of

refined petroleum products due to limited domestic refining capacity and decades of inefficiencies within state-owned refineries. For several years, Nigeria spent an estimated \$14 billion annually on importing refined petroleum products such as petrol, diesel, and aviation fuel (Central Bank of Nigeria, 2024), creating severe pressure on foreign exchange reserves and exposing the economy to international



price volatility (World Bank, 2022). Nigeria's four state-owned refineries, with a combined nameplate capacity of 445,000 barrels per day, consistently operated at below 10% utilization between 2015 and 2022, leaving the country almost entirely dependent on imported fuel (NNPC Limited, 2024).

In response to these structural challenges, the establishment of the Dangote Refinery by the Dangote Group has been widely presented as a transformative development in Nigeria's energy and industrial landscape. The refinery, located in Lagos State, is designed to process approximately 650,000 barrels of crude oil per day, making it one of the largest single-train refineries in the world. It is expected to significantly reduce Nigeria's dependence on imported petroleum products and potentially transform the country into a net exporter of refined fuel.

Supporters of the project argued that the refinery represents a major milestone in Nigeria's pursuit of industrialization and economic diversification. By increasing domestic refining capacity, creating employment opportunities, and stimulating associated industries such as petrochemicals and logistics, the refinery is widely viewed as a catalyst for industrial transformation within the Nigerian economy (Dangote Group, 2023). In addition, increased domestic production of refined petroleum products could help stabilize fuel supply, reduce foreign exchange outflows, and strengthen Nigeria's position within regional energy markets.

However, despite these potential economic benefits, the Dangote refinery project has also generated significant debate among policymakers, economists, and political analysts. Critics argue that the project may reflect broader issues within Nigeria's political economy, particularly the possibility of state capture, where powerful private actors exert disproportionate influence over government policies and regulatory decisions to advance their own interests. Concerns have been raised regarding government incentives, regulatory support, and the potential for the refinery to dominate the domestic fuel market, potentially limiting competition within the downstream petroleum sector (Premium Times, 2022).

This debate highlighted a fundamental tension between two competing interpretations of the refinery project. On one hand, the refinery can be viewed as a strategic investment capable of driving industrial transformation and strengthening national economic resilience. On the other hand, it may also represent a case where close relationships between political and business elites lead to preferential policies that benefit specific private actors (Hellman et al., 2000).

The Dangote Refinery is widely regarded as a landmark industrial project. With a capacity of 650,000 barrels per day, it is expected to meet domestic fuel demand and generate export revenues. Proponents argued that the refinery could: reduce fuel import dependence (IEA, 2024); save foreign exchange the Central Bank of Nigeria (2024) estimated that Nigeria was spending an average of approximately \$14 billion annually on refined petroleum product imports prior to the refinery reaching meaningful output; and create employment and stimulate industrial linkages (PwC, 2023). Furthermore, other Proponents argued that the refinery addresses long-standing structural weaknesses in Nigeria's oil sector particularly dependence on imported refined petroleum and reflects the type of large-scale private investment required for industrial development (World Bank, 2024; IEA, 2024). In the same vein, McKinsey (2023) alluded that large-scale industrial investments can act as 'anchor projects,' catalyzing broader economic development. The refinery's location within the Lekki Free Trade Zone further aligned with economic corridor strategies aimed at clustering industries and infrastructure.

In terms of production capacity, the Dangote Refinery operates at approximately 650,000 barrels per day (bpd), while the combined capacity of NNPC refineries stands at about 445,000 bpd, though largely underutilized (NNPC, 2024). This substantial difference highlights a transition toward private-led refining. From an industrial transformation perspective, this reflects increased capacity and the potential for import substitution. However, the concentration of such capacity within a single private entity raises concerns about market power, aligning with arguments on early-stage state capture where

economic dominance can translate into political and regulatory influence (Hellman et al., 2000).

Regarding domestic fuel supply, NNPC continues to rely on imports of approximately 42.2 million litres per day, while Dangote contributes about 32.0 million litres per day through domestic refining. This coexistence of import dependence and local production suggests a transitional equilibrium. Although industrial policy appears to be shifting toward domestic processing, consistent with UNIDO (2020), the persistence of imports indicates that the transformation process remains incomplete and continues to expose the economy to fiscal pressures.

In terms of employment effects, Dangote Refinery accounts for approximately 29,000 direct and indirect jobs, compared to about 5,700 employees within NNPC. This disparity suggests stronger employment multipliers associated with private sector participation, supporting developmental arguments in the literature (Ajakaiye & Page, 2020). Nonetheless, the concentration of employment within a single conglomerate may increase economic dependence on one dominant corporate entity.

The market share distribution further illustrates this evolving structure, with NNPC holding about 56.9% and Dangote rapidly rising to approximately 43.1%. This trend points toward increasing market concentration. From a competition theory perspective, such concentration if not matched by effective regulation can enable price-setting power, highlighting the intersection between industrial transformation and potential market capture dynamics.

In terms of GDP contribution, the sector is beginning to experience positive effects through increased refining value addition, a reduced import bill, and the growth of related industries (CBN, 2025; World Bank, 2024). While these outcomes support the objectives of industrial policy, the extent to which benefits are widely distributed depends largely on the level of competition and the strength of regulatory institutions.

The Dangote Refinery raised the ex-depot price of Premium Motor Spirit (PMS) in March 2026, citing changes in the price of crude oil globally, pressure on exchange rates, and operational expenses. The

refinery's active involvement in the domestic fuel price formulation process, which has hitherto been influenced by import-dependent mechanisms, is reflected in this development, which represents a significant shift.

From the standpoint of industrial transformation, this change represents a shift toward a domestic refining system that is driven by the market and where local production reacts to the state of the world economy. This lessens dependency on imports that are subsidized by the government and is consistent with liberalization principles. However, the price increase raises questions about pricing influence from the standpoint of market power and state control. Such changes might point to the emergence of dominating business behavior in a market with little competition, given Dangote's growing proportion of domestic supply. This bolsters the claim that pricing power can result from market concentration, especially in early-stage industrial transitions with changing regulatory regimes.

The Dangote Refinery reflects this duality, serving as both a driver of industrial transformation and a potential case of concentrated private influence. Understanding this balance is essential for evaluating its long-term implications for Nigeria's development. However, the Dangote refinery has generated significant debate over whether it represents a pathway to industrial transformation or an instance of state capture within Nigeria's political economy. Some critics raised concerns about the concentration of economic power and the potential for regulatory imbalance. Recent studies on Nigeria's political economy highlight how elite influence and institutional weaknesses continue to shape access to state resources and economic opportunities (Olayinka, 2023; Adegbite, 2021). In this context, the scale of the Dangote Refinery and the influence of its promotion raise questions about preferential access, market dominance, and the implications for competition and governance. Similarly, Transparency International (2024) further warned that large projects involving politically connected actors may distort markets and weaken regulatory independence.

Thus, the establishment of Dangote Refinery raises a fundamental tension: while it has the potential to drive industrial transformation and reduce import dependence, it may also reinforce existing patterns of elite dominance within the economy. This duality underscores the need for a critical political economy assessment of its long-term developmental and governance implications.

## 1.2 Statement of the Problem

Despite extensive research on industrialization, public-private partnerships (PPPs), and governance, there is limited integrated analysis of how large-scale private investments interact with state power in resource-dependent economies like Nigeria. Existing studies often treat industrial policy and state capture separately, overlooking how mega-projects may simultaneously drive economic transformation and reinforce elite dominance (Olayinka, 2023; Adegbite, 2021). Furthermore, empirical evidence on the broader structural impacts of mega-refineries remains scarce.

Despite repeated diversification strategies, the structure of the economy remains highly vulnerable to external shocks, thereby constraining sustainable development. This structural weakness is reflected in key macroeconomic indicators, including exchange rate instability, erratic GDP growth, and the underperformance of the manufacturing sector. In terms of economic growth, Nigeria's performance has been largely inconsistent and closely tied to fluctuations in global oil prices. Data from the World Bank show that GDP growth averaged about 6–7% annually between 2000 and 2014, driven primarily by oil revenues. However, the oil price collapse triggered the 2016 Nigerian Recession, during which GDP contracted by –1.6% (World Bank, 2020). Although the economy recovered modestly, growth rates between 2021 and 2023 ranged from 2.5% to 3.2% (NBS, 2023), falling short of the population growth rate estimated at approximately 2.6% per annum. This suggests stagnation in per capita income and highlights the limitations of oil-led growth in fostering broad-based development.

Furthermore, the manufacturing sector—widely regarded as a catalyst for industrialization—has

remained relatively weak. Empirical data from the United Nations Industrial Development Organization (UNIDO, 2022) and NBS (2023) indicate that manufacturing contributes only about 8–10% to Nigeria's GDP, significantly lower than the 20–30% observed in industrializing economies. Capacity utilization in the sector has fluctuated between 50% and 60%, constrained by infrastructural deficits, erratic power supply, and foreign exchange shortages (MAN, 2022).

Consequently, the core problem addressed in this study is whether Nigeria's recent industrial investments, exemplified by the Dangote Refinery, signify a genuine transition from a mono-economy toward diversified industrial development, or whether they entrench a system characterized by concentrated economic power and state-business entanglement. This dilemma is central to understanding the trajectory of economic transformation in Nigeria, particularly in relation to achieving sustainable growth, macroeconomic stability, and inclusive development.

Therefore, the objectives of this study are as follows:

- (i) To evaluate whether the Dangote Refinery represents a genuine pathway for Nigeria's energy sector and economic development.
- (ii) To analyze the extent to which government support for the project may reflect state capture dynamics that could have long-term implications for governance and economic equity.
- (iii) To contribute to broader discussions on development strategies in Africa and the role of elite actors in shaping national trajectories.

Hence, this study seeks to address the following key questions:

- (i) To what extent has the Dangote Refinery contributed to industrial transformation in Nigeria's petroleum sector, as measured by changes in domestic refining capacity, petroleum import volumes, employment generation, and foreign exchange expenditure between 2020 and 2026?
- (ii) To what extent do documented government policies, regulatory decisions, and crude allocation arrangements relating to the Dangote Refinery

between 2020 and 2026 reflect characteristics of state capture?

(iii) What are the observable implications of the Dangote Refinery's growing market share on fuel pricing, market competition, and governance quality in Nigeria's downstream petroleum sector?

Given the persistent clamor for a structured economy where industrialization can thrive, Nigeria, with its youthful population eager for meaningful livelihood, is at a critical point in its economic history that needs a transformative agenda to secure its future. This research study seeks to bring about consistent emphasis on relevant topical matters that border on the national development of the Nigerian economy, using the Dangote Refinery scenario vis-à-vis possible political involvement as a case study.

Despite the extensive body of literature on industrialization, public-private partnerships, and governance in developing economies, significant gaps remain in understanding the complex interaction between large-scale private investments and state power, particularly within resource-dependent contexts like Nigeria (Maruta, 2025; Joseph, Callistus, and Princewill, 2026;)

The scope of this study is restricted to the energy sector as it relates to the emergence of the Dangote refinery and its impact, if any, on the industrial transformation of Nigeria. The study covers the period from 2020 to 2026, coinciding with the final construction, commissioning, and early operational phases of the Dangote Refinery.

The Dangote Refinery, being a nascent facility of less than five years in operation, presents limitations in terms of the data available for research. Its relatively young operational history restricts the availability of time series data needed for a more comprehensive long-term assessment. Consequently, the study relies exclusively on secondary data sources, meaning primary perspectives from key stakeholders could not be captured. The quantitative analysis is also descriptive rather than inferential, limiting the ability to formally test statistical relationships between variables. Additionally, media sources used in the qualitative thread, while contemporaneous and relevant, may carry editorial bias. Despite these limitations, the use of multiple independent and

credible sources across both threads of the study strengthens the overall reliability of the findings.

Thus, this research serves as a working paper for the government, policy makers and all other stakeholders in the energy sector as to the political economic implications of the establishment of the Dangote Refinery to the Nigerian economy. Thus, the paper is further divided into other four section, Section II discussed relevant literature review in terms of conceptual, theoretical and empirical review. Section III discusses the research methodology in terms of data and data sources, mixed method of estimating both qualitative and quantitative methods. Section IV presented some relevant data in form of tables and trend analysis of the growth potentials of Nigeria's energy sector via the operation of the Dangote Refinery while Section V concludes the research with some recommendations for the success of Nigerian economy as a project.

## II. LITERATURE REVIEW

This section covered the review of some related concepts and empirical works done while the methodological approaches to existing works were also examined.

### 2.1 Conceptual Review

#### 2.1.1 Concept of State Capture and Governance Concerns

State capture refers to the ability of powerful private actors to shape state policies and institutions for their benefits. The concept was popularized by Hellman (2000) and has gained renewed relevance in contemporary political-economic studies (World Bank, 2022). Recent literature (OECD, 2023; Transparency International, 2024) highlights that state capture undermines competition, distorts markets, and weakens public trust.

#### 2.1.2 Concept of Industrial Transformation

Industrial transformation refers to structural changes driven by large-scale investment, value addition, and

productivity growth (UNIDO, 2020). Indicators include production capacity, fuel supply, employment effects, and market share.

### 2.1.3 Industrial Clusters and Spillover Effects

Industrial clusters generate spillover effects such as technology transfer and supply chain development (Porter, 1998; UNIDO, 2023). The Dangote Refinery is expected to support downstream industries, including petrochemicals, plastics, and fertilizers. However, evidence suggests that such spillovers are not automatic but depend on local capacity, regulatory frameworks, and integration with domestic firms (UNCTAD, 2022).

### 2.1.4 Economic Corridors and Public-Private Partnerships

Economic corridors are integrated networks of infrastructure, industries, and trade routes designed to stimulate regional development. According to the Asian Development Bank (ADB, 2022), economic corridors enhance connectivity, reduce transaction costs, and attract investments. Recent studies (OECD, 2023; African Development Bank, 2024) emphasized that successful economic corridors depend on strong coordination between governments and private sector actors.

## 2.2 Theoretical Review

### 2.2.1 Developmental State Theory

Recent scholarship revisited the developmental state framework, emphasizing its relevance in modern political economy. Moraes (2023) argued that it remains critical for understanding how states coordinate industrial transformation in globalized environments. Khan (2021) introduced the concept of “embedded autonomy,” where the state maintains independence while collaborating with private capital. In the African context, Mkandawire (2001) highlighted that developmental states can emerge where governments strategically coordinate investments and industrial policies.

This theory is relevant to this research and to Nigeria as a project, where state support for large projects like the Dangote Refinery reflected elements of developmental state practices. Therefore, the developmental state theory supports collaboration between the state and private actors, the risk of state capture remains significant, especially in resource-dependent economies (Hellman et al., 2000; Mkandawire, 2001).

### 2.2.2 Structural Transformation and Resource Dependence Theory

Structural transformation involves shifting from low-productivity sectors to higher-value industrial activities (Lin, 2021). However, resource-rich countries often face the “resource curse,” where dependence on commodities undermines diversification (Sachs & Warner, 2001; IMF, 2023).

Nigeria exemplifies this challenge, as crude oil accounts for over 90% of export earnings (NBS, 2023) but contributes less significantly to GDP (World Bank, 2024). This imbalance highlighted the justification for this study.

## 2.3 Empirical Review

Resource-rich countries are particularly vulnerable to state capture due to the concentration of economic power. The Natural Resource Governance Institute (NRGI, 2023) notes that elite capture often leads to unequal resource access and policy favoritism. Thus, Adegbite (2021); Olayinka (2023); argued that close relationships between political elites and business leaders raise concerns about regulatory independence. This can lead to regulatory capture, where policies favour dominant private interests through preferential access to resources, licensing advantages, or pricing benefits.

Empirical evidence showed that these dynamics are prominent in the oil and gas sector, where state and private interests intersect. Regulatory agencies often face political pressure, limiting their ability to enforce rules impartially and weakening accountability and transparency (Maruta, 2025)

Additionally, blurred boundaries between public and private roles can undermine investor confidence and long-term efficiency. Perceived bias in regulatory frameworks discourages fair competition and weakens reform outcomes. Supporting studies (Eifert, 2020; World Bank, 2024) linked strong governance and institutional autonomy to better economic performance.

Transparency International (2024) warned that in contexts where large private investments are backed by politically connected actors, the risk of regulatory capture is heightened. In Nigeria's case, the concentration of refining capacity in a single privately held entity absent a robust countervailing competition framework creates the conditions for what Hellman et al. (2000) describe as a 'capture economy,' where individual firms can shape the rules of the game to their own advantage.

Adebite (2021) and Olayinka (2023) further emphasize that Nigeria's corporate governance landscape remains characterized by weak enforcement mechanisms and a historical pattern of elite-state collusion. The Dangote Refinery's trajectory from regulatory incentives at inception, to crude allocation debates, to pricing influence in 2026 is broadly consistent with this institutional pattern. While this does not constitute conclusive evidence of state capture, it does indicate that the governance risks are real, present, and escalating in line with the refinery's growing market share.

From the perspective of institutional economics, the question of governance is not merely about wrongdoing but about the design of incentive structures (World Bank, 2024). Even if the Dangote Refinery's management acts entirely within legal bounds, a regulatory environment that fails to enforce competitive conduct enables the structural conditions under which governance degradation can occur. This distinction between de jure and de facto governance is crucial for Nigeria's long-term economic management.

Chete, L. N., Adeoti, J. O., Adeyinka, F. M., Ogundele, F. O., Newman, C., Page, J. & Tarp, F. (2016) employed critical discourse analysis to trace the historical development of industrialization efforts in Africa with particular reference to Nigeria by

evaluating some policy reforms embarked upon by several governments in Nigeria. However, the establishment of mega projects like the Dangote Refinery as an agent of industrial transformation was not considered.

## 2.4 Gaps in the Literature

Despite extensive literature on industrialization, governance, and public-private partnerships, several gaps remain. First, developmental state theory largely focuses on East Asian experiences, with limited application to African contexts (Mkandawire, 2001; Moraes, 2023).

While state capture has been widely studied, most analyses focus on transition economies, with little attention to its role in Africa's industrialization processes (Hellman et al., 2000; OECD, 2023). There is limited research on how large-scale projects like refineries can simultaneously drive growth and reinforce elite dominance.

More so, empirical studies on mega-refineries in developing countries are scarce. Existing research tends to emphasize macroeconomic outcomes such as unemployment, inflation volatilities, exchange rate disequilibrium, poverty incidence, etc with limited focus on structural impacts like market competition and institutional development.

Thus, this study addresses these gaps by examining the Dangote Refinery as both an industrial transformation project and a site of state-business power interaction while examining the political economic implications of this mega project on the Nigerian economy.

## III. RESEARCH METHODOLOGY

This chapter outlined the methodology adopted to investigate the main research question of whether the Dangote Refinery represents state capture or industrial transformation. Given the dual nature of the research problem, which combines measurable economic outcomes with complex political and institutional dynamics, the study employed a convergent mixed-method approach. This design enables the triangulation of quantitative indicators,

such as production capacity, fuel supply, employment, and GDP contribution, with qualitative evidence drawn from policy documents, regulatory decisions, and expert analyses.

### 3.1 Research Design

A convergent mixed-method case study was adopted. The Dangote Refinery constitutes the focal case, while the Nigerian National Petroleum Company Limited (NNPC) serves as a comparative institutional benchmark. The design proceeded in parallel strands:

- (i) Quantitative strand: Descriptive comparison of production capacity, fuel supply volumes, employment effect, and market share.
- (ii) Qualitative strand: Thematic analysis of policy documents, regulatory actions, media discourse, and expert reports to

interpret institutional behavior and power dynamics.

Findings from both strands were integrated at the discussion stage to produce a coherent explanation of outcomes.

### 3.2 Justification for Mixed Methods

First, the research question inherently spans industrial economics and political economy; a single method would be insufficient. Second, mixed methods enhance complementarity - quantitative results establish what changed, while qualitative evidence explained why (Creswell & Plano Clark, 2017). Third, triangulation improves validity by corroborating evidence across independent sources (Denzin, 2012). Nigerian policy studies increasingly adopt such designs to capture institutional complexity (Iyoha, 2021; Ogbonna & Appah, 2022).

### 3.4 Data and Data Sources

#### 3.4.1 Quantitative & Qualitative Sources:

Source	Indicator	NNPC	Dangote
NNPC Limited (2024) Annual Report and Dangote Group (2024) Refinery Data.	Capacity (bpd)	445,000	650,000
Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA, 2024), NNPC Limited (2024), and S&P Global (2024).	Supply (million litres/day)	42.2	32.01
Dangote Group (2024), NNPC Limited (2024), and BusinessDay (2024).	Employment	5,700	29,000
NNPC Limited (2024), IMF (2025) Nigeria Country Report, and Bloomberg (2024).	Market Share (%)	57%	43%

Variables extracted include production capacity (bpd), fuel supply (litres/day), employment effects, and market shares.

### 3.5 Method of Data Collection

Data are collected through documentary analysis, involving systematic identification, screening, and

extraction from publications between year 2020–2026. Secondary data involving metrics which include production capacity, fuel supply, employment effects and market share are presented via tables and charts. Comparative analysis were done to compare NNPC and Dangote Refinery production across these key performance indicators using Microsoft Excel.

Furthermore, thematic content analysis was applied: open coding, axial coding and theme consolidation. The core themes in this research include: industrial transformation, state support, market power, competition, regulatory environment, and institutional performance.

Open coding is the initial stage of qualitative data analysis where raw data (e.g., policy documents, reports, interviews) are broken down into smaller meaningful units and assigned descriptive labels. In this study, open coding is used to identify key concepts such as fuel pricing dynamics, regulatory decisions, and state capacity issues emerging from Nigerian institutional sources.

Axial coding involves organizing and linking the codes generated during open coding into broader categories by identifying relationships among them. In this research, it connects themes such as policy reforms, market structures, and governance challenges, showing how they interact within Nigeria’s economic and institutional framework.

Theme consolidation involves refining and combining related categories into broader themes that directly align with the research objectives. In this study, this process produces key themes such as public-private dynamics, regulatory influence, and reform outcomes, which shape the interpretation of the findings.

### 3.6 Model Specification

To assess whether the establishment of Dangote Refinery was a matter of State Capture or industrial transformation, four key indicators were adopted: production capacity, petroleum supply, employment, and market share.

Thus, the relationship can be expressed through the following structural equation:

$$IT = \beta_0 + \beta_1 PC + \beta_2 PS + \beta_3 EMP + \beta_4 MS + \epsilon$$

Where IT = Industrial transformation

PC = Production Capacity

PS = Petroleum Supply

EMP = Employment

MS = Market Share

$\epsilon$  = error term

In this functional form, the coefficients ( $\beta_n$ ) represent the constant elasticity of the dependent variable with respect to the explanatory variables.

Coefficient	Economic Meaning	Expected Value ( $\beta > 0$ )
$\beta_1$	Production Elasticity: A 1% increase in refinery capacity leads to a $\beta_1$ % increase in industrial transformation.	High (approx. 0.4 - 0.6)
$\beta_2$	Supply Elasticity: Measures how sensitive Nigeria's industrialization is to domestic crude availability versus imports.	Moderate (approx. 0.3)
$\beta_3$	Labour Elasticity: The percentage response of the industrial sector to workforce expansion.	Low to Moderate (0.1 - 0.2)

β4	Market Elasticity: How much "transformation" is captured as Dangote's market dominance grows.	Variable (0.1 - 0.3)
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As the refinery scales (moving from 100k to 650k barrels), the "noise" or variance in the data often grows. Logging the variables "squeezes" the data, stabilizing the variance and making your \$t\$-statistics more reliable.

#### IV. PRESENTATION OF FINDINGS

Figure 4.4: Dangote holds 43.1% market share versus NNPC's 56.9%, raising concerns about concentration and competitive structure.

#### 4.1. Production Capacity

Table 4.1: Dangote’s Production Capacity

Entity	Supply (million litres/day)
NNPC Imports	42.20
Dangote Domestic Refining	32.01

Source: NNPC Limited (2024) Annual Report and Dangote Group (2024) Refinery Data.

Figure 4.1: Dangote's capacity of 650,000 bpd exceeded NNPC's combined 445,000 bpd, signaling a structural shift toward private-led refining. Figure 4.1 revealed that the scale differential indicated a structural shift toward private-led refining. From an industrial transformation lens, this reflected capacity

expansion and potential import substitution. However, the concentration of capacity in a single private entity raises market power concerns, consistent with early-stage capture risks where capacity translates into influence. This alluded to the works of (Hellman, specify the other authors., 2000).

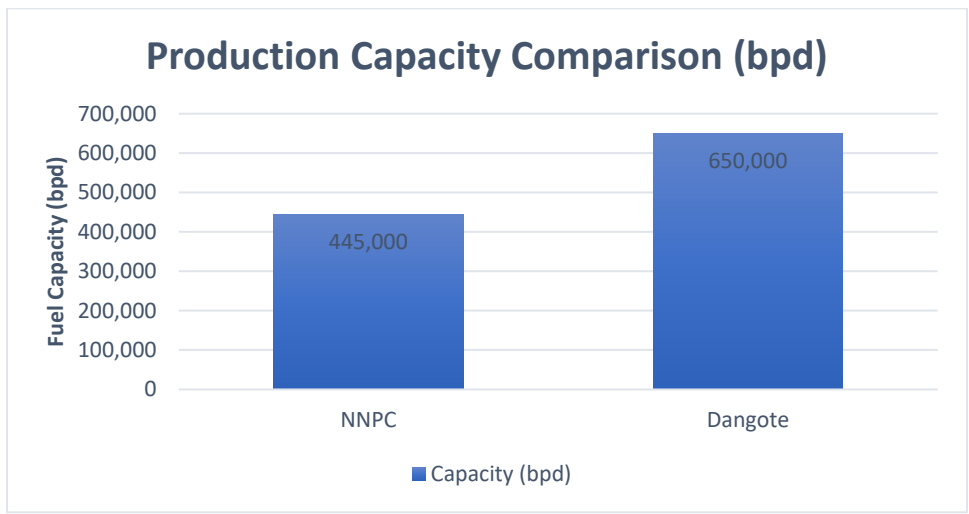


Figure 4.2 revealed that NNPC imports (42.2 million litres/day) still exceeded Dangote's domestic output (32.0 million litres/day), showing the transition from import dependence is ongoing but incomplete.

Therefore, drastic efforts must be made to reduce importation of refined petroleum products to augment domestic consumption in Nigeria in the nearest future.

**4.3 Domestic Fuel Supply**

Table 4.3: Fuel Supply

Entity	Supply (million litres/day)
NNPC Imports	42.20
Dangote Domestic Refining	32.01

Source: Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA, 2024), NNPC Limited (2024), and S&P Global (2024).

Figure 4.3 also revealed that Dangote's 29,000 jobs far exceed NNPC's 5,700, underscoring a positive labour market impact consistent with industrial transformation.

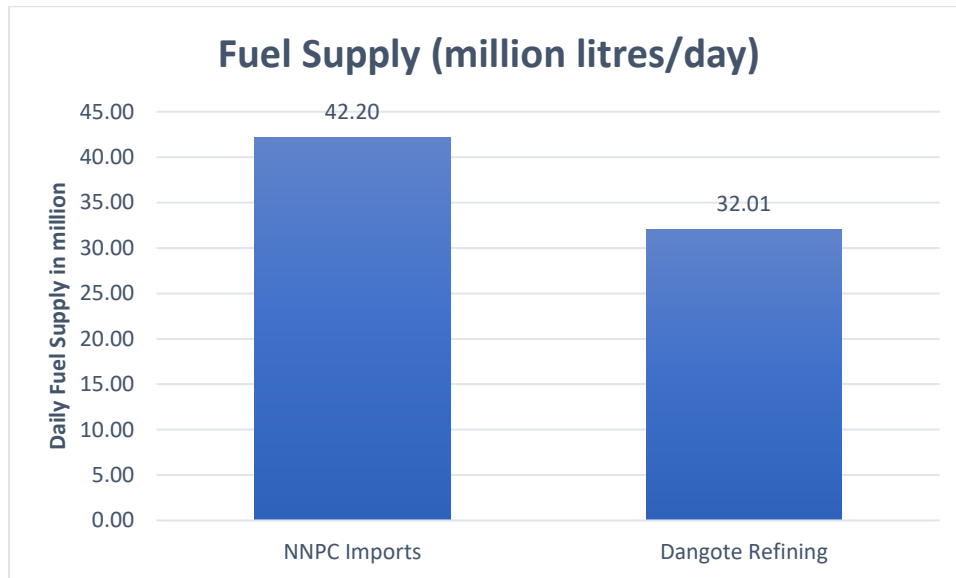


Figure 4.3: The bar chart above showed that NNPC’s imports of approximately 42.2 million litres per day exceed Dangote’s domestic refining output of about 32.0 million litres per day. This undermined Dangote’s productive capacity. Thus, Nigeria’s industrial policy appears to be moving from import dependence to domestic processing, aligning with UNIDO (2020).

Notably, the Central Bank of Nigeria (2025) recorded that Nigeria’s refined petroleum product imports fell from \$14.06 billion in 2024 to \$10.00 billion in 2025 a decline of 28.88 per cent directly attributable to increased output from the Dangote Refinery. This represented a saving of over \$4 billion in a single import category, reducing pressure on foreign exchange reserves. Nevertheless, the persistence of some imports indicates incomplete transformation and continued fiscal exposure

#### 4.4 Employment Effects

Table 4.3: Employment in Numbers

Entity	Employees
NNPC	5,700
Dangote Refinery	29,000

Source: Dangote Group (2024), NNPC Limited (2024), and BusinessDay (2024).

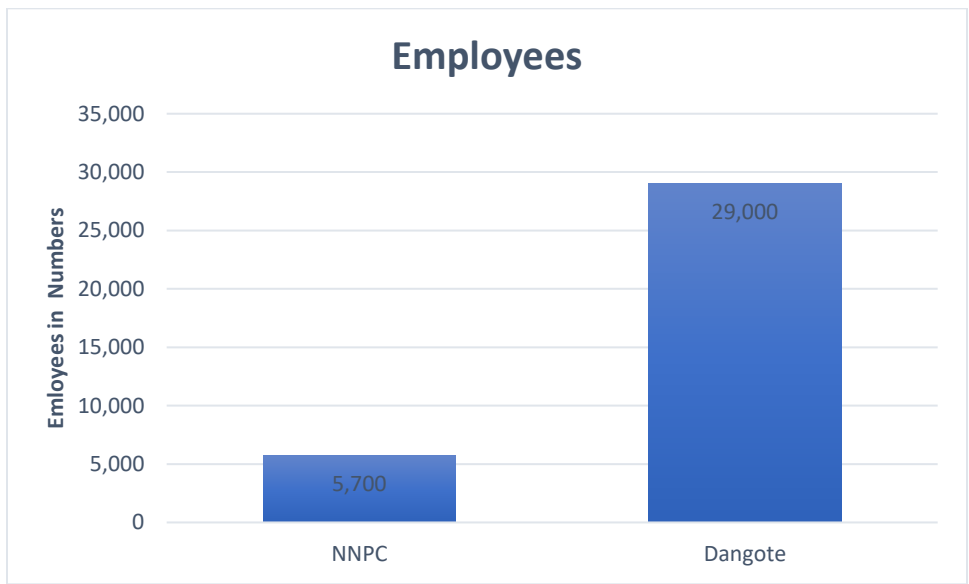


Figure 4.4: The bar chart in Figure 4.4, showed that Dangote Refinery generated approximately 29,000 direct and indirect jobs, significantly exceeding NNPC’s workforce of about 5,700 (NNPC, 2024; Dangote Group, 2024; BusinessDay, 2024).

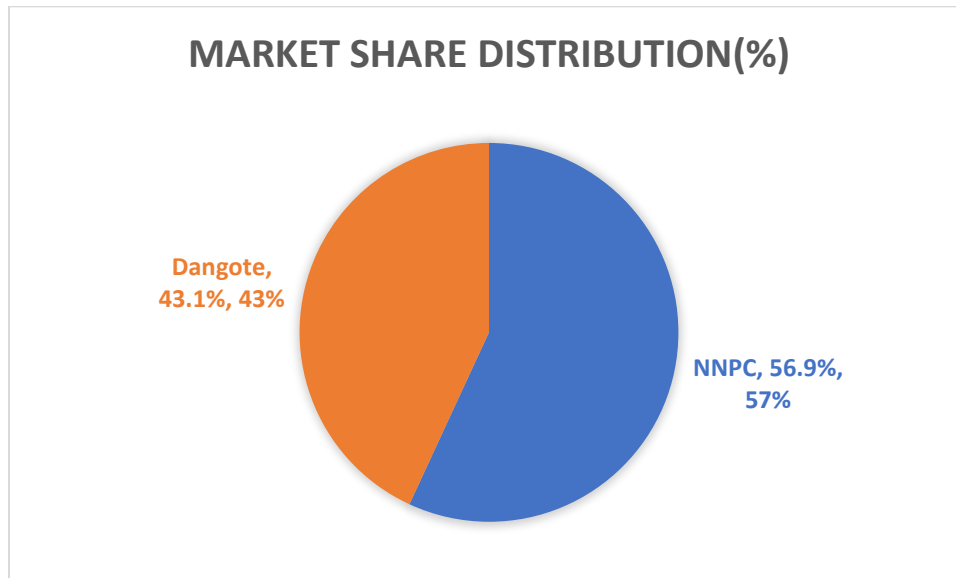
Hence this finding aligns with the works of (Ajakaiye & Page, 2020) who asserted that higher employment multipliers enhance industrial transformation. Nonetheless, job concentration within a single conglomerate may amplify dependence on one corporate actor.

**4.5 Market Share**

Table 4.5: Market Share

Entity	Market Share (%)
NNPC	56.9%
Dangote Refinery	43.1%

Source: NNPC Limited (2024), IMF (2025) Nigeria Country Report, and Bloomberg (2024).



Source: Authors’ computation

Figure 4.5: The pie chart showed that NNPC held approximately 56.9% of the market share, while Dangote accounted for about 43.1%, reflecting its rapidly rising presence in the sector (Bloomberg, 2024; IMF, 2025).

Figure 4.5 also showed the trajectory which points to increasing concentration. According to competition theory, rising concentration without countervailing regulation can enable price-setting power. This is where industrial transformation intersects with potential capture dynamics.

#### 4.6 GDP Contribution

Quantifiable contributions from the refinery are now visible in Nigeria’s national accounts. The Central Bank of Nigeria (2025) reported that refined petroleum exports attributed to the Dangote Refinery reached \$5.85 billion in 2025, a line item that was virtually absent from Nigeria’s trade accounts prior to the refinery’s operation. The CBN’s Annual Economic Report (2024) further recorded that foreign exchange expenditure on petroleum product imports averaged approximately \$14.06 billion in 2024, with the refinery’s growing output beginning to displace these outflows. The World Bank (2024) corroborated this assertion that such import substitution at scale carries measurable macroeconomic benefits, including reduced current

account pressure and improved goods balance. Positive macro effects validate industrial policy objectives; however, distributional outcomes depend on competitive structure and regulatory quality

### V. CONCLUSION AND POLICY RECOMMENDATIONS

#### 5.1 Conclusion

As a laudable project, the Dangote refinery represented industrial transformation with embedded risks of state capture. Without robust regulatory institutions, Nigeria's reliance on a single domestic champion risks drifting toward capture. The Dangote Refinery has expanded Nigeria's refining capacity, created approximately 29,000 jobs, reduced petroleum import expenditure by 28.88 per cent between 2024 and 2025, and generated \$5.85 billion in refined exports in 2025. However, preferential crude allocation, the March 2026 price adjustment made without regulatory notification, and single-entity market concentration raise governance concerns consistent with early-stage state capture.

## 5.3 Recommendations

### 5.3.1 Competition and Market Regulation

The FCCPC should be empowered to monitor and sanction anti-competitive conduct, with transparent pricing mechanisms and open infrastructure access enforced across the downstream sector.

### 5.3.2 Regulatory Governance

The NMDPRA must operate with full statutory independence. Crude allocation frameworks and pricing benchmarks should be published and subjected to independent review (Olayinka, 2023; OECD, 2023).

### 5.3.3 Transparency and Accountability

Major operators should publicly disclose supply volumes, pricing data, and crude allocation arrangements, supported by independent annual audits (Transparency International, 2024; IMF, 2025).

### 5.3.4 Macroeconomic Management

Foreign exchange savings of over \$4 billion should be channeled into infrastructure and human capital. Fiscal and exchange-rate stability must be maintained as preconditions for sustained industrial growth (CBN, 2025; World Bank, 2024).

### 5.3.6 Fuel Pricing Oversight

A transparent ex-depot pricing framework under NMDPRA oversight should be formalized. Competitive supply diversity through modular refineries and independent importers should be promoted to prevent pricing power consolidating in a single actor (BusinessDay, 2026; NREGI, 2023).

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