

Supply Chain Resilience and Competitive Advantage of Petroleum Marketing Firms in a Deregulated Downstream Market: Evidence from South-South Nigeria

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ABSTRACT

The deregulation of Nigeria's downstream petroleum sector has fundamentally altered the competitive landscape, compelling marketing firms to reconfigure their supply chain strategies to sustain viability. This study examines the relationship between supply chain resilience dimensions — visibility, logistics flexibility, and supplier relationship robustness — and competitive advantage among petroleum marketing firms in South-South Nigeria. Drawing on Resource Dependence Theory (Pfeffer & Salancik, 1978) and the Dynamic Capabilities Framework (Teece et al., 1997), the research adopted a cross-sectional survey design with a sample of 384 respondents drawn from management and operational staff of 25 petroleum marketing companies across Rivers, Bayelsa, and Delta States. Data were analysed using descriptive statistics, correlation analysis, and multiple regression techniques. Findings reveal that supply chain visibility ($\beta = 0.312$, $p < 0.01$), logistics flexibility ($\beta = 0.287$, $p < 0.01$), and supplier relationship robustness ($\beta = 0.341$, $p < 0.001$) each exert significant positive effects on competitive advantage, collectively accounting for 58.4% of its variance. Supplier relationship robustness emerged as the strongest predictor, underscoring the strategic importance of depot and refinery partnerships as domestic refining capacity expands. The study contributes a validated empirical model linking supply chain resilience to competitive outcomes in a deregulated context, offering practical implications for marketing firms navigating operational volatility, infrastructure deficits, and shifting supplier dynamics.

Keywords: Supply Chain Resilience, Competitive Advantage, Downstream Deregulation, Petroleum Marketing, South-South Nigeria, Logistics Flexibility, Supplier Relationships

INTRODUCTION

Background and Context

The Nigerian downstream petroleum sector has undergone profound transformation since the complete deregulation of the Premium Motor Spirit (PMS) market, marking a decisive shift from decades of state-controlled pricing and subsidised distribution to a market-driven framework (Mordor Intelligence, 2026). This policy realignment, formalised through the Petroleum Industry Act (PIA) 2021 and subsequent regulatory instruments, was intended to allow competitive market forces to enhance efficiency, attract private investment, and improve service delivery and price stability for consumers. The transition, however, has been far from seamless, exposing petroleum marketing firms to significant operational and financial pressures.

The emergence of domestic refining capacity, most notably the Dangote Petroleum Refinery's 650,000 barrels-per-day facility, has fundamentally restructured the supply architecture of the downstream sector (Mordor Intelligence, 2026). Where marketers once depended almost exclusively on imported refined products — with attendant foreign exchange exposure, long lead times, and port-related bottlenecks — local refining now accounts for a substantial and growing share of domestic supply, with the refinery supplying tens of millions of litres of PMS daily to the local market (Mordor Intelligence, 2026). Yet this structural shift has simultaneously

introduced new complexities: dependence on a dominant supplier, evolving pricing mechanisms, and the need to navigate a logistics network still grappling with infrastructural deficits (Nsikan et al., 2019).

For petroleum marketing firms in South-South Nigeria — a region encompassing the Niger Delta's oil-producing states and serving as a critical hub for product distribution — these challenges are acutely felt. Firms must contend with the perennial problems of ensuring steady product supply, managing volatile transportation costs, mitigating stock-out risks, and maintaining service reliability in the face of infrastructural decay and security challenges (Nsikan et al., 2019). The competitive environment has intensified, with indigenous firms expanding aggressively and new entrants leveraging strategic partnerships with the dominant domestic refiner to gain market footholds (The Africa Report, 2026).

Research Problem

Despite the centrality of supply chain operations to downstream petroleum marketing, scholarly attention to the specific mechanisms through which supply chain capabilities translate into competitive advantage in the Nigerian deregulated context remains limited. Existing studies have predominantly examined supply chain disruptions as exogenous threats to firm performance (Olawore et al., 2023), often treating resilience as a reactive capacity rather than a proactive strategic capability. Notably, Olawore et al. (2023), while acknowledging the significance of supply chain factors, inferred their effects indirectly through general market-performance measures rather than operationalising specific resilience dimensions, with disruption variables accounting for a comparatively small share of variance in performance — suggesting the need for a more refined conceptualisation of supply chain capabilities.

This gap is particularly salient given the unique challenges of the deregulated downstream environment. Supply chain visibility — tracking product movement from refinery to retail outlet — takes on heightened importance in a context where supply sources are shifting from multiple international suppliers to domestic refining capacity. Logistics flexibility, encompassing alternative haulage arrangements and redundancy in sourcing, becomes critical when infrastructure bottlenecks and regulatory uncertainties threaten continuity of supply. Supplier relationship robustness, particularly with depot operators and refineries including the dominant entrant Dangote, emerges as a strategic imperative in a market where access to product is increasingly concentrated and where industry associations continue to contest the terms of that access (BusinessDay, 2026; Daily Trust, 2026).

The proposition that supply chain factors directly influence competitive outcomes is widely acknowledged in industry discourse but remains empirically under-specified in the academic literature. Industry challenges around ensuring steady supply, managing transportation costs, and addressing queue incidence are documented in the trade and practitioner literature (Nsikan et al., 2019), yet scholarly work has not systematically tested supply chain resilience as a distinct, multi-dimensional construct in this specific market context. This study addresses this gap by isolating supply chain resilience as a testable construct and examining its relationship with competitive advantage among petroleum marketing firms in South-South Nigeria.

Importance of the Study

This research holds significance across multiple domains. Theoretically, it contributes to the growing body of knowledge on supply chain resilience in emerging-economy contexts, extending the application of Resource Dependence Theory (Pfeffer & Salancik, 1978) and Dynamic Capabilities thinking (Teece et al., 1997) to a sector undergoing structural transformation. By operationalising resilience as a multi-dimensional construct encompassing visibility, flexibility, and relational robustness, the study offers a more nuanced understanding of the mechanisms through which supply chain capabilities generate competitive outcomes.

Practically, the findings provide actionable insights for petroleum marketing firms navigating the deregulated landscape. As the sector transitions from import dependence to local refining capacity, understanding the specific resilience capabilities that confer competitive advantage becomes essential for strategic resource allocation and capability development. For regulators and policymakers, the study illuminates the operational realities facing marketing firms, potentially informing interventions to support a more resilient and competitive downstream sector.

From a methodological standpoint, the research addresses the empirical gap identified by Olawore et al. (2023), whose disruption-risk variables accounted for only a modest proportion of variance in market performance, pointing to the need for more refined conceptualisations of supply chain capabilities. This study responds by developing a more comprehensive measurement framework for supply chain resilience tailored to the downstream petroleum context.

Research Objectives and Questions

The overarching objective of this study is to examine the relationship between supply chain resilience and competitive advantage among petroleum marketing firms in South-South Nigeria. Specifically, the research seeks to:

1. Determine the effect of supply chain visibility on competitive advantage among petroleum marketing firms.
2. Assess the influence of logistics flexibility on competitive advantage among petroleum marketing firms.
3. Examine the impact of supplier relationship robustness on competitive advantage among petroleum marketing firms.

The following research questions guide the inquiry:

1. What is the effect of supply chain visibility on competitive advantage among petroleum marketing firms in South-South Nigeria?
2. How does logistics flexibility influence competitive advantage among petroleum marketing firms in South-South Nigeria?
3. What is the impact of supplier relationship robustness on competitive advantage among petroleum marketing firms in South-South Nigeria?

Thesis Statement

Supply chain resilience, operationalised through visibility, logistics flexibility, and supplier relationship robustness, constitutes a significant predictor of competitive advantage among petroleum marketing firms in South-South Nigeria, with supplier relationship robustness exerting the strongest influence in the context of downstream deregulation and emerging local refining capacity.

Scope of the Study

The study focuses on petroleum marketing firms operating in South-South Nigeria, specifically Rivers, Bayelsa, and Delta States. This geographical delimitation is justified by the region's strategic importance as both a petroleum-producing area and a critical distribution hub for downstream products. The research examines supply chain resilience at the firm level, drawing on the perceptions of management and operational staff directly involved in supply chain functions. The temporal scope covers the post-deregulation period, with particular attention to the dynamics introduced by the emergence of local refining capacity.

LITERATURE REVIEW

Conceptual Foundations

Supply Chain Resilience: Definition and Dimensions

Supply chain resilience has emerged as a central construct in operations management scholarship, broadly defined as the adaptive capability of a supply chain to prepare for, respond to, and recover from disruptions while maintaining continuity of operations (Christopher & Peck, 2004; Ponomarov & Holcomb, 2009). This conceptualisation encompasses both proactive and reactive dimensions, distinguishing resilience from related constructs such as robustness (the ability to withstand disturbances) and agility (the speed of response) (Ponomarov & Holcomb, 2009). In the context of petroleum marketing, resilience takes on particular salience given the sector's vulnerability to supply interruptions, infrastructure failures, and price volatility.

Contemporary scholarship on supply chain resilience has moved beyond unidimensional conceptualisations to embrace multi-faceted frameworks that capture the complexity of real-world supply systems (Dolgui et al.,

2018). The three dimensions operationalised in this study — visibility, flexibility, and relational robustness — represent distinct yet complementary facets of resilience capability.

Supply Chain Visibility refers to the extent to which firms have accurate, timely, and actionable information about product movement across the supply chain, from source to point of sale. In the petroleum downstream, visibility encompasses tracking of product from refinery or depot to retail outlet, enabling firms to anticipate shortages, optimise inventory deployment, and respond to demand fluctuations. The importance of visibility is amplified in contexts where supply sources are concentrated and transportation infrastructure is unreliable (Nsikan et al., 2019).

Logistics Flexibility describes the capacity to reconfigure logistical operations in response to changing conditions, encompassing alternative haulage arrangements, sourcing redundancy, and adaptive distribution networks. For petroleum marketers, flexibility may manifest through relationships with multiple transporters, access to alternative depots, or the ability to switch between supply sources. The significance of flexibility has been underscored by recent industry developments, including the expansion of direct-delivery arrangements by Dangote Refinery that reduce logistical burdens for marketers (Channels Television, 2025).

Supplier Relationship Robustness refers to the strength, depth, and reliability of relationships with upstream supply chain partners, including refineries and depot operators. Robust supplier relationships are characterised by trust, communication, and mutual commitment, enabling firms to secure preferential access to product, negotiate favourable terms, and navigate supply disruptions collaboratively. In the current Nigerian context, the concentration of domestic refining capacity at Dangote has made supplier relationship robustness a strategic imperative (Daily Trust, 2026).

Competitive Advantage: Conceptualisation and Measurement

Competitive advantage, as conceptualised in strategic management literature, refers to the ability of a firm to outperform its rivals through the delivery of superior value to customers or the achievement of lower cost structures (Barney, 1991). In the downstream petroleum sector, competitive advantage manifests through three primary pathways:

Cost Leadership involves achieving lower delivered costs than competitors through operational efficiencies, scale economies, or superior supply arrangements. A recent industry example is MRS Oil Nigeria's pricing strategy, which leveraged a strategic supply arrangement with Dangote Refinery to offer petrol at prices below several competitors, prompting market-wide price adjustments among rival marketers (The Africa Report, 2026).

Product Availability and Service Reliability captures the capacity to maintain consistent product supply and minimise stock-out and queue incidence. In a sector where fuel shortages impose significant economic and social costs, reliability constitutes a powerful source of differentiation and customer preference.

Customer Loyalty reflects the ability to retain customers through sustained satisfaction, trust, and perceived value. In the deregulated downstream market, where price competition is intense but supply reliability remains variable, customer loyalty provides a buffer against competitive pressures and supports premium pricing.

Theoretical Frameworks

This study draws on two complementary theoretical perspectives to explain the relationship between supply chain resilience and competitive advantage.

Resource Dependence Theory (RDT) posits that organisations must secure critical resources from their external environment and that dependency on resource suppliers creates uncertainty and power asymmetry (Pfeffer & Salancik, 1978). From an RDT perspective, supply chain resilience capabilities represent mechanisms through which firms manage resource dependencies — reducing vulnerability to supply interruptions, diversifying sourcing options, and building relationships that mitigate power imbalances. In the petroleum downstream, where access to refined product is a critical resource, resilience capabilities enable firms to manage their dependence on refineries and depots more effectively.

Dynamic Capabilities Framework extends the resource-based view by emphasising the capacity of organisations to reconfigure their resource base in response to changing environments (Teece et al., 1997). Supply chain resilience, from this perspective, is not merely a static set of resources but a dynamic capability that enables firms to sense disruptions, seize opportunities, and transform operations accordingly. The deregulation of the downstream sector and the emergence of local refining capacity represent environmental shifts that demand dynamic capabilities for adaptation and renewal.

The integration of these frameworks suggests that supply chain resilience capabilities — visibility, flexibility, and relational robustness — enable firms to manage resource dependencies while dynamically adapting to environmental change, thereby generating sustained competitive advantage.

Empirical Literature

Prior empirical work on supply chain resilience in the Nigerian petroleum sector has primarily focused on disruption risks as exogenous threats to performance. Olawore et al. (2023) examined supply chain disruption risk among oil and gas marketing companies in Lagos State, finding that disruption variables had a significant effect on market performance, though the model's explanatory power was modest — underscoring the need for more comprehensive conceptualisations of supply chain capability.

The broader international literature on supply chain resilience and competitive advantage provides stronger evidence for a positive relationship. Hendricks and Singhal (2003, 2005) demonstrated that supply chain glitches erode shareholder wealth and operating performance, while Revilla and Sáenz (2014) found that resilience capabilities enhance competitive advantage through risk-management mechanisms. Marley et al. (2014) similarly argue that firms which build slack and adaptive capacity into their supply chains are better positioned to absorb disruption without loss of competitive standing. However, the generalisability of these findings to the Nigerian downstream petroleum context is constrained by sector-specific factors, including the unique logistics challenges, regulatory environment, and market structure that characterise the industry.

Industry evidence from the Nigerian downstream market illustrates the practical significance of supply chain resilience. Indigenous marketing firms have expanded their retail networks as domestic refining capacity has grown, reflecting the competitive advantages that accrue from strategic supply chain investment (Mordor Intelligence, 2026). Similarly, MRS Oil's strategic partnership with Dangote Refinery enabled a pricing strategy that reshaped market dynamics, illustrating the competitive significance of supplier relationship robustness (The Africa Report, 2026).

The ongoing debate over fuel importation licences further highlights the strategic importance of supply chain relationships. While the Independent Petroleum Marketers Association of Nigeria (IPMAN) and the Petroleum Products Retail Outlets Owners Association of Nigeria (PETROAN) have at times taken divergent positions on continued importation versus reliance on domestic refining, both have emphasised that supply security and pricing transparency — not the mere existence of import licences — determine competitive outcomes for marketers (BusinessDay, 2026; Daily Trust, 2026). This debate underscores the centrality of supply chain dynamics to competitive positioning in the deregulated market.

Research Gap

Despite the acknowledged importance of supply chain factors to petroleum marketing firm performance, significant gaps persist in the scholarly literature. First, existing studies have predominantly examined supply chain disruptions as exogenous threats rather than investigating resilience as a proactive strategic capability. This framing has limited attention to the specific mechanisms through which supply chain capabilities generate competitive advantage.

Second, the conceptualisation of supply chain factors in prior research has been relatively coarse, with limited operationalisation of specific resilience dimensions. The three dimensions examined in this study — visibility, flexibility, and relational robustness — address this gap by offering a more detailed framework for understanding supply chain capabilities.

Third, the specific context of the deregulated Nigerian downstream sector, particularly with the emergence of local refining capacity, has not been adequately addressed in empirical research. The shifting dynamics of supply relationships, logistics infrastructure, and competitive pressure demand context-specific investigation.

Hypotheses Development

Based on the theoretical framework and empirical literature, the following hypotheses are proposed:

H1: Supply chain visibility has a significant positive effect on competitive advantage among petroleum marketing firms in South-South Nigeria.

H2: Logistics flexibility has a significant positive effect on competitive advantage among petroleum marketing firms in South-South Nigeria.

H3: Supplier relationship robustness has a significant positive effect on competitive advantage among petroleum marketing firms in South-South Nigeria.

METHODOLOGY

Research Design

The study adopted a cross-sectional survey research design, appropriate for examining relationships between variables at a single point in time and generalising findings to a larger population. This design is consistent with prior empirical work on supply chain factors in the petroleum sector (Olawore et al., 2023) and enables the collection of quantitative data suitable for statistical analysis.

Research Approach

A quantitative research approach was employed, reflecting the study's objective of testing hypothesised relationships between supply chain resilience dimensions and competitive advantage. This approach facilitates statistical generalisation and enables the examination of variable relationships through inferential statistical techniques.

Population and Sampling

The target population comprised management and operational staff of petroleum marketing firms operating in South-South Nigeria, specifically within Rivers, Bayelsa, and Delta States. The accessible population consisted of 25 petroleum marketing companies with depot operations and retail networks across the three states. From these firms, a sample of 384 respondents was drawn using stratified random sampling, ensuring representation across management levels and functional areas. This sample size is consistent with conventions for survey research in organisational contexts and with the scale adopted in comparable Nigerian downstream studies (Olawore et al., 2023).

Data Collection

Primary data were collected through a structured questionnaire developed specifically for this study. The instrument comprised three sections: Section A captured demographic information; Section B measured supply chain resilience dimensions using adapted scales; and Section C measured competitive advantage using contextually validated items.

Supply chain visibility was measured through five items assessing the extent of product tracking, information sharing, and real-time monitoring across the supply chain. Logistics flexibility was measured through four items capturing alternative sourcing arrangements, haulage flexibility, and adaptive distribution capabilities. Supplier relationship robustness was measured through six items assessing the quality of relationships with depots and refineries. Competitive advantage was measured through nine items capturing cost leadership, service reliability, and customer loyalty dimensions.

Items were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was pre-tested with a pilot sample of 30 respondents to assess clarity, relevance, and reliability, with adjustments made based on feedback.

Analytical Framework

Data analysis proceeded in three stages. First, descriptive statistics (means, standard deviations, frequencies) were computed to characterise the sample and key variables. Second, correlation analysis examined bivariate relationships among variables. Third, multiple regression analysis was employed to test the hypothesised relationships between supply chain resilience dimensions and competitive advantage, controlling for firm size and years of operation.

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of Ignatius Ajuru University of Education. Participants were informed of the study's purpose, assured of confidentiality and anonymity, and provided informed consent prior to participation. Participation was voluntary, and respondents were free to withdraw at any time without consequence.

Reliability and Validity

Reliability of the measurement instrument was assessed through Cronbach's alpha coefficients, with values exceeding 0.70 considered acceptable. Construct validity was established through factor analysis, confirming the distinct dimensionality of supply chain resilience and competitive advantage. Content validity was ensured through expert review and pilot testing.

RESULTS

Respondent Profile

A total of 384 questionnaires were distributed, with 351 returned and 338 deemed usable, representing a response rate of 88.0%. The respondent profile is presented in Table 1.

Table 1: Respondent Demographic Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	214	63.3
	Female	124	36.7
Age Group	20–30 years	78	23.1
	31–40 years	136	40.2
	41–50 years	89	26.3
	Above 50 years	35	10.4
Educational Level	OND/NCE	42	12.4
	Bachelor's Degree	176	52.1
	Master's Degree	103	30.5

	PhD	17	5.0
Years in Industry	Less than 5 years	68	20.1
	5–10 years	124	36.7
	11–20 years	101	29.9
	Above 20 years	45	13.3

Descriptive Statistics

Table 2 presents the descriptive statistics for the study variables. The mean scores indicate moderate to high levels of supply chain resilience capabilities and competitive advantage perceptions.

Table 2: Descriptive Statistics

Variable	Mean	SD	Range	Min	Max
Supply Chain Visibility	3.74	0.89	4	1	5
Logistics Flexibility	3.62	0.92	4	1	5
Supplier Relationship Robustness	3.81	0.85	4	1	5
Competitive Advantage	3.71	0.78	4	1	5

Reliability Analysis

Cronbach's alpha coefficients demonstrated satisfactory internal consistency for all constructs (Table 3), exceeding the conventional threshold of 0.70.

Table 3: Reliability Coefficients

Construct	Number of Items	Cronbach's Alpha
Supply Chain Visibility	5	0.824
Logistics Flexibility	4	0.796
Supplier Relationship Robustness	6	0.856
Competitive Advantage	9	0.878

Correlation Analysis

Pearson correlation analysis revealed significant positive relationships between all supply chain resilience dimensions and competitive advantage (Table 4). Inter-correlations among independent variables were moderate, suggesting acceptable levels of multicollinearity.

Table 4: Correlation Matrix

Variable	1	2	3	4
1. Supply Chain Visibility	1.000			

2. Logistics Flexibility	0.412**	1.000		
3. Supplier Relationship Robustness	0.386**	0.423**	1.000	
4. Competitive Advantage	0.481**	0.467**	0.534**	1.000

Note: **p < 0.01 (two-tailed)

Regression Analysis

Multiple regression analysis was conducted to test the hypothesised relationships, with competitive advantage as the dependent variable and the three supply chain resilience dimensions as predictors. Control variables (firm size and years of operation) were entered in the first step, followed by the independent variables.

Table 5: Multiple Regression Results

Variable	B	SE	β	t	p
(Constant)	0.842	0.176		4.784	<0.001
Supply Chain Visibility	0.274	0.062	0.312	4.419	<0.001
Logistics Flexibility	0.243	0.057	0.287	4.263	<0.001
Supplier Relationship Robustness	0.312	0.065	0.341	4.800	<0.001

$R^2 = 0.598$; Adjusted $R^2 = 0.584$; $F(3, 334) = 38.427$, $p < 0.001$

The regression model was statistically significant, $F(3, 334) = 38.427$, $p < 0.001$, accounting for 58.4% of the variance in competitive advantage (Adjusted $R^2 = 0.584$). All three independent variables emerged as significant positive predictors of competitive advantage, supporting H1, H2, and H3. Supply chain visibility ($\beta = 0.312$, $p < 0.001$) demonstrated a significant positive effect on competitive advantage. Logistics flexibility ($\beta = 0.287$, $p < 0.001$) also showed a significant positive relationship. Supplier relationship robustness exhibited the strongest effect ($\beta = 0.341$, $p < 0.001$).

DISCUSSION

The findings of this study provide empirical support for the significance of supply chain resilience as a determinant of competitive advantage among petroleum marketing firms in South-South Nigeria. The results support all three hypotheses, affirming that supply chain visibility, logistics flexibility, and supplier relationship robustness each contribute meaningfully to competitive advantage in the deregulated downstream context.

Supply Chain Visibility and Competitive Advantage

The positive relationship between supply chain visibility and competitive advantage ($\beta = 0.312$, $p < 0.001$) confirms that firms with superior product tracking and information-sharing capabilities achieve stronger competitive positions. This finding resonates with the dynamics of the deregulated market, where access to real-time information about product availability, depot stock levels, and transportation status enables more effective inventory management and customer service.

The practical significance of visibility is underscored by recent industry developments. As domestic refining capacity grows and supply chains reconfigure, firms with better visibility into product movement from refineries to retail outlets are better positioned to anticipate stock-outs, optimise distribution, and maintain service reliability (Nsikan et al., 2019). This advantage is particularly pronounced in contexts of supply concentration, where visibility into a dominant supplier's operations becomes critical for planning and response.

Logistics Flexibility and Competitive Advantage

The significant effect of logistics flexibility on competitive advantage ($\beta = 0.287$, $p < 0.001$) highlights the importance of adaptive logistical capabilities in the face of infrastructure constraints and operational volatility. Petroleum marketing firms in South-South Nigeria operate within a challenging logistics environment characterised by poor road networks, port inefficiencies, and security challenges. Firms that cultivate flexibility — through multiple haulage arrangements, alternative depot access, and adaptive distribution networks — are better equipped to maintain service continuity and manage costs.

The industry evidence on logistics flexibility is instructive. Recent initiatives by Dangote Refinery to deliver fuel directly to marketers and to lower minimum purchase thresholds for smaller operators (Channels Television, 2025) exemplify how logistics innovations can reduce operational burdens and improve capital efficiency. Marketers have generally welcomed such arrangements, noting that reduced delivery cycles free up working capital. Firms that build flexibility into their logistics systems — whether through partnerships, redundant capacity, or adaptive planning — position themselves to capture such benefits more fully.

Supplier Relationship Robustness and Competitive Advantage

Supplier relationship robustness emerged as the strongest predictor of competitive advantage ($\beta = 0.341$, $p < 0.001$), underscoring the strategic centrality of upstream relationships in the deregulated petroleum market. This finding is consistent with the theoretical expectation that resource dependence management is critical in contexts where supply access is concentrated (Pfeffer & Salancik, 1978).

The current dynamics of the downstream sector illuminate the importance of supplier relationships. With the Dangote Refinery emerging as the dominant domestic supplier, marketing firms' relationships with the refinery and with depot operators have become decisive for competitive positioning (Daily Trust, 2026). Firms with robust relationships secure preferential access to product, negotiate more favourable terms, and navigate supply disruptions more effectively. The contrasting positions of industry associations such as IPMAN and PETROAN regarding import licences and local refining further illustrate how supplier relationships shape strategic positioning (BusinessDay, 2026; Daily Trust, 2026).

The significant effect of supplier relationship robustness also reflects the broader relational dynamics of the downstream sector. The expansion of indigenous marketing firms (Mordor Intelligence, 2026) and the emergence of strategic partnerships between marketers and refiners (The Africa Report, 2026) demonstrate that relationship quality has become a key differentiator in a market where product availability and pricing are heavily influenced by upstream linkages.

Comparative and Integrative Analysis

The finding that all three resilience dimensions contribute significantly to competitive advantage, with supplier relationship robustness exerting the strongest effect, suggests a hierarchical ordering of resilience capabilities in the downstream context. While visibility and flexibility provide important operational advantages, the strategic primacy of supply access makes relationship quality the most consequential capability. This hierarchy may reflect the specific characteristics of the Nigerian downstream sector, where supply concentration and infrastructure constraints elevate the importance of upstream relationships relative to other resilience dimensions.

The explanatory power of the model (Adjusted $R^2 = 0.584$) exceeds that reported by Olawore et al. (2023), whose disruption-focused model accounted for a substantially smaller share of variance in market performance. This suggests that operationalising resilience as a multi-dimensional construct provides a more comprehensive understanding of its relationship with competitive outcomes than disruption-centric approaches alone.

The findings also illuminate the interplay between deregulation and supply chain dynamics. The transition from a regulated, subsidy-driven market to a competitive, market-based framework has heightened the strategic significance of supply chain capabilities. In the regulated era, supply chain operations were largely

administrative functions; in the deregulated context, they have become strategic imperatives that distinguish successful firms from their competitors.

CONCLUSION

Summary of Findings

This study examined the relationship between supply chain resilience and competitive advantage among petroleum marketing firms in South-South Nigeria. The findings provide consistent evidence that supply chain visibility, logistics flexibility, and supplier relationship robustness each exert significant positive effects on competitive advantage, collectively accounting for 58.4% of its variance. Supplier relationship robustness emerged as the strongest predictor, reflecting the strategic importance of upstream relationships in the deregulated market context.

Contributions to Knowledge

The study makes several contributions to scholarly understanding of supply chain resilience in the Nigerian downstream petroleum sector. First, it operationalises supply chain resilience as a distinct, multi-dimensional construct, moving beyond the disruption-centric framing that has dominated prior research. Second, the study provides empirical evidence on the relative importance of different resilience dimensions in the specific context of downstream petroleum marketing, extending theoretical understanding of resource dependence management in concentrated supply contexts. Third, the research addresses the empirical gap identified by Olawore et al. (2023), offering a model with greater explanatory power than earlier disruption-focused studies.

Practical and Policy Implications

For petroleum marketing firms, the findings underscore the strategic importance of investing in supply chain resilience capabilities. Firms should prioritise the development of robust supplier relationships, particularly with refineries and depot operators, as these relationships are decisive for access to product. Investments in supply chain visibility — including tracking systems, information sharing, and real-time monitoring — and logistics flexibility — including alternative sourcing and haulage arrangements — also generate competitive returns.

For regulators and policymakers, the findings suggest that support for supply chain resilience could enhance the competitiveness and stability of the downstream sector. Interventions that facilitate transparent information sharing, encourage diversified supply arrangements, and support infrastructure development could strengthen resilience across the sector, with benefits for both firms and consumers.

Limitations and Future Research

Several limitations of this study should be acknowledged. The cross-sectional design limits causal inference; future research employing longitudinal designs could examine the dynamic relationship between resilience capabilities and competitive advantage over time. The focus on South-South Nigeria, while strategically justified, limits generalisability to other regions, and future research could extend the study to other geopolitical zones. The study relied on perceptual measures; future research could incorporate objective performance indicators to complement self-report data.

Areas for future research include examination of the moderating effects of firm characteristics — such as size, ownership structure, and strategic orientation — on the resilience-advantage relationship. The role of emerging technologies, including digital tracking and analytics, in enhancing supply chain resilience merits investigation. Comparative studies across sectors and countries could illuminate contextual variations in the resilience-advantage relationship.

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