

SUPPLIER RISK ABATEMENT AND COMPETITIVENESS OF FIRMS IN NIGERIA'S OIL AND GAS SECTOR

EKE-EJEE Johnson Uchenna WALI Andy Fred NWULU Chinyere Stella

Department of Marketing, Faculty of Administration and Management
Rivers State University Nkpolu-Oroworukwo, Port Harcourt

Abstract

This study investigated the impact of supplier risk abatement on competitiveness of firms in Nigeria's oil and gas sector. Anchored on resource dependence theory, the study examined key outcomes of business competitiveness - cost saving, organizational responsiveness and procurement cycle time. The study adopted causal research design with a cross-sectional approach. The population of the study comprised 20 major downstream oil and gas companies operating in Nigeria. The population is small, hence all the companies were studied. However, 86 respondents provided data for the study through a semi-structured questionnaire designed in 5-point Likert scale. The study found that supplier risk abatement has strong positive and statistically significant impact on cost savings, a moderate positive and statistically significant impact on organizational responsiveness, and a very strong positive and statistically significant impact on procurement cycle time of firms in Nigeria's downstream. Based on these findings, this study concluded that supplier risk abatement has a positive and significant impact on competitiveness of firms in Nigeria's downstream oil and gas sector; and recommended that firms in Nigeria's downstream oil and gas sector should design comprehensive supplier risk management systems, including risk mapping, financial health monitoring, contingency sourcing, and joint crisis management protocols with suppliers.

Keywords: business competitiveness, cost savings, organizational responsiveness, procurement cycle time, supplier risk,

Introduction

Nigeria's downstream oil and gas sector plays a critical role in the nation's energy supply chain and overall economic stability. Yet the sector remains highly vulnerable to supply-side risks that threaten operational efficiency and competitiveness (Okoro & Nwaogbe, 2021). Supplier-related risks, including unreliable deliveries, poor quality of inputs, price volatility, and regulatory uncertainties, often disrupt production and distribution activities, leading to significant financial losses and reputational damage (Ibrahim & Ahmed, 2020). These challenges are further compounded by infrastructural decay, foreign exchange instability, and global oil market fluctuations, which increase the exposure of firms in the sector to both domestic and international supply chain shocks (Eze et al., 2022).

Although prior studies have examined supply chain risk management in general contexts, limited research has specifically addressed supplier risk abatement in the downstream oil and gas sector of Nigeria (Chukwu & Igwe, 2021). Much of existing literature emphasizes upstream activities such as exploration and production, while downstream operations - particularly refining, marketing, and distribution - remain understudied despite their importance to energy security and consumer welfare (Akinola, 2020).

Furthermore, the few available studies focus on broader supply chain resilience without isolating the impact of supplier risk abatement on firm competitiveness (Ogunyemi & Ojo, 2019). This creates a knowledge gap concerning the mechanisms through which supplier risk mitigation contributes to sustaining market position, reducing costs, and enhancing strategic performance in highly volatile environments.

This study seeks to fill this gap by investigating the impact of supplier risk abatement on the competitiveness of firms operating in Nigeria's downstream oil and gas sector. By focusing on supplier-related risks and the strategy firms adopt to mitigate them, the study sought to contribute

to supply chain management theory and practice. From a theoretical perspective, the study extend the discourse on supply chain risk management by situating supplier risk abatement as a critical determinant of competitiveness in emerging economies. From a practical perspective, the study provide managers and policymakers with actionable insights for building more resilient supplier relationships and safeguarding competitive advantage in an industry central to Nigeria's economic sustainability.

Theoretical Foundation

The study is premised on Resource Dependence Theory (RDT) (Pfeffer & Salancik, 1978) which emphasizes that organizations depend on external resources for survival and success. These dependencies create power dynamics that shape organizational behavior and performance. To remain competitive, firms must strategically manage their relationships with external entities that control critical resources. In Nigeria's downstream oil and gas sector, this is especially important given the industry's reliance on global supply chains, regulatory frameworks, and government policies. Strategic procurement thus becomes a central mechanism for managing these dependencies.

RDT highlights that organizations do not operate in isolation but exist within networks of relationships involving suppliers, governments, and other stakeholders (Pfeffer & Salancik, 1978). External resources include raw materials, financial capital, technology, and information, all of which significantly influence decision-making. Because entities that control these resources wield power, organizations must engage in deliberate strategies to reduce dependence and vulnerability. In procurement terms, this involves building strong supplier relationships, diversifying sourcing options, and negotiating favorable contracts.

The Nigerian downstream oil and gas sector illustrates these dynamics clearly. Despite vast oil reserves, limited refining capacity compels the country to import significant volumes of refined petroleum products. This dependence exposes firms to risks from fluctuating global oil prices, foreign exchange volatility, and geopolitical uncertainties (Akinola, 2020). Strategic procurement enables companies to mitigate such risks by diversifying suppliers, forming long-term partnerships, and investing in local refining initiatives, thereby ensuring supply stability and cost efficiency.

Government policies and regulations represent another critical dependency. The Nigerian government controls access to resources such as licenses, subsidies, and regulatory approvals, directly affecting procurement strategies. Changes in fuel subsidy policies or import duties, for instance, can disrupt supply chains and inflate costs. In line with RDT, downstream firms must actively manage their relationships with government bodies, anticipating regulatory changes and adapting procurement processes to maintain competitiveness (Chukwu & Igwe, 2021).

Ultimately, RDT underscores that reducing dependence on external entities strengthens organizational control and competitive advantage. For Nigerian downstream oil and gas firms, strategic procurement serves as the primary tool for managing these dependencies—securing resources, reducing risks, and improving operational efficiency. Furthermore, inter-organizational collaborations, such as joint ventures and alliances, allow firms to pool resources and share risks. By applying RDT principles, companies in the sector can enhance resilience, reduce costs, and sustain competitiveness in an environment marked by volatility and uncertainty.

Concept of Supplier Risk Abatement

Supplier risk abatement refers to proactive strategies and practices organizations adopt to minimize the negative impact of supplier-related uncertainties on supply chain performance and competitiveness. In volatile industries such as oil and gas, supplier risks manifest in diverse forms, including supply disruptions, delivery delays, input quality problems, financial instability of suppliers, and exposure to geopolitical and regulatory changes (Tang & Musa, 2011). Effective supplier risk abatement is therefore not merely about damage control but about embedding resilience into the supply chain to sustain competitiveness in uncertain markets (Christopher & Peck, 2004).

One of the primary approaches to supplier risk abatement is supplier diversification, which involves sourcing from multiple suppliers to avoid overdependence on a single source. Overreliance on a single supplier can expose firms to systemic risks in cases of supplier default, strikes, or logistical bottlenecks (Khan & Burnes, 2007). By diversifying supply sources, firms enhance flexibility, negotiate better contract terms, and reduce vulnerability to disruptions. This is particularly critical in Nigeria's downstream oil and gas sector, where infrastructural challenges and regulatory instability often disrupt the regular flow of petroleum products (Okoro & Nwaogbe, 2021).

Another critical strategy is supplier development and collaboration, which entails building stronger partnerships with suppliers through joint planning, information sharing, and performance monitoring. Effective collaboration not only reduces risks associated with uncertainty but also enhances trust, quality, and reliability across the supply chain (Krause et al., 1998). Firms that invest in supplier training, capacity building, and technology adoption tend to experience fewer disruptions and higher competitive advantage. In the Nigerian context, where infrastructural and technological weaknesses often affect suppliers, collaborative risk abatement can improve service reliability and strengthen competitiveness (Chukwu & Igwe, 2021).

Contractual risk management is also central to supplier risk abatement. Contracts that clearly define terms of delivery, penalties for non-performance, and mechanisms for dispute resolution provide a structured way to mitigate supplier-related risks (Giannakis & Louis, 2016). Well-structured contracts protect firms from opportunistic behaviors and create legal avenues for recovery when disruptions occur. Nigerian downstream oil and gas firms, often faced with supplier opportunism due to regulatory gaps, can enhance competitiveness by enforcing contractual safeguards.

Thus, supplier risk abatement is a multifaceted strategy involving diversification, collaboration, contractual management, technology adoption, and inventory buffers. For firms in Nigeria's downstream oil and gas sector, implementing these practices is critical for sustaining competitiveness amid volatile supply chains. By strategically addressing supplier risks, firms not only reduce disruptions but also enhance cost efficiency, customer satisfaction, and long-term market advantage.

Concept of Business Competitiveness

Competitiveness in business contexts refer to ability of firms to sustain superior performance relative to rivals, through efficient utilization of resources, innovation and strategic positioning. At the firm level, competitiveness is often defined in terms of productivity, cost efficiency, product quality and the ability to adapt to environmental changes (Porter, 1990). For industries operating in volatile and uncertain environments, such as the downstream oil and gas sector in Nigeria, competitiveness becomes a function of resilience and responsiveness to external

pressures, including regulatory changes, supplier disruptions, and fluctuating global oil prices (Okoro & Nwaogbe, 2021).

A key determinant of business competitiveness is effective management of supply chains. Firms that minimize risks and optimize supplier relationships are more likely to achieve cost reductions, consistent delivery and customer satisfaction, which collectively, sustain market advantage (Christopher, 2016). In Nigeria's downstream sector, where infrastructural deficits and foreign exchange volatility undermine operational efficiency, competitiveness is closely tied to how well firms mitigate these supply-side challenges (Eze et al., 2022).

Furthermore, innovation and technology adoption play central roles in building business competitiveness. Digital platforms, data analytics, and automation enable firms to monitor supply chains in real time, enhance operational transparency, and respond proactively to market shifts (Zhou et al., 2015). Firms that embrace these innovations tend to outperform competitors by offering reliable, cost-effective and value-added services.

Business competitiveness also extends to intangible factors such as reputation, regulatory compliance, and customer trust. In industries characterized by high public scrutiny, like oil and gas, firms that uphold responsible practices and sustainability initiatives gain reputational capital, which strengthens long-term competitiveness (Hart & Dowell, 2011). In essence, business competitiveness is multidimensional, shaped by operational efficiency, innovation, supply chain resilience, and social responsibility. For Nigerian downstream oil and gas firms, sustaining competitiveness requires balancing these dimensions while navigating systemic industry challenges.

In dynamic and high-risk industries such as the downstream oil and gas sector, business competitiveness is shaped by multidimensional factors that determine how effectively organizations respond to market and supply chain challenges (Christopher, 2016; Porter, 1990). Among these dimensions, cost saving, responsiveness and procurement cycle time are critical. Cost saving highlight a firm's ability to reduce operational expenses through efficient supply chain practices, supplier risk abatement, and resource optimization, thereby strengthening profitability and market position (Eze et al., 2022).

Responsiveness, on the other hand, underscores capacity of firms to adapt swiftly to disruptions, regulatory shifts, and customer demands, a capability that enhances resilience and sustains competitive advantage (Okoro & Nwaogbe, 2021). Finally, procurement cycle time, which measures the speed and efficiency of sourcing activities, directly influences delivery reliability, cost efficiency, and customer satisfaction (Zhou et al., 2015). Together, these measures provide a comprehensive framework for assessing how firms sustain competitiveness in volatile environments such as Nigeria's downstream oil and gas sector.

Cost saving

Cost saving represent a critical outcome of strategic management practices across industries, as it directly influence profitability, competitiveness and long-term sustainability. In supply chain and operations management, cost saving is achieved through efficient resource utilization, supplier risk abatement, process automation and waste reduction (Porter, 1985). By minimizing unnecessary expenses, firms allocate resources more effectively toward innovation and market expansion.

One of the primary drivers of cost saving is supply chain optimization, which reduces transaction costs, inventory holding costs, and procurement inefficiencies (Christopher, 2016). For example, firms that build reliable supplier partnerships often benefit from lower input prices, reduced disruptions, and economies of scale (Krause et al., 1998). Additionally, technology adoption such as enterprise resource planning (ERP) systems and data analytics helps firms improve decision-making, cut operational redundancies and enhance efficiency (Brintrup et al., 2016).

In high-risk sectors such as oil and gas, cost savings are particularly vital because market volatility and infrastructural constraints frequently inflate operational expenses. Firms that proactively adopt risk abatement strategies, including supplier diversification and contractual safeguards, often reduce costs linked to delays, penalties, and quality failures (Tang, 2006). Similarly, inventory buffers, though sometimes costly, can prevent greater financial losses caused by supply disruptions (Khan & Burnes, 2007).

Overall, cost savings not only reduce immediate financial burdens but also enhance strategic competitiveness by enabling firms to deliver value to customers at lower prices while maintaining profitability. Thus, effective cost management remains a cornerstone of sustainable business performance.

Responsiveness

Responsiveness in organizational context refers to a firm's ability to detect, interpret, and swiftly respond to changes in its internal and external environment. It represents a firm's swift and seamless response to market intelligence about current and future customer needs; as well as threats and opportunities in the business environment (Nwulu & Ateke, 2018). Responsiveness is a critical capability that enable firms sustain competitiveness in volatile markets characterized by uncertainty, technological disruptions, and evolving customer demands (Atuahene-Gima, 2005). Responsive organizations anticipate market shifts, align resources accordingly, and implement timely strategies that enhance agility and performance (Teece et al., 2016).

A key driver of organizational responsiveness is information processing capability, which allows firms to gather real-time market intelligence, monitor competitor actions, and track regulatory or environmental changes (Eisenhardt & Martin, 2000). This information, when effectively disseminated across organizational units, enhances decision-making speed and reduces the risk of delayed responses. In Nigeria's downstream oil and gas sector, for instance, responsiveness to supply disruptions, regulatory adjustments, and foreign exchange volatility determines firms' survival and competitiveness (Okoro & Nwaogbe, 2021).

Equally important is organizational flexibility, which refers to the ability to reconfigure resources and processes in response to change. Firms that cultivate flexible structures, decentralized decision-making, and adaptive cultures are better positioned to capitalize on emerging opportunities and mitigate risks (Grewal & Tansuhaj, 2001). Responsiveness also depends on strong supplier and customer relationships, which provide early warning signals about market trends and enable rapid collaborative adjustments (Jayachandran et al., 2004).

In sum, organizational responsiveness is not merely reactive but strategic, requiring information capabilities, flexibility, and stakeholder collaboration. Firms that institutionalize these capabilities are more likely to achieve sustained competitiveness in dynamic business environments.

Procurement cycle time

Procurement cycle time refers to the total duration taken to complete the procurement process - from requisition initiation through supplier selection, order placement, delivery, and final payment (Monczka et al., 2016). It is a critical performance metric in supply chain management, as shorter cycle times enhance responsiveness, reduce stockouts, and improve overall competitiveness (van Weele, 2018). In industries such as oil and gas, where timely access to inputs is essential, procurement delays often lead to production disruptions, cost overruns, and customer dissatisfaction (Amemba et al., 2019).

Several factors influence procurement cycle time, including supplier reliability, technological adoption, regulatory processes, and organizational efficiency. For instance, digital procurement platforms such as e-procurement systems have significantly reduced cycle times by automating bidding, order tracking, and supplier communication (Basheka, 2017). Conversely, bureaucratic bottlenecks, poor supplier performance, and infrastructural deficiencies - common in developing economies like Nigeria - tend to prolong procurement cycles (Odeyale & Ogunyemi, 2020).

Effective management of procurement cycle time requires strategies such as supplier relationship management, process standardization, and integration of technology for real-time tracking and analytics (Kaur & Singh, 2018). By optimizing cycle time, firms can achieve greater operational efficiency, minimize costs, and improve service levels. In Nigeria's downstream oil and gas sector, reducing procurement cycle time is particularly vital due to market volatility, regulatory delays, and infrastructural challenges that heighten the risk of supply disruptions (Okoro & Nwaogbe, 2021). Ultimately, efficient procurement cycle time management enhances both organizational resilience and competitive advantage.

Supplier Risk Abatement and Competitiveness

Many scholars have conducted studies on the impact of supplier risk abatement on competitiveness of companies in the downstream oil and gas sector. Adebayo and Oladipo (2021) examined supply chain risk management in the Nigerian oil and gas sector, and found that supplier risk abatement strategies, such as supplier diversification and long-term contracts, significantly contributed to reducing supply chain disruptions, which enhanced the operational efficiency and competitiveness of companies in the Nigerian downstream oil and gas sector. The study concluded that effective supplier risk management strategies are critical in the downstream oil and gas sector in Nigeria, as they improve competitiveness by minimizing operational disruptions, ensuring stability, and enabling companies to adapt to market changes.

Similarly, Suleiman (2022) investigated how competitiveness of Nigerian oil and gas firms could be enhanced through effective supply chain risk management. The study found that effective risk mitigation strategies, including monitoring supplier performance and reducing reliance on a single supplier, led to cost savings, reduced lead times, and increased overall competitiveness; and concluded that supplier risk abatement is integral to improving competitiveness in the Nigerian oil and gas industry, helping companies respond faster to market changes and supply disruptions.

Also, Akinsanya and Williams (2020) examined supplier risk management strategies in Nigeria's oil and gas industry, and revealed that proactive supplier risk management, particularly fostering strategic partnerships and conducting thorough supplier assessments, improved supplier reliability and competitiveness by reducing operational disruptions and costs. The study concluded that supplier risk management is essential for improving operational performance, reducing procurement costs, and enhancing the competitiveness of Nigerian oil and gas firms.

These studies highlight the essential role of supplier risk abatement in enhancing competitiveness, operational efficiency and resilience in Nigeria's downstream oil and gas sector. By implementing effective risk management practices, companies can better navigate market challenges, reduce disruptions, and improve their overall competitiveness. However, the following hypotheses will be tested:

- H₀₁:** Supplier risk abatement does not significantly impact cost saving of firms in Nigeria's downstream oil and gas sector.
- H₀₂:** Supplier risk abatement does not significantly impact responsiveness of firms in Nigeria's downstream oil and gas sector.
- H₀₃:** Supplier risk abatement does not significantly impact procurement cycle of firms in Nigeria's downstream oil and gas sector.

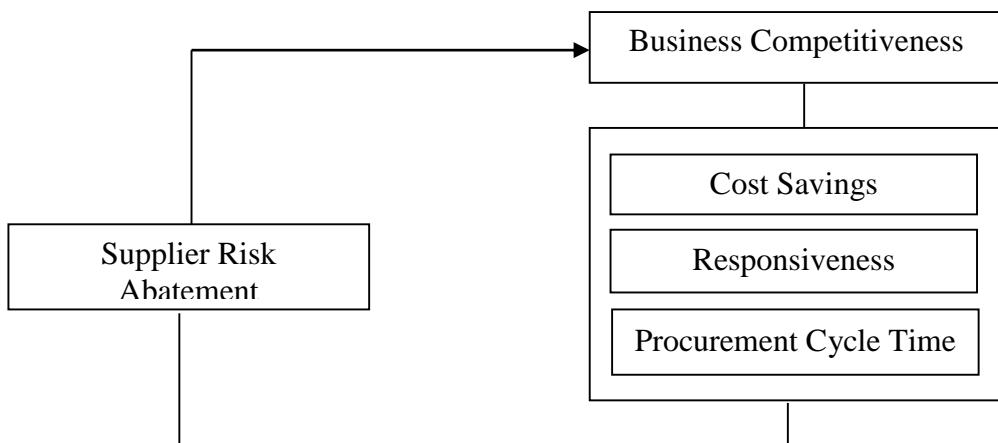


Fig. 1: Operational framework of impact of supplier risk abatement on competitiveness of firms in Nigeria's downstream oil and gas sector.

Methodology

This study adopted causal research design with a cross-sectional approach to establish the impact of supplier risk abatement on business competitiveness in Nigeria's downstream oil and gas sector. The population of the study comprised 20 major downstream oil and gas companies operating in Nigeria, covering key players involved in refining, distribution, and marketing of petroleum products. The population is small, hence all the companies were studied. However, 86 respondents comprising procurement managers, supply chain managers, finance managers, risk management officers and ICT managers provided data for the study through a semi-structured questionnaire consisting 16 measurement items. The instrument was designed in 5-point Likert scale.

To determine the reliability of the instrument, a pilot study (pretest) was conducted and the data were subjected to Cronbach's Alpha reliability test, subject to a threshold of 0.70 set by Nunally (1978). Furthermore, construct validity of the instrument was determined through Exploratory Factor Analysis (EFA). See Table 1 for results of reliability and validity tests. To determine the impact of supplier risk abatement on competitiveness, simple regression analysis was used to test 3 hypotheses at a critical value of 0.05. The analysis was done with the aid of Statistical Package for Social Sciences (SPSS) version 25. Results of the hypotheses are shown in the Tables 2, 3, and 4.

Table 1: Results of Reliability and Validity Tests

S/N	Variables	Number of Items	Cronbach's Alpha Coefficients	Factor Loadings
1	Supplier Risk Optimization	4	0.797	0.736
2	Cost Savings	4	0.759	0.714
3	Organizational Responsiveness	4	0.782	0.848
4	Procurement Cycle Time	4	0.763	0.874

Source: SPSS Output form field data (2025).

Results of the Cronbach's alpha analysis in Table 1 revealed that all the variables in the study produced high Cronbach's Alpha coefficients. This is an evidence to show that, there is inter-item consistency among the variables in the study. In other words, if this study is conducted again in a similar condition the results will be similar to the results of this study. Again, all the variables have high factor loadings greater than 0.4, indicating that the items and variables in the questionnaire measured what they were supposed to measure. These loadings indicated that there is no cross-loading hence there is discriminant validity.

Results and Discussion of Findings

Table 2: Impact of Supplier Risk Abatement on Cost Saving

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	17.343	1.748		9.923	.000
	Supplier Risk Abatement	.236	.080	.632	2.970	.000
a. Dependent Variable: Cost Savings						

Source: SPSS Output form field data (2025).

A simple regression analysis was conducted to determine the impact of supplier risk abatement on cost saving of firms in Nigeria's downstream oil and gas sector. As shown in Table 2, supplier risk abatement has a strong and positive impact on cost savings. This is evident in the Beta Coefficient of 0.632. As shown further, the unstandardized coefficients, the slope B_1 is 0.236, indicating that 1 percent increase in supplier risk abatement will bring about approximately 0.24 percent increase in cost savings. Additionally, the probability value 0.000 is less than 0.05 hence the researchers reject the null hypothesis which states that supplier risk abatement does not significantly impact cost savings of firms in Nigeria's downstream oil and gas sector.

Table 3: Impact of Supplier Risk Abatement on Organizational Responsiveness

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	11.615	2.388		4.863	.000
	Supplier Risk Abatement	.474	.109	.459	4.359	.000
a. Dependent Variable: Organizational Responsiveness						

Source: SPSS Output form field data (2025).

A simple regression analysis was conducted to determine the impact of supplier risk abatement on organizational responsiveness of firms in Nigeria's downstream oil and gas sector. As shown in Table 3, supplier risk abatement has a moderate and positive impact on organizational responsiveness. This is evident in the Beta Coefficient of 0.459. As shown further, the unstandardized coefficients, the slope B_1 is 0.474, indicating that 1 percent increase in supplier risk abatement will bring about approximately 0.47 percent increase in organizational

responsiveness. Additionally, the probability value 0.000 is less than 0.05 hence the researchers reject the null hypothesis which states that supplier risk abatement does not significantly impact organizational responsiveness of firms in Nigeria's downstream oil and gas sector.

Table 4: Impact of Supplier Risk Abatement on Procurement Cycle Time

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	B	Std. Error	Beta			
1 (Constant)	8.098	2.150			3.767	.000
Supplier Risk Abatement	.629	.098	.806		6.424	.000
a. Dependent Variable: Procurement Cycle Time						

Source: SPSS Output form field data (2025).

A simple regression analysis was conducted to determine the impact of supplier risk abatement on procurement cycle time of firms in Nigeria's downstream oil and gas sector. As shown in Table 4, supplier risk abatement has a very strong and positive impact on procurement cycle time. This is evident in the Beta Coefficient of 0.806. As shown further, the unstandardized coefficients, the slope B_1 is 0.629, indicating that 1 percent increase in supplier risk abatement will bring about approximately 0.63 percent increase in procurement cycle time. Additionally, the probability value 0.000 is less than 0.05 hence the researchers reject the null hypothesis which states that supplier risk abatement does not significantly impact procurement cycle time of firms in Nigeria's downstream oil and gas sector.

The simple regression analysis that was conducted to determine the impact of supplier risk abatement on cost savings, organizational responsiveness, and procurement cycle time of firms in Nigeria's downstream oil and gas sector revealed that supplier risk abatement has a strong and positive, significant impact on cost savings, a moderate and positive, significant impact on organizational responsiveness, and a very strong and positive, significant impact on procurement cycle time.

The findings of this study are in line with the findings of Adebayo and Oladipo (2021), Suleiman (2022), Akinsanya and Williams (2020), Nwachukwu and Okafo (2019) and Olanrewaju and Ige (2020) that conducted similar studies. These studies highlight the essential role that supplier risk abatement strategies play in enhancing competitiveness, operational efficiency, and resilience within the Nigerian downstream oil and gas sector. By implementing effective risk management practices, companies can better navigate market challenges, reduce disruptions, and improve their overall competitiveness. In view of the findings above, it is concluded that the application of Supplier Risk Abatement system would improve competitiveness of Firms in Nigeria's Downstream Oil and Gas Sector.

Conclusion and Recommendations

Based on the findings of this study which reveal that supplier risk abatement has a strong and positive, significant impact on cost savings, a moderate and positive, significant impact on organizational responsiveness, and a very strong and positive, significant impact on procurement cycle time, it is concluded that supplier risk abatement has a positive and significant impact on business competitiveness in Nigeria's Downstream Oil and Gas Sector.

In view of the foregoing, it is recommended that, firms in Nigeria's downstream oil and gas sector should design comprehensive supplier risk management systems, including risk mapping, financial health monitoring, contingency sourcing, and joint crisis management protocols with

suppliers. Proactive risk abatement lowers potential opportunism and disruption-related transaction costs by ensuring contracts are enforced effectively and that alternative arrangements are pre-negotiated. Additionally, managing supplier risks reduces the firm's vulnerability to resource shortages and strengthens its bargaining position, mitigating the power imbalance that comes from over-reliance on a single or unstable supplier.

References

- Akinola, O. (2020). Supply chain vulnerabilities and risk management in Nigeria's oil and gas industry. *Journal of African Business*, 21(3), 295–312.
- Akinsanya, A. O., & Williams, T. A. (2020). Supplier risk management strategies in the oil and gas industry: A case study of Nigeria. *Journal of Petroleum Technology and Alternative Fuels*, 11(5), 62-72.
- Amemba, C., Nyaboke, P., & Osoro, A. (2019). Effects of procurement cycle time on supply chain performance. *International Journal of Supply Chain Management*, 8(5), 412–419.
- Basheka, B. C. (2017). Public procurement cycle and its impact on value for money: A comparative analysis. *African Journal of Public Administration*, 9(1), 23–37.
- Brintrup, A., Kito, T., & MacCarthy, B. (2016). Supply network risk propagation and its mitigation. *International Journal of Production Research*, 54(1), 215–236.
- Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *International Journal of Logistics Management*, 15(2), 1–14.
- Chukwu, B. C., & Igwe, K. (2021). Risk management practices and performance of petroleum marketing firms in Nigeria. *International Journal of Energy Economics and Policy*, 11(5), 457–465.
- Eze, R. O., Okoye, A. O., & Nwachukwu, C. (2022). Exchange rate volatility and supply chain risks in Nigeria's oil and gas sector. *Energy Policy Research*, 9(1), 44–58.
- Giannakis, M., & Louis, M. (2016). A multi-agent based framework for supply chain risk management. *Journal of Purchasing and Supply Management*, 22(4), 285–298.
- Ibrahim, Y., & Ahmed, A. (2020). Supplier risks and organizational performance in the oil and gas sector: Evidence from Nigeria. *African Journal of Management Research*, 26(2), 67–82.
- Kaur, P., & Singh, R. (2018). Role of procurement cycle management in enhancing organizational performance. *Journal of Supply Chain Management Research*, 7(2), 56–65.
- Khan, O., & Burnes, B. (2007). Risk and supply chain management: Creating a research agenda. *International Journal of Logistics Management*, 18(2), 197–216.
- Krause, D. R., Handfield, R. B., & Scannell, T. V. (1998). An empirical investigation of supplier development: Reactive and strategic processes. *Journal of Operations Management*, 17(1), 39–58.
- Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2016). *Purchasing and supply chain management (6th edition)*. Cengage Learning.
- Nunnally, J. C. (1978). *Psychometric theory*. McGraw-Hill.
- Nwulu, C. S., & Ateke, B. W. (2018). Frontline employee competence development and responsiveness of quick service restaurants. *European Journal of Social Sciences Studies*, 2(10), 1-17.
- Odeyale, O., & Ogunyemi, A. (2020). Challenges of procurement processes in Nigeria's oil and gas industry. *Journal of African Business*, 21(4), 475–492.

- Ogunyemi, A. A., &Ojo, F. (2019). Supply chain risk management and competitiveness in Nigerian manufacturing firms. *Management Review Quarterly*, 69(4), 345–364.
- Okoro, C. I., & Nwaogbe, O. R. (2021). The challenges of downstream petroleum supply chain management in Nigeria. *International Journal of Supply Chain Management*, 10(2), 92–101.
- Suleiman, M. B. (2022). Enhancing competitiveness of the Nigerian oil and gas industry through effective supply chain risk management. *International Journal of Oil and Gas Management*, 15(1), 45-60.
- Tang, C. S. (2006). Perspectives in supply chain risk management. *International Journal of Production Economics*, 103(2), 451–488.
- Tang, O., & Musa, S. N. (2011). Identifying risk issues and research advancements in supply chain risk management. *International Journal of Production Economics*, 133(1), 25–34.
- van Weele, A. J. (2018). *Purchasing and supply chain management* (7th edition). Cengage Learning.