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Tactical Flexibilities And Supply Chain Performance Of Transportation Companies In Port Harcourt

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Abstract: *This study explores the influence of tactical flexibilities on the supply chain performance of transportation enterprises in Port Harcourt, Nigeria. It emphasizes two pivotal aspects: volume flexibility and routing flexibility. The research employs a descriptive survey methodology, gathering data from 300 participants drawn from registered transportation companies within the area. Utilizing structured questionnaires, the data is processed through SPSS to assess how tactical flexibility strategies impact crucial supply chain performance metrics such as delivery reliability, cost-effectiveness, responsiveness, and customer satisfaction. The results indicate that both volume and routing flexibility notably enhance operational agility and supply chain performance. Volume flexibility facilitates organizations in accommodating variable demand with minimal disturbances, whereas routing flexibility bolsters delivery reliability by enabling real-time route optimization and responsiveness to road and traffic conditions. The study concludes that tactical flexibility is vital for maintaining a competitive edge in dynamic and infrastructure-limited settings like Port Harcourt. It is recommended that transportation companies invest in advanced logistics technologies, scalable capacity solutions, and ongoing staff training to enhance tactical responsiveness. This research contributes to the logistics and supply chain body of knowledge by providing empirical evidence on the role of tactical flexibility in driving performance in emerging urban economies.*

Keywords: Tactical Flexibility, Volume Flexibility, Routing Flexibility, Supply Chain Performance, Transportation, Port Harcourt.

Introduction

In today's fast-paced and competitive business landscape, organizations are required to adapt continuously to ever-changing market demands, technological advancements, regulatory changes, and global economic trends. The transportation sector, which is key to supply chain systems, is particularly vulnerable to these disruptions. With globalization, customers now expect higher levels of service, speed, accuracy, and customization (Tien, 2020). Transportation companies, therefore, need to employ flexible and responsive strategies to maintain their performance and competitive edge. One effective approach is the adoption of tactical flexibilities within the supply chain (Feizabadi, Gligor, & Alibakhshi, 2021). Supply chain performance is typically measured by key indicators such as delivery speed, customer satisfaction, cost efficiency, service quality, and adaptability (Kamble, & Gunasekaran, 2020). Tactical flexibility can significantly enhance these performance metrics. For example, a transport company that can quickly reroute trucks during road blockages or adjust delivery schedules due to security concerns is more likely to satisfy customers and maintain operational efficiency. Likewise, flexibility in vehicle deployment and load management can help minimize fuel costs and reduce turnaround time. Therefore, the ability to respond swiftly and appropriately to changing conditions can markedly boost overall supply chain performance.

However, tactical flexibility is a company's ability to rapidly make short-to-medium-term adjustments in operational processes and supply chain activities in response to internal and external changes (Hoeft, 2022). Unlike strategic flexibility, which involves long-term, structural changes, or operational flexibility, which deals with everyday decisions and actions, tactical flexibility addresses immediate short-term challenges that require efficient responses (Dhir, 2024). In the transportation arena, this may involve rerouting deliveries to avoid traffic jams or unsafe areas, rescheduling pick-ups and drop-offs based on fluctuating customer demands, adjusting vehicle loads, altering delivery frequencies, or reconfiguring fleet deployment in response to fuel shortages, road conditions, or security alerts. Port Harcourt, the capital of Rivers State in Nigeria, is a significant urban and economic hub in the Niger Delta region. It is home to various industrial, commercial, and oil and gas ventures that depend heavily on effective transportation and logistics networks. However, the area faces numerous logistical and infrastructural challenges that impact transportation efficiency. These issues include deteriorating road networks, constant traffic congestion, inadequate traffic control, high vehicle maintenance costs, insecurity, and environmental problems like flooding. Moreover, fluctuations in fuel prices, unreliable power supply, and unstable government regulations often lead to operational unpredictability. For transportation companies operating in such a turbulent environment, adopting tactical flexibilities is not merely a competitive edge but a necessity for survival.

Despite the increasing acknowledgment of the importance of tactical flexibility in global logistics literature, there is a noticeable lack of empirical studies on its role in developing countries, particularly Nigeria. Awwad (2011) evaluated the influence of tactical

flexibilities on the competitive advantage of a firm: An empirical study on Jordanian Industrial Companies. Jum'a, and Bushnaq, (2024) Investigated the role of flexibility as a moderator between supply chain integration and firm performance: the case of manufacturing sector. Khanuja, and Jain, (2021) investigated the mediating effect of supply chain flexibility on the relationship between supply chain integration and supply chain performance. Many Nigerian transportation firms, especially those operating in cities like Port Harcourt, continue to operate with inflexible, linear supply chain structures that are ill-equipped to handle real-time challenges. Their inability to incorporate flexible practices in route planning, fleet scheduling, inventory handling, and customer service often results in inefficiencies, poor customer experience, and financial losses. Furthermore, the unique socio-political and infrastructural landscape in Port Harcourt makes a compelling case for context-specific studies. The mix of urban sprawl, oil-related economic activities, and infrastructural shortcomings presents distinct challenges that generic supply chain models may not fully address. Thus, there is a need for localized research into how tactical flexibilities are being employed by transportation companies in the area and how these influence their performance. This research is timely and significant, as it seeks to explore the extent to which transportation companies in Port Harcourt implement tactical flexibilities in their operations and how these flexibilities affect their supply chain performance.

Statement of the Problem

Transportation is crucial for the efficient operation of supply chains across various industries. In Port Harcourt, a key commercial center and access point to Nigeria's oil-rich Niger Delta region, the transportation sector is vital for the movement of goods, people, and services. Despite its strategic importance, transportation companies in Port Harcourt face numerous challenges that significantly impede supply chain performance. These challenges include inadequate road infrastructure, frequent traffic congestion, unpredictable security risks, fluctuating fuel prices, regulatory hurdles, and environmental issues like flooding. These factors contribute to the high level of uncertainty and dynamism in transportation operations in the region.

Although tactical flexibility holds potential benefits, there is limited evidence of its practice among transportation firms in Port Harcourt and whether it actually leads to better supply chain outcomes. Many transportation companies in the area still operate with inflexible logistical frameworks and outdated processes, restricting their ability to adapt to real-time changes. This lack of adaptability often results in missed deliveries, increased operational costs, customer dissatisfaction, and poor competitive positioning. This study aims to explore the relationship between tactical flexibilities and supply chain performance of transportation companies in Port Harcourt. The goal is to identify how tactical adjustments can be used to enhance efficiency and competitiveness in the region's transportation sector.

Conceptual Framework

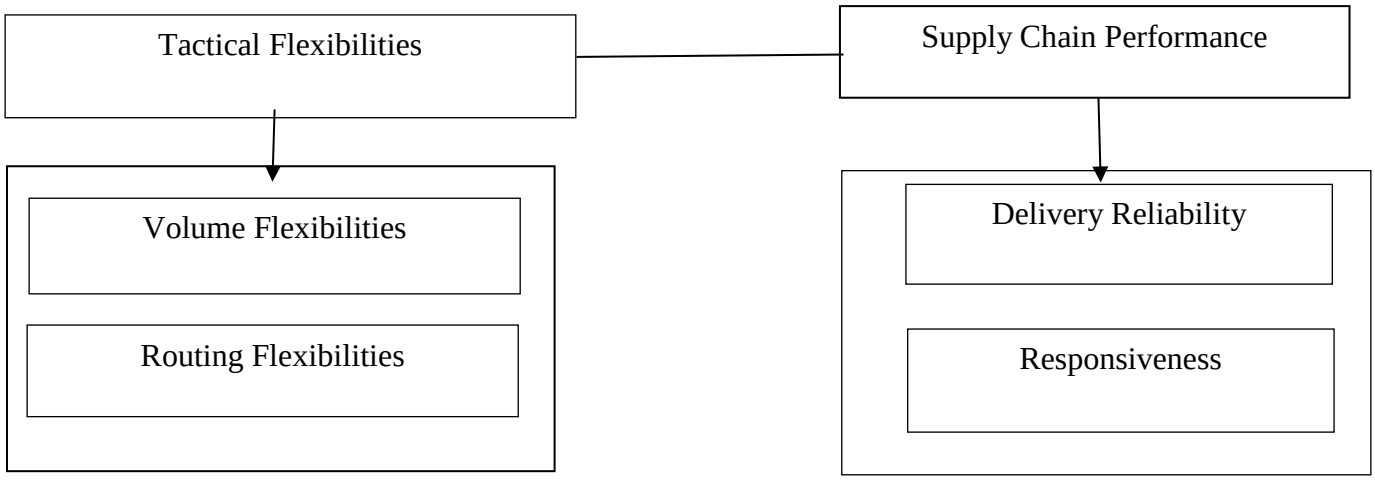

Fig. 1.1: Conceptual model of Tactical Flexibilities and Supply Chain Performance

Source: Adapted from Jeong and Hong (2007); Gerwin, (1993), Stevenson and Spring, (2007)

Aim and Objectives of the Study

The aim of this study is to ascertain the relationship between tactical flexibilities and supply chain performance of transportation companies in Port Harcourt. The specific objectives are to;

i. Determine the relationship between volume flexibilities and delivery reliability of transportation companies in Port Harcourt
ii. Ascertain the relationship between volume flexibilities and responsiveness of transportation companies in Port Harcourt
iii. Examine the relationship between routing flexibilities and delivery reliability of transportation companies in Port Harcourt
iv. Investigate the relationship between routing flexibilities and responsiveness of transportation companies in Port Harcourt

Research Hypothesis

H_{01}: There is no significant relationship between volume flexibility and delivery reliability of transportation companies in Port Harcourt

H_{02}: There is no significant relationship between volume flexibility and responsiveness of transportation companies in Port Harcourt

H_{03}: There is no significant relationship between routing flexibility and delivery reliability of transportation companies in Port Harcourt

H_{04}: There is no significant relationship between routing flexibility and responsiveness of transportation companies in Port Harcourt

Review of Related Literature

Theoretical Foundation: The Dynamic Capabilities Theory, developed by Teece, Pisano, and Shuen in 1997, builds upon the Resource-Based View by emphasizing a firm's ability to integrate, develop, and reconfigure both internal and external capabilities to effectively respond to rapidly changing environments. Tactical flexibility is aligned with this theory as it represents an organization's ability to dynamically sense, seize, and modify operational activities in order to remain resilient and competitive. Dynamic capabilities refer to a company's ability to identify, pursue, and reorganize opportunities and resources in response to rapidly changing environmental conditions (Teece, Pisano, & Shuen, 1997). These capabilities are embedded in an enterprise's organizational and managerial processes and activities (Kindström, Kowalkowski, & Sandberg, 2013). However, not all capabilities are considered 'dynamic'. The dynamic capabilities perspective (DCP) specifically addresses the subset of competencies that enable a company to develop new products and processes and react to changing market conditions (Teece & Pisano, 1994). The DCP highlights adaptability by focusing on firms' abilities to reorganize, respond, and evolve in response to shifting circumstances, rather than on capabilities that focus on maintaining existing resources and competencies (Teece et al., 1997). Even if organizations possess resources, they will not achieve a sustainable competitive advantage without the necessary processes to identify, seize, and reorganize resources in pursuit of new opportunities and to adapt to changing environments (Eisenhardt & Martin, 2000). In Port Harcourt's complex transportation landscape, characterized by volatile fuel prices, varying road conditions, and regulatory challenges, companies that can adeptly adapt their supply chain strategies through flexible approaches are better positioned to sustain consistent performance.

Tactical Flexibilities

Tactical flexibility pertains to an organization's ability to swiftly adjust its operations in response to abrupt environmental changes, unexpected obstacles, or specific customer requirements (Holloway, 2024). Unlike strategic flexibility, which focuses on long-term adaptation, tactical flexibility concentrates on immediate decisions that can stabilize or improve performance amidst uncertainties (Alzoraiki et al, 2024). This adaptability is essential in sectors such as transportation and logistics, where unforeseen factors like infrastructure challenges, weather variations, fuel price fluctuations, and shifting customer expectations can significantly impact performance. Tactical flexibility manifests in various forms, such as rerouting deliveries, modifying transport schedules, switching between different modes of transit like road to water or rail, reallocating vehicles or personnel, and adjusting inventory levels or shipment sizes in real time (Lordieck & Corman, 2021). These quick-response capabilities enable organizations to efficiently manage disruptions like traffic congestion, vehicle malfunctions, or port delays. Tactical flexibility also enhances customer service by minimizing delivery interruptions and maintaining reliability, even in unstable situations.

Transportation businesses, particularly in challenging areas like Port Harcourt, Nigeria, require a high degree of tactical flexibility to address issues related to inadequate infrastructure, inconsistent regulations, and volatile fuel prices. Failure to adapt tactically in such environments may result in extended delivery times, increased operational costs, and a loss of customer trust (Ivanov, 2010). Resources such as real-time information systems, GPS tracking, fleet management software, skilled personnel, and decentralized decision-making structures facilitate tactical flexibility (Verma et al; 2024). These tools enable faster assessments of disruptions and promote rapid decision-making. A flexible organizational culture that encourages innovation and cross-departmental collaboration further supports tactical agility (Akone, & Kinyua, 2025). The true value of tactical flexibility lies in its direct impact on supply chain performance. Research indicates that organizations effectively utilizing tactical flexibility experience improved customer satisfaction, enhanced service reliability, reduced operational costs, and greater resilience against supply chain disruptions

(Kamalahmadi, et al, 2022; Kamalahmadi & Parast, 2017). As a short-term adaptive strategy, tactical flexibility acts as a bridge between strategic planning and daily operations. It serves as a crucial competency that allows organizations, especially transportation firms, to survive and prosper in unpredictable, high-pressure environments. It not only aids in managing daily risks but also ensures consistent supply chain performance, making it an essential component of modern logistics and operations management.

Supply Chain Performance

Performance serves as the evaluative mechanism organizations employ to ascertain the extent to which tasks or activities align with their objectives. Essentially, performance assessment encompasses the evaluation of both the successful and unsuccessful outcomes of activities, including aspects such as productivity and profitability. According to Agami et al. (2012), performance metrics within Supply Chain Management (SCM) can be perceived as a methodological process that gauges whether supply chain entities have experienced growth or decline. Consequently, short supply network performance can be formulated as a methodology for assessing the effectiveness of the supply chain system. Since the late 1990s, the topic of performance evaluation in SCM has increasingly garnered the attention of scholars and enterprises globally (Beamon, 1999). However, assessing network supply performance poses a significant challenge, primarily due to the multitude of factors inherent in the supply network. The study by Gunasekaran et al. (2004) underscored the critical role that SCM plays in attaining a competitive edge, thereby enhancing organizational productivity and profitability.

Therefore, robust performance measurement is imperative. Gunasekaran et al. (2004) further noted that, in contemporary times, many businesses are often remiss in pursuing continual advancements within the supply chain. One contributing factor to some businesses' failures in capitalizing on their supply chain potential is their initial inability to delineate performance metrics and indicators effectively. Beamon (1999) developed a framework for supply chain performance metrics, categorizing them into three types: flexibility, resources, and outputs. Nevertheless, Ibrahim and Ogunyemi (2012) contended that there remains an absence of consensus among scholars regarding the optimal measures of supply chain performance. For instance, Jeong and Hong (2007) advocated for using indicators such as delivery reliability, responsiveness, flexibility, cost, and efficiency to quantify supply chain performance. Conversely, Lee et al. (2007) emphasized cost control and reliability indicators for a similar evaluation in the same period. Sezen (2008) assessed supply chain performance by considering flexibility, output, and resource performance. Additionally, Vanichchinchai and Igel (2009) opted for variables like cost, flexibility, relationship, and responsiveness in their assessment of supply chain performance. In concordance with existing literature, researchers have resolved to adopt three indicators for assessing supply chain performance. The first category comprises resource metrics, which pertain to the efficiency in utilizing network supply resources, such as cost and inventory levels. The second category includes production outputs, represented by metrics such as fill rates, timely delivery, customer response time, and flexibility.

Empirical Review

Awwad (2011) evaluated the influence of tactical flexibilities on the competitive advantage of a firm: An empirical study on Jordanian Industrial Companies. The study targeted operations managers, plant managers, and quality managers in Jordanian Manufacturing Companies listed in Amman Stock Exchange Market. A total of 153 usable responses are received representing a response rate of 69.5%. For the purpose of data analysis, the research utilizes multivariate data analysis using exploratory and confirmatory factor analysis. The results of structural equation modeling analysis indicate significant impact of tactical flexibilities on competitive advantage.

Jum'a and Bushnaq (2024) Investigated the role of flexibility as a moderator between supply chain integration and firm performance: the case of manufacturing sector. This research employed a quantitative method to validate the study's model. Data was collected using an online self-administered questionnaire from 219 managers across various Jordanian manufacturing companies. The researchers used SmartPLS software for structural equation modeling to test the proposed hypotheses. According to the study's findings, companies in Jordan's manufacturing sector could gain from developing a more integrated and adaptable supply chain to enhance Supply Chain Performance (SCP) in today's volatile, uncertain, complex, and ambiguous market environment. Additionally, investments in supply chain management practices related to Supply Chain Integration (SCI) and Supply Chain Flexibility (SCF) had significant positive effects on SCP. Furthermore, SCF notably influenced the relationship between SCI and SCP. Consequently, SCI and SCF enabled firms to achieve optimal performance by enhancing productivity, reducing costs, and improving customer satisfaction.

Khanuja and Jain (2021) investigated the mediating effect of supply chain flexibility on the relationship between supply chain integration and supply chain performance. The researchers utilized the structural equation modeling approach to evaluate data collected from 187 Indian organizations through survey methods. The results reveal that external integration plays a crucial role in enhancing supply chain flexibility (SCF) and supply chain performance (SCP). Additionally, flexibility in sourcing and logistics contributes to improvements in SCP. Mediation analysis indicated that the relationship between customer and supplier integration

with SCP is partially and completely mediated by logistics flexibility, respectively. The study suggests that integration with downstream partners and strong logistics flexibility capabilities significantly impact SCP.

Emon (2025) studied the mediating role of supply chain responsiveness in the relationship between key supply chain drivers and performance: evidence from the FMCG industry. A quantitative research methodology was implemented, employing a structured questionnaire circulated among Fast-Moving Consumer Goods (FMCG) companies in Bangladesh. From the 360 questionnaires distributed, 217 responses were received, of which 198 were deemed valid and consequently utilized in the analysis. To evaluate the proposed relationships, Structural Equation Modeling (PLS-SEM) was conducted using Smart PLS 4 software. Initially, the measurement model was assessed for validity and reliability, followed by an evaluation of the structural model to explore direct and mediating effects. The findings indicate that both Supply Chain Agility (SCA) and Supply Chain Visibility (SCV) significantly affect Supply Chain Responsiveness (SCR), which in turn enhances Supply Chain Performance (SCP). Notably, while Supply Chain (SC) and Technological Integration (TI) do not exert direct effects on SCP, they significantly influence it when mediated by SCR. These results underscore the pivotal role of responsiveness in augmenting the effectiveness of key supply chain drivers within FMCG companies.

Piprani, et al. 2020) investigated supply chain integration and supply chain performance: The mediating role of supply chain resilience. A quantitative methodology utilizing a survey questionnaire was implemented to investigate the hypotheses and theoretical model. Data were gathered from a sample of 182 manufacturing companies located in Pakistan, and the analysis was conducted using SMART PLS version 3.2.7. The findings indicated that Supply Chain Integration (SCI) had a notable influence on Supply Chain Resilience (SCRES), which in turn significantly affected Supply Chain Performance (SCP). However, the relationship between SCI and SCP was not straightforward; it was contingent upon the degree of SCRES.

Cowan et al (2013) studied the role of strategic and tactical flexibility in managing input variability on farms. Utilizing the principles of general systems theory, this paper introduces a conceptual framework aimed at elucidating the tactical and strategic adaptability of agricultural systems, thereby uncovering their sensitivity to fluctuating essential inputs. This model categorizes agricultural systems into three distinct types: rigid, robust, or elastic, based on the farmer's capability to minimize dependence on essential inputs through modifications in the following areas: (i) the utilization of essential inputs and (ii) agricultural yield. The variance in production focus across these system types influences farmers' abilities to manage increased variability and informs public policies intended to support sustainable agricultural enterprises amidst growing variability.

Lartey and Amikiya (2025) investigated enhancing sustainable supply chain performance through circular economy practices: the mediating role of supply chain capability and flexibility. Employing a descriptive survey methodology, data were collected from 120 managers representing ten manufacturing companies in Greater Accra, Ghana. All participants completed and returned their questionnaires. The results indicate that circular economy practices substantially improve the sustainable performance of the supply chains within these firms. Furthermore, it was discovered that supply chain capabilities and flexibility serve as partial and positive mediators in this relationship.

Jermsittiparsert, et al. (2019) Green supply chain practices and sustainable performance: moderating role of total quality management practices in electronic industry of Thailand. This study investigates the potential moderating role of Total Quality Management (TQM) on the impacts of Supply Chain Flexibility (SCF), Supply Chain Governance (SCG), and Green Supply Chain Practices (GSCPs) on the Supply Chain Performance (SCP) of medium-sized industrial enterprises in Saudi Arabia. To achieve this, a dataset comprising information from 312 employees within these firms was collected and subjected to analysis using structural equation modeling (SEM) via the Smart PLS 4 software. The findings indicate that both GSCPs and SCG exert a positive, significant, and direct influence on SCP. Conversely, SCF and TQM were found not to have a direct beneficial impact on SCP. Moreover, the research identified that TQM serves as a moderator in the relationship between GSCPs, SCF, SCG, and SCP.

Methodology

This research utilized a descriptive survey methodology to explore the connection between tactical adaptability and supply chain effectiveness within transportation firms in Port Harcourt. This method was chosen for its effectiveness in assessing current practices, conditions, and perspectives within a specified group. The study population included management and operational staff from registered transportation companies in the Port Harcourt area, comprising roles such as logistics managers, fleet supervisors, operations officers, and supply chain professionals. As reported by the Port Harcourt Transport Union and Ministry of Transport (2024), the city hosts approximately 78 registered transportation businesses. To ensure diverse representation across various transportation sectors (logistics, passenger transport, freight, and delivery services), a stratified random sampling approach was applied. The sample size was determined via the Yamane formula, based on an estimate of 300 relevant employees across the firms. The content validity of the instrument was evaluated by academic specialists in supply chain and logistics management using Statistical Package for the Social Sciences (SPSS) version 25.

Statistical Analyses using Spearman Ranking Correlation

Volume Flexibility and Supply Chain Performance

H_{01}: There is no significant relationship between volume flexibility and delivery reliability of transportation companies in Port Harcourt

H_{02}: There is no significant relationship between volume flexibility and responsiveness of transportation companies in Port Harcourt

			Volume Flexibility	Delivery Reliability	Responsiveness
Spearman's rho	Volume Flexibility	Correlation Coefficient	1.000	.921**	.874**
		Sig. (2-tailed)	.	.000	.000
		N	300	300	300
	Delivery Reliability	Correlation Coefficient	. 921**	1.000	.883**
		Sig. (2-tailed)	.000	.	.000
		N	300	300	300
	Responsiveness	Correlation Coefficient	. 874**	. 883**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	300	300	300

Source: Field Survey Data, 2025, SPSS (Output)

The result shows that volume flexibility has a strong significant relationship and positively correlates with delivery reliability at a Rho = 0.874 and a Pv = 0.000 and volume flexibility further contributes strong and positive correlation towards responsiveness at a Rho = 0. 883 and a Pv = 0.000. The result presents volume flexibility as having a significant and positive impact on the two measures of supply chain performance of transportation companies in Port Harcourt. Therefore, we reject null hypotheses one and two relating to volume flexibility and supply chain performance, because the Pv (0.000) <0.05 level of significance.

Routing Flexibility and Supply Chain Performance

H_{03}: There is no significant relationship between routing flexibility and delivery reliability of transportation companies in Port Harcourt

H_{04}: There is no significant relationship between routing flexibility and responsiveness of transportation companies in Port Harcourt

			Routing flexibility	Delivery Reliability	Responsiveness
Spearman's rho	volume Flexibility	Correlation Coefficient	1.000	.872**	.886**
		Sig. (2-tailed)	.	.000	.000
		N	300	300	300

Delivery Reliability	Correlation Coefficient	. 872**	1.000	. 896**
	Sig. (2-tailed)	.000	.	.000
	N	300	300	300
Responsiveness	Correlation Coefficient	. 886**	. 896**	1.000
	Sig. (2-tailed)	.000	.000	.
	N	300	300	300

Source: Field Survey Data, 2025, SPSS (Output)

The result shows that routing flexibility has a strong significant relationship and positively correlates with delivery reliability at a Rho = 0.872 and a Pv = 0.000 and responsiveness further contributes strong and positive correlation towards supply chain performance at a Rho = 0.886 and a Pv = 0.000. The result presents routing flexibility as having a significant and positive impact on the two measures of supply chain performance and as such contributing significantly toward transportation companies in Port Harcourt. Therefore, we reject null hypotheses one and two relating to routing flexibility and delivery reliability and responsiveness, because the Pv (0.000) <0.05 level of significance.

Discussions of Findings

Volume flexibility refers to a company's capacity to adjust the quantity of goods or services transported in response to changing demand. The study indicated that transportation companies with high volume flexibility were better able to maintain operational efficiency, particularly during demand surges or seasonal variations. Participants from companies with adaptable fleet sizes and resource allocation practices reported greater agility in handling both large and small transport requests without sacrificing cost efficiency or delivery timelines. This finding aligns with Slack (2005), who highlighted the importance of volume flexibility in managing demand variability in uncertain environments. In Port Harcourt, where market conditions are often influenced by factors such as fluctuations in the oil sector, urban growth, and regional trade flows, firms that invested in scalable logistics systems showed improved delivery reliability and cost-effectiveness. This suggests that volume flexibility helps transportation firms reduce idle capacity, avoid stock-outs, and meet customer expectations even when demand changes unpredictably. Routing flexibility is the ability of a company to alter or reconfigure transportation routes in real time based on operational constraints, road conditions, or customer needs. The study found that companies with higher routing flexibility achieved better delivery speed, customer satisfaction, and responsiveness to disruptions. Transportation firms that used intelligent routing systems, real-time traffic updates, or alternative route planning were able to avoid common issues like traffic congestion, roadblocks, or poor road conditions challenges often found in Port Harcourt's transport infrastructure. These firms exhibited greater reliability in meeting delivery schedules and reduced lead times, thereby boosting supply chain performance. This finding supports Christopher (2016), who argued that routing flexibility is a strategic capability in urban transportation systems, particularly in developing cities with unstable road networks. Furthermore, the integration of GPS tracking and dispatch systems by some firms in Port Harcourt provided the operational transparency needed to make real-time routing decisions, thus enhancing agility and building customer trust.

Conclusion and Recommendations

This research explored the impact of tactical flexibilities, specifically volume and routing flexibility, on the supply chain performance of transportation companies in Port Harcourt. The results indicated that these two dimensions are vital in improving the responsiveness, efficiency, and overall effectiveness of transportation operations. Volume flexibility allows transportation firms to adjust to varying demand patterns, utilize resources effectively, and maintain cost-efficiency even during fluctuations. Companies with this capability are better prepared to serve both large and small clients without delays or excessive overhead costs. Conversely, routing flexibility enables the real-time adjustment to road conditions, traffic congestion, and delivery constraints, challenges that are prevalent in Port Harcourt's transportation landscape. Companies capable of swiftly altering routes exhibit higher delivery reliability and customer satisfaction. Collectively, these tactical flexibilities act as strategic instruments for achieving superior supply chain performance in a competitive and unpredictable logistics market. Therefore, the study concludes that integrating flexible tactical systems into transportation operations is not merely an operational advantage but a critical success factor for achieving supply chain excellence in Port Harcourt. In light of the findings and conclusions, the subsequent suggestions are offered:

i. It is advisable for transportation companies to implement modular strategies for vehicle deployment along with adaptable staffing frameworks to enhance their capacity for volume flexibility.

ii. Furthermore, enterprises should consider allocating resources toward fleet management systems equipped with GPS capabilities, tools for monitoring traffic in real-time, and software for dynamic route planning.
iii. Organizations should ensure high flexibility in their operations as such will enhance their fortune.
iv. The transport company should embrace flat organizational structural as such will encourage flexibility in the workplace and enhance the supply chain performance.

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