



Experiential exploration of supplier evaluation and supply chain performance of Shipping firms in Rivers State, Nigeria

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Article Info

ISSN (online): 2582-7138

Volume: 03

Issue: 01

January-February 2022

Received: 06-01-2022

Accepted: 22-01-2022

Page No: 445-454

Abstract

This study investigated the relationship between supplier evaluation and supply chain performance of shipping firms in Rivers State, Nigeria. Correctional design was applied to establish a relationship between supplier evaluation and the measures of supply chain performance. Both primary and secondary methods of data collection were used in obtaining relevant data for analysis. The instrument of data collection employed was the questionnaire. The study population comprised of the forty-five (45) shipping firms operating in Rivers State as enlisted in the Nigerian oil and gas industry annual report (2020). The researchers selected two top management staff from each of the shipping firms operating in Rivers State as respondents for the study hence a total of ninety (90) respondents were used for the study. The data was analyzed using the Pearson's Product Moment Correlation statistic through the aid of statistical packages for social science version 23.0. The result of the findings revealed the existence of significant and positive relationship between supplier evaluation and supply chain performance of shipping firms in Rivers State. The researchers concluded that supplier evaluation relates with supply chain performance of shipping firms in Rivers state and hence recommended that managers of shipping firms should capitalize on the relevant role of supplier evaluation in their operations to ensure efficient supply chain performance.

Keywords: Supplier evaluation, supply Chain, product quality, customer satisfaction, cost reduction

Introduction

The maritime sector is critical to the economies of nations the world over. Due to the tight connection between oil activities and economic progress, most nations, particularly Nigeria, cannot afford to take the oil business lightly (Eluozo, 2018) ^[10]. Following deregulation in the oil sector, an excessive number of firms have begun to battle for advantaged positions and high performance. Also, new entrants are entering the market, resulting in an increasingly hostile and competitive business environment (Eluozo, 2018) ^[10]. Enterprises rely on strategic relationships with their customers and suppliers more than ever before to develop value-added systems that offer them a competitive edge in the market (Ulaga and Eggert, 2006) ^[37].

Due to the fierce competition that forces organizations to focus on competitive advantage strategies and performance in terms of product quality, customer satisfaction, and cost reduction, it is critical for organizations to be extremely efficient in meeting the needs of their customers or clients in a dynamic business environment, which can only be accomplished through careful evaluation, segmentation, and selection of qualified suppliers (Aksoy & Ozturk, 2011) ^[3]. According to Inemek and Matthyssens (2013) ^[16], companies frequently evaluate and select suppliers based on some fundamental performance aspects, such as their ability to achieve certain quality requirements, their delivery schedule, and the price they offer. Nonetheless, modern management must treat suppliers as the organization's best intangible assets in order to flourish and achieve excellent supply chain performance through long-term supplier relationships (Pi and Low, 2006) ^[27].

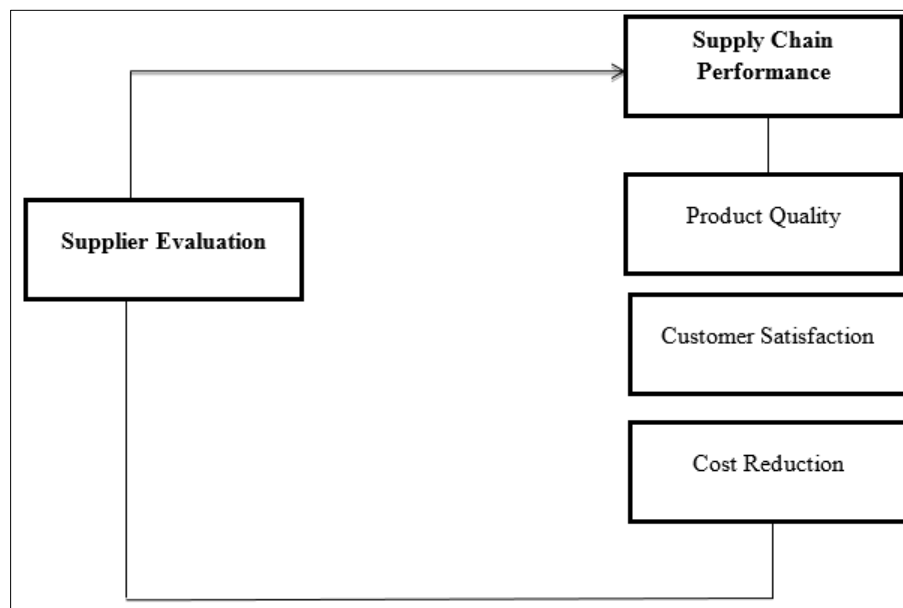
According to Loppacher, Cagliano, and Spina (2011)^[20], the increasing importance and reliance on suppliers within a business's value chain has heightened the need for objective evaluation as a necessary step toward efficient supplier relationship management. In many circumstances, suppliers' ability to meet today's material and service standards is insufficient. Additionally, organizations must decide whether a supplier is adequately equipped to meet the organization's long-term objectives and needs. They say that supplier evaluation is an important part of logistics and supply chain management success. This has become one of the most hotly debated topics in recent literature on logistics and supply chain management.

It is unquestionably true that every organization strives to operate at the optimal level specified in its business plan's performance expectations or objectives. Management scholars from a variety of disciplines, including strategy, operations, human resources, organizational behavior, information systems, marketing, and management accounting and control, are making significant contributions to the field of performance assessment (Akili, 2009)^[1]. Client or customer happiness is determined by the amount to which customer criteria are met, and the degree to which these requirements are met economically becomes the degree of product quality, which eventually results in the ideal level of supply chain performance (Inemek &Matthyssens, 2013)^[16].

By definition, a business's performance is determined by its productivity, which is determined by the satisfaction of clients or customers' desires

However, interactions between shipping enterprises' supply chain partners, particularly in Rivers State, have been rather weak, with many selected suppliers missing salience and true customer-centric partnerships. The challenge for oil service companies in Rivers State is much greater, especially when it comes to providing exceptional services that meet the needs of each customer at a fair price.

It appears that studies examining the relationship between supplier evaluation and supply chain performance of shipping firms in Rivers State are scarce, if they exist at all, which may work against supply chain performance, as previous research on supplier evaluation and supply chain performance does not provide managers in the Nigerian maritime sector with adequate knowledge regarding how supplier evaluation affects a firm's supply chain performance (Akili, 2009; Fujiang, Ye-zhuangand Xiao-lin 2006; Ondieki and Oteki 2015)^[1, 11, 24]. To address this information gap, this research attempted to conduct an empirical investigation of the correlational influence of supplier assessment on the supply chain performance of shipping enterprises in Rivers State, Nigeria. A conceptual framework depicting the relationship between the variables is depicted below.



Source: Authors' conceptualization from the review of related literature, 2022

Fig 1: Conceptual Framework of the relationship between supplier evaluation and supply chain performance of shipping firms in Rivers State, Nigeria

Theoretical Foundations

Social Exchange Theory

Homans proposed the social exchange theory in 1958, and it has gained more traction than ever in the twenty-first century (Yang, Wang & Su, 2006)^[40]. George Homans, a sociologist and founder of this theory, described social exchange theory as the exchange of activities, tangible or intangible, rewarding or costly, between at least two individuals. Homan defined the social exchange theory system in three dimensions: success proposition—if a person is rewarded for doing something, the individual will continue to do the same thing; stimulus proposition—if a person is rewarded for doing something, the individual will continue to do the same

thing; and deprivation—if a person is deprived of something, the individual will continue to do the same thing (Cook & Rice, 2014)^[7].

The importance of this theory to the contemporary business climate cannot be overstated, as it illuminates people's and organizations' understanding of relationships, including business ties, by elucidating why certain relationships succeed while others are problematic. It explains why individuals and businesses enter into and maintain certain connections. Communication and interaction between parties, as well as the variables that regulate human connections, are quite admirable. The idea postulates that in human relations, man is rational in seeking to maximize his

own benefit (Yang, Wang & Su, 2006) ^[40]. This means that people choose whether or not to associate with one another or with the firm that will maximize their social status, objectives, and social standing (Gold, Seuring, & Beske, 2010) ^[12]. The majority of partnerships are founded on shared values such as acceptance, affection, financial support, and companionship. People gravitate toward locations where they can profit.

According to Burnet (2012) ^[5], the imperatives of social exchange theory can be investigated in two ways: (1) social exchange theory contributes to the development of buyer-supplier interactions by progressing from casual to deeper connections. Thus, individuals and organizations are aware of one another's concerns or problems, which facilitates human communication. Furthermore, the theory can be used to examine and describe how individuals and organizations connect through social networks, express their prescriptions and sentiments, and exchange information (Gold, Seuring, & Beske, 2010) ^[12]. The significance of this idea for our study contest is that social contact is a commendable mechanism that enables supply chain partners to develop and manage connections in ways that support their objectives. The model's main point is that humans want a good outcome, which means they want to maximize benefits and minimize costs while making an exchange.

The Nature of Suppliers' Evaluation

The increasing importance and reliance on suppliers throughout an organization's value chain has heightened the requirement for objective supplier evaluation. Supplier evaluation, as defined by Shin, Benton, and Jun (2009) ^[33], is a mechanism for the establishment and advancement of supplier relationships among supply chain participants. The core concept of supplier evaluation is that supply chain companies will be able to generate results that can be used as feedback and present themselves as changed supplier behavior aligned with the assessing company's interests, enhanced supplier performance and capabilities (Dou, Zhu & Sarkis, 2013) ^[9]. Simply put, supplier evaluation is a critical component of business success. Because supply chains include all of the steps needed to get a product to a customer, with suppliers being the main link between raw materials and final product design and delivery (Gong, 2008) ^[13], supplier evaluation is one of the most important things a business should do.

It is undeniably true that one of the most critical responsibilities of a business's purchasing function is the evaluation and selection of its suppliers, as it is necessary to determine whether a supplier can ensure sustained continuity of supply prior to entering into a contractual agreement with that supplier (Pohl & Forstl, 2011) ^[28]. Supplier evaluation and vendor rating are the same thing. They both refer to the process of evaluating the efficiency and effectiveness of a supplier's actions (Modi & Mabert, 2007, p. 6) ^[21].

However, the process of supplier evaluation has grown extremely sophisticated as a result of the large number of variables that must be evaluated. According to Imeri (2013) ^[41], there are more than twenty elements that a procurement manager must examine while evaluating a supplier (cited in Droge). As a result, procurement managers are expected to do a variety of tasks in addition to purchasing commodities. The procurement manager, after doing a review, selects the right supplier who assists them in achieving the firm's broad objectives (Loppacher, Cagliano & Spina, 2011) ^[20]. Thus,

the objective of supplier evaluation is not limited to identifying suppliers that deliver items at the lowest possible cost; it also encompasses determining a supplier's ability to supply products that fulfill the firm's objectives on a continuous or long-term basis.

Understanding Supply Chain Performance

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Organizations are constantly attempting to improve their performance in response to volatile business marketplaces and the necessity to manage their business activities properly. Shin, Benton & Jun, 2009) ^[33] have become critical components of remaining competitive in global competition and boosting performance (Shin, Benton & Jun, 2009) ^[33]. Most firms have recognized that it is not sufficient to enhance internal efficiency; rather, they have realized that increasing supply chain management competitiveness among competitors will significantly increase their chances of survival.

Hammami, Temponi & Frein (2014) ^[15] argue that any company's development and long-term survival in today's competitive market environment is highly dependent on its capacity to provide value in the form of high-quality products and services that satisfy customers at a relatively low cost (Hammami, Temponi & Frein, 2014) ^[15]. Customers define and patronize what they see as valuable, and this patronage manifests itself in a variety of benefits that can be viewed as the supply chain performance of the organization (Inemek & Matthyssens, 2013) ^[16]. Chain of distribution Performance is defined as a firm's efficacy in attaining its objectives. According to Inemek and Matthyssens (2013) ^[16], "performance" is a business jargon or concept that is used to determine an organization's wellbeing condition.

The competition is now between supply chains, not between enterprises. Modi and Mabert (2007) ^[21] define supply chain performance as the difference between an organization's

actual output or outcomes and its anticipated outputs (or goals and objectives) targeted at surviving and remaining in business in the face of competition. Numerous academics have identified various characteristics as the main variables that contribute to supply chain performance. The performance of the overall supply chain can be classified into three categories: financial performance, product performance, and operational performance (adopted in Inemek & Matthyssens, 2013) ^[16]. As a result, this study focuses on operational supply chain performance metrics.

Supply chain performance refers to an organization's ability to accomplish both market-oriented and financial objectives (Askoy & Ozturk, 2011) ^[3]. The short-term objectives of supplier relationship management are to increase productivity and decrease inventory cycle time, while the long-term objectives are to increase market share and profit for all supply chain members by delivering high-quality products and satisfying customers in an efficient manner (Askoy & Ozturk, 2011) ^[3]. According to Inemek and Matthyssens (2013) ^[16], the performance of a supply chain is determined by how well and quickly purchases are made.

The term "supply chain performance" refers to the degree to which a previously set goal is attained through the selection of a certain course of action. Both financial and non-financial indicators have been used to compare and evaluate enterprises throughout time (Gong, 2008) ^[13]. If a supplier relationship management function is able to achieve a set of goals with the least amount of resources and make customers happy, it's called a good supply chain.

Identifying Supply Chain Performance Parameters (i.e.,

According to Waters and Waters (2007) ^[42], performance measurement of a complete supply chain is critical for managing and improving the supply chain itself. This is especially true in contexts where supply chains are viewed as critical to business success (adopted from Inemek & Matthyssens, 2013) ^[16]. Additionally, performance measurement is critical for supplier relationship management, which is the process of managing supplier evaluation, segmentation, and selection (Pohl & Forstl, 2011) ^[28].

Successful supply chain performance measurement is contingent upon the adoption of proper metrics capable of encapsulating the supply chain process as a whole. In this regard, performance measurement measures should give information for internal reasons and the purposes of external stakeholders as well as facilitate ongoing organizational improvement. Among these criteria, product quality, customer happiness, and cost reduction have long been considered as critical indicators of a supply chain's efficiency. Thus, the study's supply chain performance measures are product quality, customer happiness, and cost reduction, as proposed by Pohl & Forstl (2011) ^[28] and Panayides & Venus (2009) ^[26]. The previous section gives an in-depth discussion of supply chain performance metrics.

Product Quality

Due to the fierce competition across many markets today, quality has been considered as an entry level characteristic of the market place since organizations place premium on it in their purchasing decisions (Lee, Rhee & Cheng, 2009; cited in Hammami, Temponi & Frein, 2014) ^[15, 19]. On this note, we view quality as an essential component of market mix that can be adopted by organizations to differentiate effectively,

their products and services from those of their competitors. For instance, many major procurement companies have during the last decades encouraged their suppliers to develop their quality management system and adopt a continuous improvement philosophy that helps eliminate non qualitative or value adding products within the organization (Shin, Benton & Jun, 2009)^[33].

Quality is a factor that makes a product worthwhile. Shin, Benton and Jun (2009)^[33] defines quality as a mix of properties and characteristics that determines the extent to which a product can meet the needs of the consumer. In the views of Araz and Ozkarahan (2011)^[4], quality is the totality of the features and characteristics of product or service especially in meeting certain implied or stated needs. For Panayides and Venus (2009)^[26], quality means not goodness but conformity to certain laid down requirements or expectation. Panayides and Venus (2009)^[26] further stressed that the definition of quality can never make any sense unless it is based on what the customer wants, that is, a product is qualitative only when it conforms to the customer requirements.

Product quality is regarded as an effort to meet or exceed customer expectations through value creation. According to Araz and Ozkarahan (2011)^[4], a product with qualities that meets the standards of consumer's taste has the potential to assume a market leader among its product class. To improve product quality, many companies opt for approach-based prevention. It is important that suppliers guarantee the level of product quality for their offerings (Panayides & Venus, 2009)^[26]. Product quality is therefore, a key factor of supply chain performance. Providing quality products and services in the 21st century is not only to satisfy the customers, but also, to have a safe position in the market place. Quality product delivery and availability of product are critical to supply chain performance improvement.

Customer Satisfaction

No business can exist in the absence of the customer. Implicit in this truism is that every business organization's success depends on the customer. Whenever a business is about to start, customers always come "first" and then the profit. If a customer's satisfaction is earned, then it is sure that the organization will record high performance. Those companies that are succeeding to satisfy the customers fully will remain in the top position in a market (Shin, Benton & Jun, 2009)^[33]. Amazingly today's organizations are beginning to realize that customer satisfaction is the key component for the success of the business and at the same time, plays a vital role in expanding the market value. In general, customers are those people who buy goods and services from the market or business that meet their needs and wants. Customers purchase products to meet their expectations (Lee, Rhee & Cheng, 2009)^[19].

Customer satisfaction has been one of the top tools for successful business adopted in Hammami, Temponi and Frein (2014)^[15] defines customer satisfaction as an overall evaluation based on the total purchase and consumption experience with the good or service overtime. In marketing, customer satisfaction implies performance over expectation; that is, it ascertains the expectation of the customer on how the goods and services are being facilitated by the companies. Satisfaction means to feel content after what the person desired or wanted. It is difficult to know whether customers are satisfied with a company's product or service offering

hence delivering satisfaction must be a conscious task on the part of the organization.

Panayides and Venus (2009)^[26] posit that satisfying the customer is dynamic and relative given the complex nature of the customer. Only the idea "customer-centric" can help companies improve satisfaction and keep customer truly. While improving customer satisfaction, customer expectations should be noticed. Customer satisfaction is influenced by specific product or service features and perceptions of quality thus increased customer satisfaction can provide company benefits like good supplier relationship, customer repurchase and increased customer positive word of mouth communication. When a customer is satisfied with the product or service of a company, such customer tends to purchase frequently and recommend such products or services to potential customers.

At a glance, customer satisfaction is a crucial component of a business strategy as well as customer retention and product repurchase; it is a barometer that predicts the future customer behavior. Yet, it is impossible for a business organization to grow and improve on its supply chain performance when it ignores or disregards the needs of customers. Hence, organizations must ensure that their product or service offerings are commensurate with their customers' expectation. This will increase the satisfaction of their customers and the long-term relationship between the customer and the organization as well as attract new customers through positive word of mouth. Satisfied customers usually rebound and buy more. Besides buying more, they also work as a network to reach other potential customers by sharing experiences thus the value of keeping a customer is only one-tenth of winning another one.

Cost Reduction

With heightened global competition that has reduced the profit margins of most companies, cost cutting has become the option and is being focused in logistics which has become the single largest and most important activity of most firms, both in the public and private sectors (Robert, 2016)^[30]. As such, quite a significant portion of organizations' budgets is spent in these activities. Supplier relationship in particular is crucial in management of a supply chain. Cost is one of the most fundamental and important decisions made by buyers and organizations.

Resources must be sacrificed for any organization to achieve its objectives. From a literary point of view, cost is defined as a resource forgone to achieve a specific goal. This can be expressed as the monetary amount which must be paid to acquire goods and services. The term cost reduction denotes real or genuine saving in production, administration, selling and sharing costs resulting to the elimination of wasteful and inessential elements from the design of the product and from the techniques and practices carried out in connection therewith (Gong, 2008)^[13]. The necessity for cost reduction arises when the profit margin has to be increased without an increase in the sales turnover (Robert, 2016)^[30].

The aim of cost reduction in any organization is to see whether there is any possibility in bringing about a saving in cost incurred- material, labour, overheads, etc. According to Groves, Collins, Gini and Ketter (2014)^[14], cost reduction is to be understood as the success of real and unchanging reduction in the unit costs of goods manufactured without impairing their suitability for the use intended. Low production cost has become one of the primary ways that

organizations compete in a global economy, hence, cost reduction must continually be in the minds of managers of organization (McWatters, Morse & Zimmerman, 2012; cited in Groves, Collins, Gini & Ketter, 2014) ^[14, 22].

Gong (2008) ^[13] remark that cost reduction is a planned approach to reduce expenditure. It is a continuous process of examining critically all elements of cost and each aspect of the business with a view to improve business efficiency, cost reduction is a corrective function. Cost reduction is the process of cutting down costs incurred by an organization for the purpose of making profit. It starts when cost control ends and considers that no cost is at its optimum level. According to Adeniyi (2015) ^[43] in Gong (2008) ^[13], cost reduction starts with an assumption that current cost levels or planned cost levels are too high despite the fact that cost control may be good and organization experiencing high efficiency levels.

Adeniyi (2015) ^[43] views cost reduction as a calculated action plan that is basically adopted by organizations to enable them to diminish expenditures involved in doing business (adopted in Gong, 2008) ^[13]. This entails an attempt at ensuring that costs per units of goods or services without in anyway affecting the benefits of the intended usage of such products. On the other hand, it is the process of achieving and sustaining long term savings without reducing the quantity or quality of products or services offered. In planning for reduction in costs, Adeniyi (2015) ^[43] emphasized that organizations need to adopt crash programs.

Adeniyi (2015) ^[43] viewed cost reduction as that which focuses on established products whereby costs are reduced by lowering costs by adopting a way that reduces the materials used in production or approaches employed in services that will not affect both quantity and quality. Therefore, cost reduction is accomplished in inventory management through lowering costs associated with holding stocks, transporting, warehousing, and delivery. Reduction of costs is achieved at unit levels where accumulation of costs helps to alter physical attributes that makes the unit to become more and more efficient.

Methodology

The research design adopted for this study is correlation. Correlational research design is a survey method that indicates the magnitude or strength and nature or direction of linear relationship that that exists between two or more variables or set of data in a single group of subjects. This study is correlational because the researchers gathered two sets of scores. The study population comprised of the forty-five (45) Shipping firms operating in Rivers State as enlisted in the Nigerian oil and gas industry annual report (2019). The researchers selected two top management staff from each of the forty-five (45) shipping firms operating in Rivers State as respondents of the study hence a total of ninety (90) respondents were used for the study. Categories of persons

that constituted the respondents were Operations Managers and Procurement Managers. The 90 copies of questionnaire were usable for the data analysis. The validity of the scales used in this study was assessed for content, construct and face validity, the The content validity was ensured based on review of similar constructs from major variables of the study- Supplier evaluation and supply chain performance of shipping firms operating in Port Harcourt, Rivers State Nigeria. In construct validity, the questionnaire used by Scannell, (2010) ^[32], Owuor *et al.*, (2015) ^[25] and especially Ondieki, & Oteki, (2015) ^[24] on the effect of supplier relationship management on the effectiveness of supply chain management in the Kenya public sector was adapted, modified and refined to suit our study. Similarly, the researchers used the Cronbach's Alpha analysis to ascertain the reliability and internal consistency of the measurement instrument while the Pearson Product Moment Correlation (PPMC) was used in testing the relationship between (Supplier evaluation and supply chain performance of shipping firms operating in Port Harcourt of Nigeria and the analysis was conducted with the aid of the Statistical Package for Social Sciences (SPSS) version 23.0. Table 1 depicts the instrument reliability values for the study variables

Table 1: Table Depicting Result of the Cronbach Alpha Reliability Test

S/No	Dimension/Measures of the Study	Number of Item	Cronbach's Alpha
1	Supplier Evaluation	5	0.901
2	Product Quality	5	0.750
3	Customer Satisfaction	5	0.865
4	Cost Reduction	5	0.820

Statistical Packages for Social Sciences (SPSS) version 23

Table 1 above shows the reliability values for 4 constructs of the study. Based on the results obtained, all the reliability values were above 0.70 bench mark as posited. The result further depicts that the instruments used for the study had sufficient constructs reliability

Results

Univariate Data Analyses

The primary data analysis was carried out through univariate statistic. The secondary data analysis employed the use of bivariate inferential statistic of Pearson's Product Moment Correlation tool which was used at a 95% confidence level. Specifically, the tests covered hypotheses H_{01} to H_{03} which were bivariate at all, stated in the null manner. The study relied on the Pearson's Product Movement Correlation tool to carry out the analysis thus the probability criterion of 0.05 significance level was adopted for accepting the null hypotheses at ($P > 0.05$) or rejecting the hypotheses at ($P < 0.05$).

Table 2: Descriptive Statistics of Supplier Evaluation

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
We have vendors seeking our approval to become our supplier	76	2	4	258	3.39	.767
Our suppliers always provide inspection records for each order placed.	76	1	5	275	3.62	1.166
Suppliers are located close to our firm	76	1	5	274	3.61	1.212
Products supplied by the supplier are compliant to IS specification.	76	1	5	264	3.47	1.160
Suppliers deliver high quality products	76	1	5	286	3.76	1.221
Valid N (listwise)	76					

Source: Field Survey, 2022.

Table 2 depicts high mean scores of the questionnaire items ranging over 3.00, this means that greater number of the respondents agreed and strongly agreed to the research question with respect to supplier evaluation. However, it can be seen that question 5 which sought to determine the extent

to which suppliers of oil shipping firms in Rivers State deliver high quality products, has the highest mean score of 3.76. This shows that question 5 has the strongest influence on the variables.

Table 3: Descriptive Statistics of Product Quality

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Customers have positive views about our product	76	1	5	169	2.22	1.401
Our customers testify that our products are durable	76	1	5	263	3.46	1.125
Our product meets customers requirement	76	1	5	289	3.80	1.020
We are prompt in identifying client's needs	76	1	5	303	3.99	.683
We empathize with our customers in our product offering	76	1	5	265	3.49	1.238
Valid N (listwise)	76					

Source: Field Survey, 2022.

Table 3 depicts the responses of respondents with respect to product quality. The high mean scores of the questionnaire items ranging over 3.00 implies that greater number of the respondents agreed and strongly agreed to the research question with respect to product quality. Although, as can be observed from the Table, question 1 which tried to determine the extent to which customers have positive views about ` Rivers State oil servicing firms' products showed a mean

response of 2.22, which means that most of the respondents disagreed and strongly disagreed. However, it can be observed that question 4 which sought to determine the extent to which shipping firms in Rivers State are prompt in identifying client's needs, has the highest mean score of 3.99. This shows that question 4 has the strongest influence on the variables.

Table 4: Descriptive Statistics of Customer Satisfaction

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
We prioritize the needs of our customers	76	1	5	320	4.21	.805
We work hard to satisfy our customers	76	1	5	285	3.75	1.072
Our customers place high expectations on us	76	2	4	268	3.53	.757
Our customers are happy with us	76	1	5	320	4.21	.805
We meet up with the performance demand of our customers	76	1	5	285	3.75	1.072
Valid N (listwise)	76					

Source: Field Survey, 2022.

Responses of respondents in Table 4 depicts high mean scores of the questionnaire items ranging over 3.00, this means that greater number of the respondents agreed and strongly agreed to the research question with respect to customer satisfaction. However, it can be observed that questions 1 and 4 which sought to determine the extent to

which shipping firms in Rivers State prioritize the needs of their customers and the extent to which customers are happy with them, have the highest mean score of 4.21 respectively. This shows that questions 1 and 4 have the strongest influence on the variables.

Table 5: Descriptive Statistics of Cost Reduction

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Our firm records low operations cost.	76	1	5	229	3.01	1.361
When we reduce cost, profit is maximized in our firm	76	1	5	269	3.54	1.137
We avoid costs not associated with stock value	76	1	5	284	3.74	1.136
Our firm minimize avoid wastage	76	1	5	287	3.78	.918
We make proper research before we take any purchase decision	76	1	5	282	3.71	1.209
Valid N (listwise)	76					

Source: Field Survey, 2022.

Responses of respondents in Table 5 depicts high mean scores of the questionnaire items ranging over 3.00, this means that greater number of the respondents agreed and strongly agreed to the research question with respect to cost reduction. However, it can be observed that question 4 which sought to determine the extent to which shipping firms in Rivers State minimize to avoid wastage, has the highest mean score of 3.78. This shows that question 4 has the strongest influence on the variables.

Test of hypotheses

H₀₁: There is no significant relationship between supplier

evaluation and product quality of shipping firms in Rivers State.

From the result in Table 6, it is observed that there is a correlation coefficient of 0.861** between supplier evaluation and product quality, indicating a very strong and positive relationship between supplier evaluation and product quality. More so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a very strong significant relationship between supplier evaluation and product quality. This further implies that supplier evaluation can be used to achieve product quality among shipping firms in Rivers State. Based on this, we reject the null hypothesis that there is no

significant relationship between supplier evaluation and product quality of shipping firms in Rivers State and accept the alternate hypothesis that there is a very strong, significant relationship between supplier evaluation and product quality

of shipping firms Rivers State.

H0₂: There is no significant relationship between supplier evaluation and customer satisfaction of shipping firms in Rivers State

Table 6: Relationship between Supplier Evaluation and Product Quality

		Supplier Evaluation	Product Quality
Supplier Evaluation	Pearson Correlation	1	.861**
	Sig. (2-tailed)		.000
	N	76	76
Product Quality	Pearson Correlation	.861**	1
	Sig. (2-tailed)	.000	
	N	76	76

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7: Relationship between Supplier Evaluation and Customer Satisfaction

		Supplier Evaluation	Customer Satisfaction
Supplier Evaluation	Pearson Correlation	1	.597**
	Sig. (2-tailed)		.000
	N	76	76
Customer Satisfaction	Pearson Correlation	.597**	1
	Sig. (2-tailed)	.000	
	N	76	76

** . Correlation is significant at the 0.01 level (2-tailed).

Notably also in Table 7, it is observed that there is a correlation coefficient of 0.597** between supplier evaluation and customer satisfaction, indicating a moderate and positive relationship between supplier evaluation and customer satisfaction. More so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a moderate significant relationship between supplier evaluation and customer satisfaction. This further implies that supplier evaluation can be used to achieve customer satisfaction among shipping firms in Rivers State. Based on

this, we reject the null hypothesis that there is no significant relationship between supplier evaluation and customer satisfaction of shipping in Rivers State and accept the alternate hypothesis that there is a moderate, significant relationship between supplier evaluation and customer satisfaction of shipping firms in Rivers State.

H0₃: There is no significant relationship between supplier evaluation and cost reduction of shipping firms in Rivers State

Table 8: Relationship between Supplier Evaluation and Cost Reduction

		Supplier Evaluation	Cost Reduction
Supplier Evaluation	Pearson Correlation	1	.928**
	Sig. (2-tailed)		.000
	N	76	76
Cost Reduction	Pearson Correlation	.928**	1
	Sig. (2-tailed)	.000	
	N	76	76

** . Correlation is significant at the 0.01 level (2-tailed).

Also, in Table 8, it is observed that there is a correlation coefficient of 0.928** between supplier evaluation and cost reduction, indicating a very strong and positive relationship between supplier evaluation and cost reduction. More so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a very strong significant relationship between supplier evaluation and cost reduction. This further implies that supplier evaluation can be used to achieve cost reduction among shipping firms in Rivers State. Based on this, we reject the null hypothesis that there is no significant relationship between supplier evaluation and cost reduction of shipping firms in Rivers State and accept the alternate hypothesis that there is a very strong, significant relationship between supplier evaluation and cost reduction of shipping firms in Rivers State.

Discussion of Findings

The analysis of the study revealed a correlation coefficient of

0.861** between supplier evaluation and product quality, indicating a very strong and positive relationship between supplier evaluation and product quality. More so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a very strong significant relationship between supplier evaluation and product quality. The analysis results also revealed a correlation coefficient of 0.597** between supplier evaluation and customer satisfaction, indicating a moderate and positive relationship between supplier evaluation and customer satisfaction. More so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a moderate significant relationship between supplier evaluation and customer satisfaction. Further, the study result showed a correlation coefficient of 0.928** between supplier evaluation and cost reduction, indicating a very strong and positive relationship between supplier evaluation and cost reduction. More so, the probability value (0.000) is less than the critical value (0.05),

this shows that there is a very strong significant relationship between supplier evaluation and cost reduction. The results as discussed therein are evidenced in Tables 5,6 and 7 respectively.

These findings are in line with the findings of other authors in the area of supplier evaluation. Specifically, the study result corroborates with the findings of Prahinski and Benton (2004)^[29] who studied supplier evaluations: communication strategies to improve supplier performance and found that supplier evaluation significantly improves supplier performance. The findings also converge with Theodorakioglou, Gotzamani and Tsiolvas (2006) on supplier management and its relationship to buyers' quality management of Kenyan companies which found that there is strong significant and positive relationship between supplier evaluation dimension of the study and buyers' quality management of Kenyan companies.

The study analysis result agree with Owuor, Muma, Kiruri and Karanja (2015)^[25] who investigated effect of strategic supplier relationship management on internal operational performance of manufacturing firms in Kenya and revealed that there is significant and positive relationship between supplier evaluation dimension of the study and internal operational performance of manufacturing firms in Kenya. Finally, the result of the study agrees with the views of Robert (2016)^[30] on effect of supplier relationship management on organizational performance in Kenya Airways Limited which indicated significant and positive relationships exist between supplier evaluation dimension of the study and organizational performance in Kenya Airways Limited.

Conclusion

In line with the findings of this study the researchers conclude that supplier evaluation has significant and positive relationship with supply chain performance of shipping firms in Rivers State, Nigeria. Thus, this implies that supplier evaluation is a key enabler of growth and improvement in supply chain performance and the researchers therefore conclude that supplier evaluation affect supply chain performance of shipping firms in Port Harcourt, Rivers state Nigeria. Based on the theoretical and empirical findings, the researchers recommend that managers of shipping firms in Port Harcourt, Rivers state should take advantage of the influential role of supplier evaluation in their operations as to ensure the enhancement supply chain performance.

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