

## **SUPPLIER EVALUATION AND SUPPLY CHAIN PERFORMANCE OF SHIPPING FIRMS IN RIVERS STATE, NIGERIA**

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**ABSTRACT:** *This study investigated the effect of supplier evaluation on supply chain performance of shipping firms in Rivers State, Nigeria. The study adopted an explanatory research design with a causal type of investigation. Both primary and secondary methods of data collection were used to obtain 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). Two top management staff from each of the shipping firms operating in Rivers State were selected 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. It was concluded that supplier evaluation affect 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.*

**KEY WORDS:** supplier evaluation, product quality, customer satisfaction, shipping firms and supply chain performance

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## **INTRODUCTION**

The maritime sector plays a very prominent role in the economy of nations, world over. Due to the close link between oil activities and economic development, most nations cannot afford to treat the oil industry with levity (Eluozo, 2018). Following the deregulation in the oil sector, too many companies have begun to compete for advantage positions and high performance, new entrants are also finding their way into the industry thereby making the business environment increasingly hostile and competitive (Eluozo, 2018). Presently, more than ever, enterprises are depending on strategic relations with their customers and suppliers in order to create value-added systems that will give them a competitive edge in the market (Ulaga & Eggert, 2006).

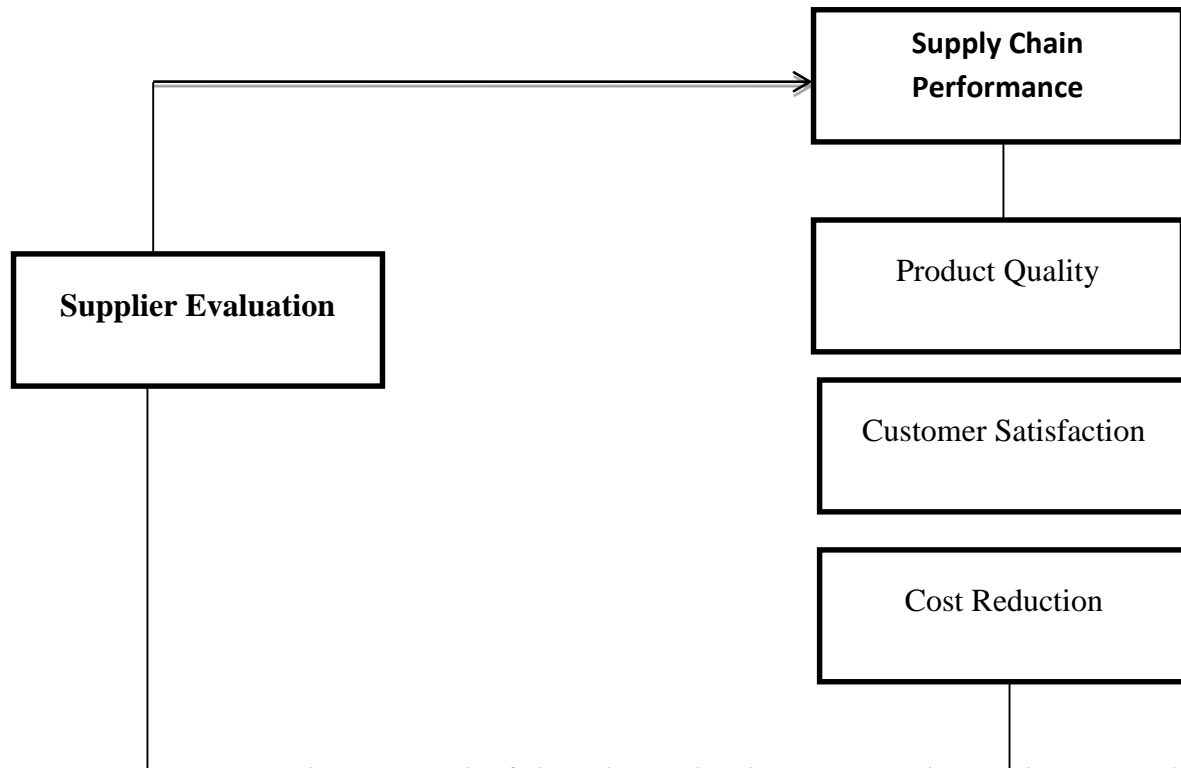
The fact that organizations face stiff competition which compels them to focus on competitive advantage strategies and performance in terms of product quality, customer satisfaction and cost reduction has made it imperative for organizations to be very efficient in meeting the needs of their customers or clients in a dynamic business environment which can only be achieved through careful evaluation, segmentation and selection of qualified suppliers (Aksoy & Ozturk, 2011). Inemek and Matthyssens (2013) posited that most often, suppliers are evaluated and selected by organizations based on some basic performance factors such as the ability to meet some quality standards, their delivery schedule and the price they offer. Nevertheless, the modern management must recognize suppliers as the best intangible assets of the organization in its contractual criteria in order to succeed and gain high supply chain performance through long-term supplier relationships (Pi & Low, 2006).

According to Loppacher, Cagliano and Spina (2011) assert that the growing role and dependence on suppliers within the company's business chain has increased the need for objective evaluation as a key step to effective supplier relationship management. In many cases it is not sufficient that suppliers are able to meet the materials and service requirements of today. Organizations also need to determine whether a supplier is sufficiently equipped to live-up to the company's long-term requirements and needs. It is on this note that Jaber, Bonney and Guiffrida (2010) describe supplier evaluation as bedrock of success in logistics and supply chain management and has become one of the most critical issues at the heart of recent literature on logistics and supply chain management.

It is undoubtedly true that every company struggle to reach the optimal level of performance expectations or objective stated in its business plan. Management researchers in areas as diverse as strategy management, operations management, human resources, organizational behaviour, information systems, marketing, and management accounting and control, are contributing to the field of performance measurement (Akili, 2009). The extent to which customer requirements are met determine clients or customer satisfaction and the degree of meeting these requirements in terms of cost then becomes the degree of product quality which ultimately leads to optimal level of supply chain performance (Inemek & Matthyssens, 2013). Performance of a company is linked to productivity which results from satisfaction of clients or customers' desires. However, the relationships that exist among supply chain partners of shipping firms, has been relatively weak, with many selected suppliers lacking saliency and true customer based relationship (Magid, Cox & Cox, 2006). For oil servicing firms in Rivers State, the challenge is even bigger, more so with regard to providing qualitative services relevant to clients' specific needs at a reduced cost.

It appears that studies showing the link between supplier evaluation and supply chain performance of shipping firms in Rivers State are scarce, and this arguably militate against the supply chain performance as previous researches on supplier evaluation and supply chain performance do not provide adequate knowledge for managers in the Nigerian maritime sector on how supplier evaluation affects a firm's supply chain performance (Akili, 2009 ; Fu-jiang, Ye-zhuang and Xiaolin 2006; Ondieki and Oteki 2015). Against this backdrop, this paper was designed to fill the

knowledge gap as it sought to investigate the correlational effect of supplier evaluation on supply chain performance of shipping firms in Rivers State, Nigeria.



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

*Source: Authors' conceptualization from the review of related literature, 2021.*

## LITERATURE REVIEW

### Theoretical Foundation

The social exchange theory was propounded by Homans in 1958 and has continued to gain grounds in the 21<sup>st</sup> century more than ever (Yang, Wang & Su, 2006). The sociologist and originator of this theory George Homans defined social exchange theory as the exchange of activity, tangible or intangible and more or less rewarding or costly, between at least two persons. Homan explained the system of social exchange theory in three dimensions; success proposition-if a person is rewarded for doing something, the individual will continue that same behaviour, the second variable is stimulus proposition and the third dimension, deprivation (Cook & Rice, 2014).

The importance of this theory to the current business environment cannot be anytime more important than now as it illuminates people and organizations understanding of relationships in terms of why some relationships work while some are dysfunctional, including business

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relationships. It explains the rational for individuals and firms' choice of commencing and remaining in some relationships. The communication and interaction between parties and the variables governing the connections in people is very laudable. The theory posits that in human interactions, man is rational to maximize profit individually (Yang *et al.*, 2006). This means that humans decide whether or not to enter into relationship with one another or the firm that will maximize their social status, objective and standing in society (Gold, Seuring & Beske, 2010). Most relationships are based on values of acceptance, affection, financial support, companionship etc. People tend to relate in spaces that they can benefit.

Burnet (2012) concludes that the imperatives of the social exchange theory can be explored in two folds; social exchange theory helps in driving buyer-supplier relationships as it graduates from mere relationship to deeper connections. Thus, individuals and organizations alike are aware of each other's challenges or problems, this inform communication among humans. The theory serves as a valid prescription for investigating and explaining how individuals and organizations connect themselves through social networks, express their prescriptions and feelings and transmit information among themselves (Gold, Seuring & Beske, 2010). The importance of this theory to our study context is that social interaction is a laudable contrivance that helps supply chain partners to build and manage their relationships in ways that meet their objectives. Put best, the high point of this model is that humans strive for a positive outcome which is to maximize benefit and minimize cost when engaging in an exchange (Holthausen, 2013).

### **Nature of Supplier Evaluation**

The growing role and dependence on suppliers among organizations business chain has increased the need for objective supplier evaluation. Shin, Benton and Jun (2009) defined supplier evaluation as a mechanism for the development and advancement of supplier relationship among supply chain partners. The underlying idea behind supplier evaluation is that supply chain organizations will be able to produce results that may be used as feedback and manifested in changed supplier behaviour aligned with the evaluating company's interests; improved supplier performance and capabilities (Dou, Zhu & Sarkis, 2013). Simply put, supplier evaluation is a veritable tool for organizations success, because supply chains encompass all links necessary for conveying a product to the final customer, with suppliers forming major links between the raw materials, final product design and delivery (Gong, 2008).

It is undoubtedly true that one of the most important responsibilities within the purchasing function of a business is the evaluation and selection of its suppliers as it is necessary to know if a supplier can guarantee sustained continuity of supply before engaging such supplier in contractual agreement (Pohl & Forstl, 2011). The terms supplier evaluation and vendor rating are used interchangeably and can be viewed as the process of quantifying the efficiency and effectiveness of supplier action (Modi & Mabert, 2007). However, the process of supplier evaluation has become a very complicated task as many factors must be considered. Droge, Vickery and Jacobs, (2012); Imeri (2013) argue that there are more than twenty factors a procurement manager must put into consideration during the process of evaluation of the supplier. It is therefore understood that procurement managers do a

lot more work other than buying goods. The procurement manager through evaluation selects the appropriate suppliers that help them in accomplishing the wide objectives of the firm (Loppacher, Cagliano & Spina, 2011). Thus, the aim of supplier evaluation is not restricted to selection of suppliers who provide the products for lowest cost; it also cuts across the determination of a supplier's ability in supplying the products that meets the goal of the firm on a continuous or long term basis. It can therefore be said that supplier evaluation is one of the most critical activities a firm should focus on (Araz & Ozkarahan, 2007).

### **Understanding Supply Chain Performance**

Today, organizations are striving to improve their performance in response to turbulent business markets and the need to efficiently control their business activities. The understanding and practice of supply chain management has become an essential prerequisite for staying competitive in the global race and enhancing performance (Shin, Benton & Jun, 2009). Most organizations have begun to realize that it is not only enough to improve efficiencies within an organization but rather making the supply chain management competitive among others will greatly improve their chances of survival.

The progress and enduring survival of any business organization in today's aggressive market condition depends largely on its ability to offer value in terms of quality products and services that meets the customer's satisfaction at a relatively reduced cost (Hammami, Temponi & Frein, 2014). Customers define and patronize what they perceive as value and this patronage metamorphoses into benefits of many kinds which can be viewed as the firm's supply chain performance (Inemek & Matthyssens, 2013). Supply chain performance is viewed as the effectiveness of firms in achieving their purpose. Inemek and Matthyssens (2013) hold that performance is a business jargon or construct that is applied in ascertaining the wellness status of an organization.

Competition is no longer between organizations, but among supply chains. According to Modi and Mabert (2007), supply chain performance is concerned with the actual output or results of an organization as measured against its intended outputs (or goals and objectives) aimed at surviving and remaining in business in spite of the competition. Different researchers have proposed different variables as being the fundamental variables that ensure good supply chain performance. Overall supply chain performance can be divided into three parts: financial performance, product performance and operational performance (Inayatullah, Rakesh & Amar, 2012; Inemek & Matthyssens, 2013) thus this study places anchor on operational supply chain performance measures.

Supply chain performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Askoy & Ozturk, 2011). Akintokunbo and Akpotu (2020) allude to this by positing that work processes and strategies are crafted to facilitate prompt response to market needs. The short-term objectives of supplier relationship management are primarily to increase productivity and reduce inventory cycle time, while long-term objectives are to increase market share and profit for all members of the supply chain through qualitative product delivery

and customer satisfaction in cost effective way (Askoy & Ozturk, 2011). According to Inemek and Matthyssens (2013), supply chain performance refers to the outcome of purchasing effectiveness and purchasing efficiency.

Supply chain performance highlights the extent to which, the choice of a certain course of action, leads to meeting a previously established goal. Financial and non-financial metrics have served as a tool for comparing organizations and evaluating an organization's behaviour over time (Gong, 2008). Performance in supply chain is considered as the extent to which the supplier relationship management function is able to realize its predetermined goals at the minimum utilization of the organization's resources and to the delight of customers (Shin, Benton and Jun, 2009).

### **Identifying Supply Chain Performance Parameters**

Waters (2007); Inemek and Matthyssens, (2013) assert that performance measurement of an entire supply chain is essential when managing and developing the supply chain itself, and becomes particularly important in those contexts where supply chains are considered as key factor of corporate success. Moreover, performance measurement is crucial for supplier relationship management; this includes the process of managing the processes of evaluation, segmentation and selecting between suppliers (Pohl & Forstl, 2011).

Successful supply chain performance measurement relies on the adoption of appropriate metrics, able to capture the entire essence of the supply chain process. In this respect, performance measurement metrics should provide information for internal needs and external stakeholders' purposes as well as enable continuous organizational improvement. Among those metrics, product quality, customer satisfaction and cost reduction have long been recognized as important for assessing the efficiency of the supply chain. Thus, the measures of supply chain performance as posited by Pohl and Forstl, (2011); Panayides and Venus, (2009) and used for the study are product quality, customer satisfaction and cost reduction. The preceding section provides an elaborate discourse on the measures of supply chain performance.

### **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, 2013; Hammami, Temponi & Frein, 2014). 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).

Quality is a factor that makes a product worthwhile. Shin, Benton and Jun (2009) defines quality as a mix of properties and characteristics that determines the extent to which a product can meet

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the needs of the consumer. In the views of Araz and Ozkarahan (2007), 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), quality does not mean goodness but conformity to certain laid down requirements or expectation. They 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 (2007), a product with qualities that meet the standards of consumer's taste has the potential to become 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). Product quality is therefore, a key factor of supply chain performance. Providing quality products and services in the 21<sup>st</sup> 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). 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. 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 *et al.*, 2013).

Customer satisfaction has been one of the top tools for successful business. Tao (2014); Hammami, Temponi and Frein (2014) define 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 (Vouzias & Psychogios, 2012). 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) 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. 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

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supplier relationship, customer repurchase and increased customer positive word of mouth communication (Tao, 2014). 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 behaviour (Caridi, Pero & Sianesi, 2012). 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 (Tao, 2014). Organizations must ensure that their product or service offerings are commensurate to 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 (Vouzaz & Psychogios, 2012). 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 (Caridi, Pero & Sianesi, 2012).

### **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). 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 in 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). The necessity for cost reduction arises when the profit margin has to be increased without an increase in the sales turnover (Robert, 2016).

The aim of cost reduction in any organization is to seek possibility of bringing about a saving in cost incurred- material, labour, overheads, etc. According to Groves, Collins, Gini and Ketter (2014), 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, 2001; Groves *et al.*, 2014).

Gong (2008) 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



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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 (2008) and Gong (2008), 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 (2008); Gong (2008) view cost reduction as a calculated action plan that is basically adopted by organizations to enable them to diminish expenditures involved in doing business. 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 (2008) emphasized that organizations need to adopt crash programs.

Adeniyi (2008) 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**

This study adopted an explanatory research design with a causal type of investigation. 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 researcher selected two 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 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), Owuor, Muma, Kiruri & Karanja, (2015) and especially Ondieki, & Oteki, (2015) 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 researcher 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, Nigeria and the

analysis was conducted with the aid of the Statistical Package for Social Sciences (SPSS) version 23.0.

**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 by Nunally (1978). The result further depicts that the instruments used for the study had sufficient constructs reliability.

## DATA ANALYSIS AND RESULTS

### Univariate Data Analysis

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 and 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, 2021.**

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, 2021.**

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, 2021.**

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, 2021.**

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

H<sub>01</sub>: There is no significant relationship between supplier evaluation and product quality 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).

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.

Ho<sub>2</sub>: There is no significant relationship between supplier evaluation and customer satisfaction of shipping firms in Rivers State.

**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.

Ho<sub>3</sub>: 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, 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) 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 *et al.*, (2015) 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) 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 AND RECOMMENDATION

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 researcher 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 of supply chain performance.

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