PROCUREMENT PRACTICES AND SUPPLY CHAIN PERFORMANCE OF FOOD BEVERAGE FIRMS IN RIVERS STATE

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Abstract

The study examines the nexus between procurement practices (PP) and supply chain performance (SCP) of food and beverage firms in Rivers State. Procurement practices specifically focus on strategic supplier partnership, and reverse logistics as its dimensions while supply chain performance has its measures as flexibility and cost reduction. The study is underpinned by social exchange theory. We adopt a correlational study design with a cross-sectional survey carried out in a contrived study environment. This census study comprises of 25 food and beverages firms in Rivers State and five copies of the questionnaire were administered to respondents in each of the twenty-five companies, thus resulting in a sample size of 125. Data were analysed with Pearson Product Moment Correlation (PPMC) with the aid of SPSS 23.0. Our findings reveal that strategic supplier partnership and reverse logistics both have strong and positive relationship with supply chain performance measures and based on these findings, the study concludes that procurement practices significantly relate to supply chain performance. We therefore recommend that food and beverages firms in Rivers State should acquire, build and maintain collaborative relationship with their suppliers in order to improve supply chain performance and also develop frameworks that ensure recycling, remanufacturing and reuse of materials that will result in flexibility and cost effectiveness.

Keywords: Cost reduction, flexibility, procurement practices, reverse logistics, strategic supplier partnership, supply chain performance.

Introduction

Firms are now seeking better procurement practices and collaboration through strategic partnership that emphasize environmental responsible approaches in their supply chain practices in an attempt to maintain effective and efficient delivery system, reduce operating cost, attain timely project delivery and gain competitive advantage (Liu et al., 2023; Munir et al. 2023; Yip, Zhou, & To, 2023). Thus, individual supply chain firms are now able to integrate their myriads of activities into a seamless whole to gain competitive advantage through cooperation and collaboration (Doumbia, Awudu, Yakubu and Ganideh, 2021).

Procurement is the starting point of supply chain management (Charkha, & Jaju, 2014) and it is a critical function that directly affects the performance of an organization. It involves the acquisition of goods and services, the selection of supplier, contract negotiation and management (Jama & Mohamud, 2024). Additionally, effective procurement cuts across myriads of strategies and practices such as supplier management, centralization, automation, and strategic sourcing (Munir et al., 2023). Fundamentally, efficient procurement can affect an organization's strategic purpose, like streamlining the processes, optimizing costs, and acquiring the right supplies that can timely match optimum production pace (Corboș, Bunea, & Jiroveanu, 2023). Therefore, organizations adopting procurement practices must focus on achieving and sustaining high- cost reductions, quality output, and timely deliveries. (Flynn, Sakakibara & Schroeder, 2014).

In today's economy, supply chain performance is viewed as the new yardstick for competition rather than the performance of individual companies (Wambui & Chege, 2024) since the efficiency of a company's supply chain determines its long-term viability (Njenga, 2018). firms seeking to achieve their overall goals

in supply chain performance, must devote more efforts at optimizing their procurement processes and strategies (Cao & Wang, 2022; Mohamud et al., 2023). This is important because customers judge a firm's performance by their supply chain performance, signifying supply chain performance is a vital factor for the survival of firms operating in a highly competitive environment (Eyaa & Ntayi, 2010).

Many industries across the globe including the U.K. have placed emphasis on certain metrics of supply chain performance such as, customer service goals, on-time supplier delivery, inventory investment, material availability etc. (León-Bravo et al., 2017). Supply chain performance encourages competition among firms in various industries; thus, it becomes a major way companies gain competitive edge across industries (Nandi et al., 2020) and also a competitive strategy capable of enhancing a firm's productivity and profitability (Hastig & Sodhi, 2020Opio, 2016).

The food and beverage industry in Nigeria generate substantial revenue, offers many job opportunities, thus contributing significant to her economy (Fedderke & Szalontai 2012; Adebanjo, 2011 as cited in Iyo, 2025). As the biggest sub-sector in the Nigerian manufacturing industry as listed on the Nigerian Stock Exchange (Zhou, 2021), the sector promotes a higher standard of living and increases the prosperity of the Nigerian economy (Cronin, 2015; Iyo, 2025). As a dynamic and growing sub-sector of the manufacturing industry, it opens it to several opportunities and also places it in a tense competition where it faces intense threats (Akpan & Ikon, 2016KPMG, 2015). This is evidenced by so many new beverage products that are displayed on the shelves in retail outlets in Port Harcourt a mega urban city in South South Nigeria.

There has been deployment of new strategies in the food and beverages firms in Nigeria as a result of expansion and growth (Wambui & Chege, 2024) that can enhance a firm's performance including supply chain performance, Procurement practices touch many core aspects of a company's operations and, hence, their successful deployment and use are critical to performance and survival. On the other hand, supply chain performance shows the ability of a supply chain in reducing costs, inadequacies, fulfilling customer requirements (Alahmad, (2021) and the degree to which a supply chain satisfies its customers' needs and wants with respect to product availability and delivery time (Tarafdar & Qrunfleh, 2017).

However, companies in Nigeria are having trouble deciding on appropriate performance strategies that affect supply chain performance (Njoku & Kalu, 2017). Ineffective procurement processes, stockouts, logistic challenges among others are some challenges facing supply chain performance (Samir & Aman, 2017). It is quite obvious that some firms invest deeply in their supply chain components but do not considerably translate into profits or better performance (Njoku & Kalu, 2015). This suggest that these firms do not have the knowledge of appropriate supply chain management strategies that can boost their performance. Unfortunately, Agu, Obi-Anike & Eke (2016) observes that food and beverage companies operating in Rivers State have continued to suffer from several problems in recent times as a result of limited knowledge on procurement practices (PP) on supply chain performance (SCP).

Although, past studies have empirically and theoretically highlighted the pivotal role and relationship between PP and SCP in various industries and sectors, but there still appears to be little or no empirical proofs to the best of our knowledge showing the relationship between PP and SCP of food and beverages firms in Rivers State using the dimensions of our study in our own geographic scope. In order to achieve the objective of our study, a thorough literature review of our unpinning theory which is; social exchange theory – SET (Homans, 1958) we are persuaded that the two dimensions of SCP such as strategic partnership and reverse logistics can be used as veritable variables that may enhance SCP of food and beverages firms in Rivers State. The questions thus arise; to what extent does strategic supplier partnership (SSP) and reverse logistics (RL) relate to supply chain performance of food PP and SCP of beverages firms in Rivers State? The study therefore seeks to answer the following research questions in order to fill the identified gaps in literature. The study therefore examines the relationship between procurement practices (PP) and supply chain performance (SCP) of food and beverages firms in Rivers State.

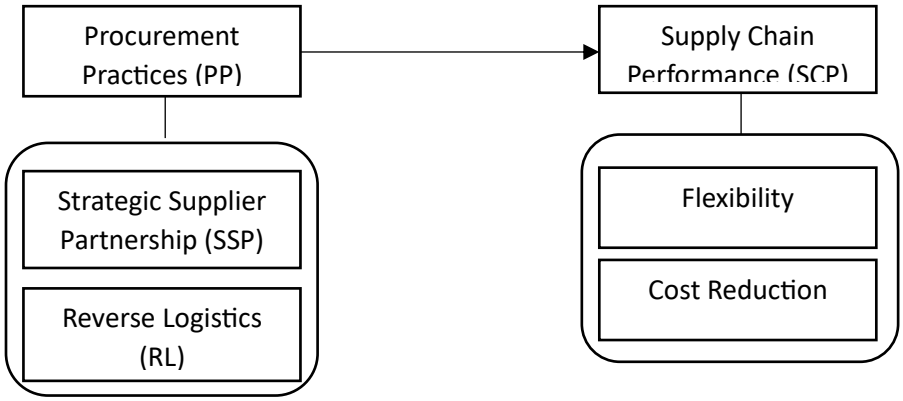

Figure 1.1: Conceptual framework of the relationship between procurement practices and supply Chain Performance of Food and Beverages Firms in Rivers State.
Source: Researcher's Concept based on Literature, 2025

Literature Review

Theoretical Framework

Social Exchange Theory

This study is based on the social exchange theory developed by Homans (1958) and; Thibaut and Kelly (1959) which holds that relationships are based upon the exchange of value between two or more parties, the Social Exchange Theory views interpersonal interactions from a cost-benefit perspective, much akin to an economic exchange except that a social exchange deals with the exchange of intangible social costs and benefits (respect, honour, friendship, and caring) and is not governed by explicit rules or agreements. Homans (1961) define social exchange as the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons.

Costs are the elements of relational life that have negative value to a person, such as the effort put into a relationship and the negatives of a partner. Rewards are the elements of a relationship that have positive value. Emerson (1981) notes that social exchange involves two persons, each of whom provides some benefits to the other, and contingent upon rewards from the other. Exchange relationship can be reciprocal or negotiated (Molm, 2003). Reciprocal exchanges occur when people experience a cost while providing a reward for their partners without specifying the exact nature of repayment but usually with an expectation that some form of repayment will happen. Such exchanges are voluntary and typically occur as a result of relationships established by prior successful exchanges (Mitchell, Cropanzana, & Quisenberry, 2012).

The theory argues that people calculate the overall worth of a particular relationship by subtracting its costs from the rewards it provides. If worth is a positive number, it is positive relationship. On the contrary, negative number indicates a negative relationship. The worth of a relationship influences its outcome, or whether people will continue with a relationship or terminate it. Positive relationships are expected to endure, whereas negative relationships will probably terminate.

Social exchange theory assumes that individuals take part in an exchange only when they expect rewards from it to justify the costs of taking part in it (Bailey, 2008). The theory relates well to the unique relationship established by the buyer through supplier development for mutual economic exchanges that is beneficial to both parties. Therefore, this theory relates to this study as it can be used to explain the aspects of supplier partnership and the exchange relationship both parties anticipate some reward arising from the relationship.

The Concept of Procurement Practice

According to public procurement and asset disposal Act (2015), procurement is the acquisition of any sort of works, assets, services, or goods, including livestock, by purchase, renting, lease, hire buy, licensing,

tenancy, franchise, or any other contractual means, as well as advisory, planning, and processing within the supply chain system. important to the company's success. Procurement practices refer to tactics for buying or acquiring products and services. (McFalls, 2016). It can also be said that Procurement practices are those managerial actions undertaken to enhance performance of the integrated supply chain. A poor procurement process results in higher cost to the organization. It results to delays in executing projects or delivery of products or services, which result to cost escalation, poor project execution, and delays the delivery of benefits to the beneficiary of the procurement requirement (Shirima, 2009).

Scott and Westbrook (1991) describe procurement as the chain linking each element of the manufacturing and supply process from raw materials through to the end user, encompassing several organizational boundaries. Thus, according to this definition procurement encompasses the entire value chain and addresses materials and supply management from the extraction of raw materials to its end of useful life. Procurement practices positively impact an organization's financial performance, the success of a new product depends on procurement and supplier involvement. Most organizations use a substantial amount of their income in procurement and therefore recognize the importance of procurement practices Carr and Pearson (2002). Two procurement practices such as Strategic supplier partnership and reverse logistics are considered in this study.

The Concept of Strategic Supplier Partnership

Strategic partnership focuses on long-term relationships between trading partners and encourages collaborative planning and problem-solving efforts. Organizational strategic partnerships create shared advantages and continued collaboration in important strategic areas like technology, products, and markets. Strategic supplier partnership is intended to use the operational and strategic strengths of employee participating firms to help them achieve substantial competitive advantages (Govindaraju et al, 2017). Supplier partnership and development enables the supplier firm to gain technological and managerial advantage which increases its abilities to respond effectively and efficiently to the buying firm's requirements regarding frequent reliable deliveries (Mumelo, Selfano & Onditi, 2017). Through strategic supplier partnerships, organizations can work closely with suppliers who can share responsibility for the success of the company. Strategic supplier partnership focuses on long-term direct relationships with consumers for cooperative planning and problem-solving efforts.

Efficient supplier collaboration plays a key role in a leading supply chain (Al-Shboul et al 2017). Qi *et al.,* (2011) argued that a long-term relationship with supplier facilitates in garnering positive results in an array of activities reflected in superior product quality, diminished lead time, and agile customer service leading to customer satisfaction. Strategic supplier partnership makes it more likely that suppliers will be involved in activities throughout the product life cycle (design, engineering, procurement, delivery, and recycle) and provide early input relating to product design, materials, tools etc. (Vickery, Droge, Setia, & Sambamurthy, 2010), avoiding delays due to changes and re-work and increasing the speed with which these processes can be performed.

The Concept of Reverse Logistics

Logistics management is an integrated part of supply chain management and reverse logistics is for all operations related to the reuse of products and materials. It is "the process of moving goods from their typical final destination for the purpose of recycling, reuse, capturing value, or proper disposal. Remanufacturing and refurbishing activities also may be included in the definition of reverse logistics (Yu et al 2018). Reverse logistics is a green supply chain management practice that enables companies to manage wastes and improve their competitiveness as their environmental efficiency is enhanced. Reverse logistics networks have some generic characteristics related to the coordination requirement of two markets, supply uncertainty, returns disposition decisions, postponement and speculation (Amemba et al., 2012). Reverse logistics practices vary from one industry to another.

The strategies proposed to implement reverse logistics programs include outsourcing, collaborations,

adopting green strategies or implementing reverse logistics from a product-life cycle approach using closed-loop supply strategy (Job et al., 2020). Outsourcing enables a firm to concentrate on its core capabilities, achieve higher flexibility and transfer risk to a third party (Moghaddam, 2015; Hsu, Tan and Mohamad-Zailani, 2016). Collaborations led by industry associations or governments can integrate reverse logistics operations for firms in an industry (Hung-Lau and Wang, 2009). Adopting green strategies such as reuse, recycle and remanufacture helps in "greening" the supply chain (Rao and Holt, 2005). Finally, implementing reverse logistics using the product-life cycle approach allows for the recreation of value through the closed-loop supply chain (Govindan et al., 2015; Sangwan, 2017).

The Concept of Supply Chain Performance

Supply chain performance refers to the overall output across the supply chain link which is aligned to the objectives of a firm in terms of profitability, stock turnover, market share, investment expenditure and customer satisfaction (Kamau 2017). To improve their own environmental supply chain performance, organizations need to interact with the government, suppliers, customers, and even competitors. Cooperation with suppliers and customers has become extremely important for organizations to close the supply chain loop (Zhu et al., 2009). Supply chain performance is predicated on some parameters used to ascertain the efficiency and effectiveness of the supply chain system (Tarafdar & Qrunfleh, 2017; Alahmad, 2021).

Performance can be measured using output control by using qualitative and quantitative indicators. Basically, performance measurement can be defined as the process qualifying the efficiency and effectiveness of an action (Gunasekaran, 2007). Mangla, Kusi-Sarpong, Luthra, Bai, Jakhar, & Khan, (2019) identified a few key performance dimensions, including flexibility, collaboration, transparency, innovation, and relational capabilities of the supply chain. Cost, customer satisfaction, quality and on-time deliveries have been operationalised as measures of supply chain performance (Kiswili, & Ismail, 2016)> This study adopt flexibility and cost reduction.

Flexibility

Supply chain flexibility represents the operational capabilities within the supply chain functions (Swafford et al., 2008). Extant studies reveal that flexibility is a driver of agility, and higher levels of supply chain flexibility leading to higher levels of agility (Fayezi, Zutshi & O'Loughlin, 2013; Chiang, Hiramatsu, Messah, & Kroeger, 2012). Gilgor (2016) indicate that flexibility is the capability to modify the range of tactics and operations to the extent needed. Shishodia, Verma and Dixit (2019). indicated that investing in creating flexibility is assumed to be more beneficial than investing in creating redundancies, because having flexible suppliers helps a firm in day-to-day operations in addition to helping the firm mitigate disruptions.

Zhang et al. (2003) considers the external flexibilities comprising mix flexibility and volume flexibilities in their study. Production flexibility is defined as the capacity to share or redistribute by efficiently managing production resources as environmental changes require. Volume flexibility is defined briefly as the ability to change the output volume of a production process according to customer orders. Labor flexibility has defined the ability to assign different numbers of workers as needed. Labor flexibility allows for multi-tasking, which means that each operator must be well trained in various tasks.

Routing flexibility is the ability to use alternative processing routes to produce a product. This flexibility is achieved with multi-purpose machines and similar grouping machines (Al-Haddad & Kotnour, 2015). Flexibility is expressed as making environmental uncertainty more predictable with little cost in terms of time, effort, cost, or performance or react to environmental uncertainty. Therefore, proactive and reactive flexibility offers companies unique advantages in improving business performance (Mishra, 2018) and this resonates with reverse logistics, a dimension in our study.

Cost Reduction

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 (Cocca and Alberti (2010). The necessity for cost reduction arises when the profit margin must be increased without an increase in the sales turnover (Robert, 2016).

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), 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, et al., 2001; as cited in Groves, et al., 2014). Cocca and Alberti (2010) state 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 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 Adeniyi, 2000; Cocca and Alberti (2010). 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 become more and more efficient.

Empirical Review

Eldin, Ragab, Ragheb, & El Mokadem (2019) utilsed exploratory research design to investigate the effect of procurement practice on organizational performance in service organizations: a case study of the Arab academy for science, technology and maritime transport in Kenya. The study used structured questionnaires and semi structured interviews with AAST logistics Managers as primary tools for data collection. Regression model was used to analyse the data on the effect between customer orientation, strategic supplier partnership, information sharing, adoption of it, reverse logistics, knowledge management on organizational performance. Result shows that there is a significant positive effect of customer orientation and knowledge management on organizational performance.

Bodunrin (2016), conducted an investigation on empirical review and analysis of public procurement practices in Nigeria: challenges and prospects. The study adopted a survey research typology. Data were sourced basically from secondary sources, such as textbooks, journals, magazines, newspapers and government publications etc. Results from this study reveals that the existence of multiple procurement guidelines and procedures, overt emphasis on procurement of manpower, the fear of vigilance, poor/quality training and lack of centralized data sharing facility etc. were the challenges and problems of effective public procurement practices in Nigeria. This study therefore recommends need for qualified staff handling,

Karanja & Kiarie (2015) carried out a study on the influence of procurement practices on an organization's performance in the private sector in Kenya: a case study of guaranty trust bank Kenya ltd. A descriptive survey was employed and descriptive statistics and multiple regression were used to analyse the data. Results indicate that procurement practices, e-procurement, and contract management influence organizational performance at private sectors. The study also finds that organization performance at private sectors have improved over the past five years. They recommend the development and issuing of operational guideline, procedures and task descriptions which provide authority to the purchasing department in private sectors. Decision on outsourcing, establishing long-term contracts and contacts with certified and or preferred suppliers, adopting a supplier strategy based on multi-versus single sourcing were also recommended

Strategic supplier partnership and supply chain performance

Supply chain relationships play a critical role in the growth of small enterprises as they contribute to the growth and profitability of firms in many ways. A strong sustainable relationship between an enterprise and its customers on one hand, and its suppliers on the other hand have a strong bearing on the speed of growth in transactions and profitability (Mwirigi, 2011). Thus, there is need for the process of creation of supply chain relationships to be approached in a more structured way to enhance its role in the growth of small enterprises (Mwirigi, 2011). Supplier relationship management and supply chain performance have been studied in many industries including the alcoholic beverage industry. Firms in the alcohol beverage industry are shown to be moving towards collaborative relationships with their suppliers to improve on their supply chain performance (Wangeci, 2013). To a large extent, supplier collaboration, supplier development etc affect supply chain effectiveness (Nyamasege & Biraori, 2015).

Mumelo et al., (2017) in investigating the influence of supplier relationship management (SRM) on performance of small-scale enterprises in Kenya reveal that there is a strong and positive relationship between relationship duration and organizational performance of small-scale enterprises in Bungoma Town, Kenya. The study's findings show that there is a positive relationship between strategic supplier relationship and competitive the long- term relationships built with strategic partners generate more value than the short-term gain (Binalla, 2019). There is a strong positive relationship between supplier relationship management and organizational performance especially in Kenya Airways Limited (Kosgei & Gitau, 2016).

Reverse Logistics and supply chain performance

For reverse logistics systems to be successful, top management in every organisation must not only guide and support its implementation but must also recognize the fact that, reverse logistics cannot be managed in isolation (Kabergey & Richu (2015), Somuyiwa and Adebayo (2014) in studying the effect of reverse logistics objectives on economic Performance of food and beverages firms in Nigeria, found that companies have been effective in using reverse logistics to improve enhance competitive advantage, reduce logistic cost, increase customer satisfaction, and in minimizing environmental impact of returns, materials recovery and product re-use.

Product return and product remanufacture have been found to positively and significantly influence customer perception among motor vehicle dealers therefore, oganizations should ensure that since defective products are often sent to their point of origin in a manner that the customer will be assured compensation in a timely and cost-effective manner (Okumu & Juma, 2019). Operational performance as a measure of supply chain performance significantly mediates the relationship between reverse logistics and a firm's competitive advantage (Job, 2020). The authors assert that competitive advantage is dependent on gaining operational competence even from a reverse logistics perspective.

Methodology

The study adopts a correlational research design with a cross-sectional survey in terms of time horizon, carried out in a non-contrived study environment. The study which focuses on a macro level of analysis has a population comprising of twenty-five (25) registered food and beverage companies operating in Rivers state as listed in the Nigerian Directory. Based on the small size of our population, a census study is conducted, and different levels of managers in these companies namely, procurement/purchasing manager, logistics manager, production manager, customer-service manager, accounts manager constitute our unit of analysis. We therefore administered copies of the questionnaire to five (5) respondents from each of the twenty-five (25) beverages firms in Rivers state thus constituting a total of one hundred and twenty-five (125) respondents for this study.

The questionnaire of this study was designed using the five (5) point Likert scale. Face validity was done by a team of experts in the field of procurement and supply chain management. The reliability instrument

was determined through the Cronbach's Alpha reliability test and all the items attained the threshold greater than 0.7 coefficient. The study utilised both descriptive and inferential statistics to analyze the data. Descriptive statistics such as mean scores, percentages, frequency, pie-chart, and standard deviation while Pearson Product Moment Correlation (PPMC) was used to determine the relationship between hypothesized variables with the aid of (SPSS).

Data Analysis

Test of Hypotheses

Four null hypotheses were tested in the study using Pearson Product Moment Correlation.

Ho1: There is no significant relationship between strategic supplier partnership and flexibility of food and beverages firms in Rivers State.

Table 1: Relationship between strategic supplier partnership and flexibility

		Strategic Supplier Partnership	Flexibility
Strategic Supplier Partnership	Pearson Correlation	1	.824**
	Sig. (2-tailed)		.000
	N	110	110
Flexibility	Pearson	.824**	1
	Sig. (2-tailed)	.000	
	N	110	110

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

From the analysis in Table 1, with a significance level of 0.05, the test indicates that correlation coefficient is 0.824 which shows that there is a very strong and positive relationship between relationship strategic supplier partnership and flexibility of food and beverages firms in Rivers State. The relationship between strategic supplier partnership and flexibility are significant because the probability value is less than 0.05(P<0.05, P=0.000). Therefore, the null hypothesis is rejected; and the alternate hypothesis which states that there is a significant relationship between strategic supplier partnership and flexibility of food and beverages firms in Rivers State is accepted.

Ho2: There is no significant relationship between strategic supplier partnership and cost reduction of food and beverages firms in Rivers State.

Table 2: Relationship between strategic supplier partnership and cost reduction

		Strategic Supplier Partnership	Cost Reduction
Strategic Supplier	Pearson	1	.884**
	Sig. (2-tailed)		.000
	N	110	110
Cost Reduction	Pearson	.884**	1
	Sig. (2-tailed)	.000	
	N	110	110

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

From the analysis of table 2, with a significance level of 0.05, the test indicates that correlation coefficient is 0.884 which shows that there is a very strong and positive relationship between strategic supplier

partnership and cost reduction of food and beverages firms in Rivers State. The relationship between strategic supplier partnership and cost reduction are significant because the probability value is less than 0.05(P<0.05, P=0.000). Therefore, the null hypothesis is rejected; and the alternate hypothesis which states that there is a significant relationship between strategic supplier partnership and cost reduction of food and beverages firms in Rivers State is accepted.

Ho3: There is no significant relationship between reverse logistics and on time delivery of food and beverages firms in Rivers State.

Table 3: Relationship between reverse logistics and flexibility

		Reverse Logistics	Flexibility
Reverse Logistics	Pearson Correlation	1	.919**
	Sig. (2-tailed)		.000
	N	110	110
Flexibility	Pearson Correlation	.919**	1
	Sig. (2-tailed)	.000	
	N	110	110

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

From the analysis of table 3, with a significance level of 0.05, the test indicates that correlation coefficient is 0.919 which shows that there is a very strong and positive relationship between reverse logistics and flexibility of food and beverages firms in Rivers State. The relationship between strategic reverse logistics and flexibility are significant because the probability value is less than 0.05(P<0.05, P=0.000). Therefore, the null hypothesis is rejected; and the alternate hypothesis which states that there is a significant relationship between reverse logistics and flexibility of food and beverages firms in Rivers State is accepted.

Ho4: There is no significant relationship between reverse logistics and cost reduction of food and beverages firms in Rivers State.

Table 4: Relationship between reverse logistics and cost reduction

		Reverse Logistics	Cost Reduction
		TICS	ON
Reverse Logistics	Pearson Correlation	1	.895**
	Sig. (2-tailed)		.000
	N	110	110
Cost Reduction	Pearson Correlation	.895**	1
	Sig. (2-tailed)	.000	
	N	110	110

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

From the analysis of table 4, with a significance level of 0.05, the test indicates that correlation coefficient is 0.895 which shows that there is a very strong and positive relationship between reverse logistics and cost reduction of food and beverages firms in Rivers State. The relationship between strategic reverse logistics and cost reduction are significant because the probability value is less than 0.05(P<0.05, P=0.000). Therefore, the null hypothesis is rejected; and the alternate hypothesis which states that there is a significant relationship between reverse logistics and cost reduction of food and beverages firms in Rivers State is accepted.

Table 5: Relationship between procurement practices and supply chain performance

		Procurement Practices	Supply Chain Performance
Procurement Practices	Pearson Correlation	1	.971**
	Sig. (2-tailed)		.000
	N	110	110
Supply Chain Performance	Pearson Correlation	.971**	1
	Sig. (2-tailed)	.000	
	N	110	110

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

From the analysis of table 5, with a significance level of 0.05, the test indicates that correlation coefficient is 0.971 which shows that there is a very strong and positive relationship between procurement practices and supply chain performance of food and beverages firms in Rivers State. The relationship between procurement practices and supply chain performance are significant because the probability value is less than 0.05(P<0.05, P=0.000). Therefore, the null hypothesis is rejected; and the alternate hypothesis which states that there is a significant relationship between procurement practices and supply chain performance of food and beverages firms in Rivers State is accepted.

Discussion of Findings

Relationship between strategic supplier partnership and supply chain performance

The relationship between strategic supplier partnership and on time delivery was found to be very strong and positive with correlation coefficient of 0.833. The relationship between strategic supplier partnership and on time delivery is significant because the probability value is less than 0.05 (P<0.05, P=0.000). Furthermore, a very strong and positive relationship was found between strategic supplier partnership and flexibility with a correlation coefficient of 0.824. The relationship between strategic supplier partnership and flexibility is significant because the probability value is less than 0.05 (P<0.05, P=0.000). Similarly, a very strong and positive relationship was found between strategic supplier partnership and cost reduction with a correlation coefficient of 0.884. The relationship between strategic supplier partnership and cost reduction is significant because the probability value is less than 0.05 (P<0.05, P=0.000). Based on these results, hypothesis four were rejected.

These findings affirm the results of (Binalla 2019; Kosgei & Gitau ,2016; Mwirigi, 2011; Nyamasege & Biraori, 2015) that demonstrate positive and significant relationship between strategic supplier partnership and the various measures of supply chain performance.

Relationship between reverse logistics and supply chain performance

The relationship between reverse logistics and on time delivery was found to be strong and positive with correlation coefficient of 0.789. The relationship between reverse logistics and on time delivery is significant because the probability value is less than 0.05 (P<0.05, P=0.000). Furthermore, a very strong and positive relationship was found between reverse logistics and flexibility with a correlation coefficient of 0.919. The relationship between reverse logistics and flexibility is significant because the probability value is less than 0.05 (P<0.05, P=0.000). Similarly, a very strong and positive relationship was found between reverse logistics and cost reduction with a correlation coefficient of 0.895. The relationship between reverse logistics and cost reduction is significant because the probability value is less than 0.05 (P<0.05, P=0.000). Based on these results, hypotheses seven, eight and nine were rejected.

These findings affirm the findings of the study conducted by Job, Njihia, Maalu, & Iraki, (2020), study hypothesis. The study finds that that operational performance significantly mediates the association linking reverse logistics and a firm's competitive advantage and concludes that achievement of competitive advantage is dependent on gaining operational competence even from a reverse logistics perspective.

Again, Somuyiwa & Adebayo (2014) reveals that companies have been effective in using reverse logistics to reduce total logistic cost, improve customer satisfaction, enhance competitive advantage and in minimizing the environmental impact of returns as well as recovery of materials for re-use. product recovery and product reuse both had positive effect on operational performance of sisal processing firms in Nakuru County (Kabergey & Richu (2015) thus corroborating this study findings.

Conclusion and Recommendations

The relationship between procurement practices and supply chain performance of food and beverages firms in Rivers State is revealed to be positive and statistically significant. Based on the findings, the study concludes that strategic suppler partnership has a strong and positive relationship with flexibility and cost reduction.

We equally conclude that reverse logistics has a strong and positive relationship with flexibility and cost reduction. We therefore recommend that food and beverage firms in Rivers State should strategically partner with suppliers so as to enhance flexibility reduce costs. As food and beverages firms in Rivers State adopt reverse logistics strategies, they will certainly enhance flexibility and reduce cost in in procurement practices which will ultimately improve overall supply chain performance. It is therefore expected that food and beverages firms should build and maintain collaborative relationship with suppliers in order to improve supply chain performance. Food and beverages firms should also show proactiveness in developing and improving frameworks that ensure recycling, remanufacturing and product reuse in a timely and cost-effective manner.

Contribution to Knowledge, Limitation and suggestions for future Research

The results of this study have implications for theory and practice in the procurement practice and supply chain management domain. The study equally contributes to the theoretical and methodological discourse in this domain. The limitation of this study lies in the fact that the finding is exclusive and applicable only within the food and beverages firms. However, procurement practices have other dimensions which were not included in this study, Thus, their relationship with supply chain performance of food and beverages firms are not known. On the basis of the above, the researcher suggests that this study be conducted in the following areas; procurement practices and supply chain performance of Telecommunication firms in Rivers State, procurement practices and supply chain performance in the fast-moving consumer goods and other sectors.

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