International Journal of Management and Marketing Systems
ISSN: 2384-537X, Volume 13, Issue 9, (April, 2023) pages 52 - 63
DOI: 272614566711393
www.arcnjournals.org

Logistics Outsourcing and Organizational Performance of Oil and Gas Companies in Rivers State

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Abstract: *This study focused on logistics outsourcing and organizational performance of oil and gas firmsin Rivers State. The study employed descriptive research design and the target population was two hundred and ninety-five (295) oil and gas firms in Rivers State. The sample size of this study was 170 oil and gas firms, and the number of respondents were three (3) executives drawn from each of the 170 sampled companies based on non-probability sampling technique company study. The selection of the three (3) executives from each of the 170 sampled companies was based on non-probability sampling technique. The number of respondents was 510 management staff. Descriptive statistics such as mean, standard deviation and frequency distribution was used for demographic analysis, while, the Pearson's Product Moment Correlation technique was used to test the extent to which logistics outsourcing relates with organizational performance. The outcome of the study demonstrated that, operational outsourcing services positively and significantly correlated with organization performance, and manufacturing outsourcing positively and significantly correlated with organization performance The study therefore, concludes that there is a significant and positive relationship between logistics outsourcing and organizational performance of oil and gas firms in Rivers State, and recommends that the management of oil and gas firms should use adequate logistics outsourcing strategies such as operational outsourcing services and manufacturing outsourcing to connect to organizational performance for sustainable growth in business*

Keywords: *Logistics outsourcing, Manufacturing outsourcing services, Operational outsourcing services, Organizational outsourcing services.*

INTRODUCTION

The essential success determinant for organization performance embrace access to right knowledge and skills, proper planning, innovation and flexibility. Experts in almost all fields are worried with organizational performance as well as strategic planners, operations, finance, legal, and organizational development (Kivuva, 2018). Thus, organizations are realizing that they are not obtaining the expected cost reduction, competitive advantage and network stability that they are anticipated to provide. Organizations are more and more turning to outsourcing in trying to improve their competitiveness and, organizations may equally increase their organizational performance by focusing more attentively on logistics outsourcing.

Silva (2013) defines logistics as the aspect of a supply chain concerned with the forward and reverse flow of goods, services, cash, and information. Jeffery (2012) added that, it comprises the management of entirelyall transportation material handling, warehouse inventory, order processing and distribution, third-party logistics, and reverse logistics in logistics activities. Logistics incorporates all of the information and material flows in an organization, covering the whole thing from the movement of a product or from a service that needs to be rendered, through to the management of incoming raw materials, production, the storing of finished goods, its delivery to the customer and after-sales service (Bali, 2013).

Thus, logistics outsourcing involves the contracting of the logistics functions of a company to other parties. These parties may be first party logistics providers, second service party providers, third-party service providers and fourth-party service providers. When a company is incapable of engaging in logistics practices such as warehousing, transportation, information management and material/inventory handling, which are services done from within its means, and then contemplates it economical to have these services from other companies, it can deliberate outsourcing the services. This is acknowledged as logistics outsourcing, whereby, there is the undertaking of the organization's internal activities, decisions and responsibilities by external provider(s).

Outsourcing then, is utilizing an external supplier to tender services to a company that it cannot provide for itself, or cannot provide them in a competent manner. Logistics outsourcing constitutes the act of delegating logistics activities to companies organized to provide the required services better than the users.

By firmly evaluating the motivations, prospects, and justifications for outsourcing elementary supply chain functionality, companies are enabled to turn out better and sound decisions thereby engendering progressive profits and shareholder value (Min, 2012). Logistics outsourcing has condensed costs, transportedby the growth of the companies, also eradicated waste and has empowered companies to concentrate on major functions. (Mutual, 2012). Reasons for outsourcing includes refining company focus, attaining access to world-class capabilities, speeding up of benefits from re-engineering, sharing of risks and freeing resources for other purpose (Deavers, 1997).

Despite the difficulties recurrently being noted or faced by organizations with regards to their outsourcing arrangements, few empirical analyses regarding that issue have been conducted and still its impact is imprecise and mysteriousenigma, in order words it has not yet been copiously interpreted (Bolat *et.al.,* 2015). Previous work on outsourcing has been largely theoretical in nature, concentrated mostly on anecdotal evidence to underpinning assertions. Furthermore, as mentioned above the conclusions of those studies are contradictory. Many impulsively engaging arguments have been provided both for and against outsourcing as a technique of realizing organizational performance. For example, Quinn (2012) opined that by permitting outside services provider to perform some of their functions may affect the things organizations do best or their core activities. Though, Bettis, Bradley, and Hamel (2013) contend that outsourcing may lessen organizational innovation, may make an adjustment to knowledge to the outside service provider, and may decrease control over organization's functions or activities. Involvement in it may see outsourcing extinguish long-run competitive advantage. Likewise, Deloitte (2014) discovered that greater number of big organizations that had outsourced were unsuccessful to achieve the projected cost saving.

Still, John (2018) confirmed that in some cases, outsourcing firms are acknowledged to originate a solution at single firm (at their own expense) and instantlyvend the recently developed solution to the competitors. Panos (2011) posits that outsourcing can be effortlessly reproduced by the competition leading to partition and decline of the supply chain, consequently conveying new entrants into the industry. It correspondinglysustains corporate self-satisfaction; and wanes a firm's relations with its stakeholders.

The main motivation for this study is the rapid increase in outsourcing of logistics activities in Nigeria and the benefits accrued from such activities over time to companies, their employees and other stakeholders as well as providers of the activities. This study focused on the impact and benefits of sharing identified non-core activities in manufacturing business with experts for optimal results. The study clearly provides a useful reference on outsourcing for business practitioners to use as a business plan for outsourcing to third parties. It helps to spread risks and focuses on matters that are vital to long-term survival and development. With the results, it is expected that many businesses will turn to logistics outsourcing to better stabilize their activities in the face of Nigeria's and the world's current economic woes.

Based on the facts presented, the researchers seek to advance understanding about the relationship between logistics outsourcing and organizational performance of oil and gas firms in Rivers State, which will add more knowledge to the existing literatures.

LITERATUREREVIEW AND HYPOTHESES

Transaction Cost Economics (TCE)

Transaction costs are the costs sustained in the process of trading i.e. the process of selling and buying overhead the price of the product that is being traded. TCE hypothesizes that, the type of governance structure is defined by the properties of a transaction (union, market and hierarchy) that will be espoused (Mclvor, 2009). Organizations offer a service function in house, when it is economically more cost effective than buying the similar service function from the third party. Therefore, when transaction cost is tall the organization chooses to run the service function internally rather than buying from external provider. Transaction cost economics is thus, predictable to provide the best decision-making instruments to assist organizations to decide to outsource and to prepare themselves for upcoming outsourcing arrangements. This helps in making effective decisions concerning outsourcing. Clearly expressed, an activity is outsourced if a total profit after increasing income and dropping costs is higher than the total transaction costs of outsourcing.

The Concept of Logistics Outsourcing

The concept of logistics always fascinates attention from both industry and academia. Bosire *et al* (2013) perceive outsourcing as obtaining a product or service from outside the organization even though this appears too extensive and not so much valuable. Ugwu & Okoroji's (2014) portray outsourcing as when a given company hands over a percentage of their commercial operations. Thomopoulos (2016) established that logistics involves the movement of items from the point of origin to the final destination to satisfy the requirements of customers. It adds value to the production process but it comes at costs to customers in terms of high product cost and time constraint for managers during product delivery where it is not well managed.

This study identifies logistics outsourcing as an approacharranged by an organization to access experienced and efficient service provider to perform their non-core functions to boostthe flow of quality goods or services to satisfy customers' necessities in conditions where their ownaccessible staff, technology or systems are deteriorating. Since outsourcing has turned out to be a widespread strategy, researchers, practitioners and governments have utterly investigated at its outcomes. In line with Kivuva (2018), this study adopts operational outsourcing service and manufacturing outsourcing as the dimensions of logistics outsourcing.

Operational Outsourcing Service

Operational outsourcing services embrace equipment repairs and machine maintenance which are habitually outsourced to a 3rd party who are professionals in such responsibilities. (Solakivi *et al.,* 2011). Other types of operational activities comprise landscaping, facilities maintenance, cleaning, and property management (Mbeyu, 2019). The essence of Companies turning to the outsourcing of equipment is to lessencosts and sustains production. It has been proclaimed that, Oil and Gas, Utility and Power Generation operators and producers not only require the right equipment, but competent and approachable service also (Valmec, 2018).

So, operation and maintenance services are an all-inclusive, focused activity which requires being thoughtful about the plant and its processes, coupled with the objectives of the owner (Kutemann, 2015). Operational outsourcing has the ability to increases operating revenue of an organization and extends the productive period of its assets, leading to lessening of capital expenditure and environmental risks of the client. This directly impacts on productivity and customer profits since having a maintenance service provider with the preciseexpertise set could fundamentally lower the repair time.

Manufacturing Outsourcing

Outsource manufacturing entails hiring external people to join parts of, or build awhole product. It is typically cheaper to outsource production processes to companies that have the knowhow than to produce them internally (David, 2018). Many organizations basically outsource the manufacturing owing to the challenges and problems linked with production (Rudhi, 2017). Since regulating costs has turned out to be a menace for the oil and gas industry, engendering chances for external providers to offer industry definite outsourcing solutions across an entire supply chain will match the tremendous worldwide energy demand.

The Concept of Organizational Performance

Organizational performance involves analyzing a company's performance equated to its objectives and goals. That is, organizational performance contains real results or outputs equated with intended outputs. The analysis of organizational performance emphasizes shareholder value performance, financial performance and Market performance as major outcomes (Kayumba, 2019). Organizational performance consists of the actual output or results of an organization as evaluated or measured in contrast with its planned output. Performance measurement assesses the limits under which programs, investments, and acquisitions are meeting the expected results (Kaplan & Norton, 1996).

Organizational Performance refers to output and outcomes gotten from process, production and services that permits evaluation and standards articulated both in monetary and nonmonetary terms whichindicate how well or badly a firm is performing.

Empirical Review

Adesunkanmi and Nurain (2022) investigated the effect of efficiency of logistics outsourcing on productivity of selected manufacturing companies in Southwestern, Nigeria, adopting a descriptive survey design. The population of the study comprised six hundred and twenty (620) senior managers, middle level officers of the selected food manufacturing companies in Lagos, Oyo and Ogun states Southwestern, Nigeria, and asample size of two hundred and sixty (260) employees of manufacturing companies in South western, Nigeria derived using Taro Yamane's formula. Primary data was collected through the administration of questionnaire to respondents, and were analyzed using tables, percentages and regression analysis.The result revealed that, logistics outsourcing had significant effect on productivity of manufacturing companies in the Southwestern Nigeria.

Mbeyu and Odock (2019) examined the effect of logistics outsourcing on performance of dairy processors in Kenya on a population of study 28 dairy processors in Kenya. The study assembled primary data which was by means of a structured questionnaire from logistics and operations managers or their equivalents, and a attained a response rate of 89.3%. Data was analyzed using regression analysis and the results proved that the concept that firms outsource logistics operations to reduce costs such as cost of vehicle acquisitions and maintenance, fuel costs, risks cost amongst other. The study also found a high correlation between logistics outsourcing and firm's performance.

Ikegwuru and Ihunwo (2018) investigated the influence of logistics outsourcing on the success of physical distribution management using a. descriptive research design ona population of 85 clearing and forwarding companies in the River State was clearing and forwarding firms in River State, and a sample size of 55 clearing and forwarding companies was used. A survey was conducted which adopted the simple random sampling technique and the results indicate that there are significant and direct effects of the dimensions of logistics outsourcing on the success of physical distribution management.

Somuyiwa, Odepidan and Dosunmu (2016) examined the several operations that manufacturing firms outsourced for satisfying customer demand, and found that companies that engaged in the production of goods or services outsource peripheral or ancillary services at various levels of their operations, with haulage or redistribution of their goods being the most outsourced, signifying that transportation is a critical constituent of manufacturing firms' operations for the reason that it is vital throughout the entire process.

From the review of literature, the study developed the following operational framework:

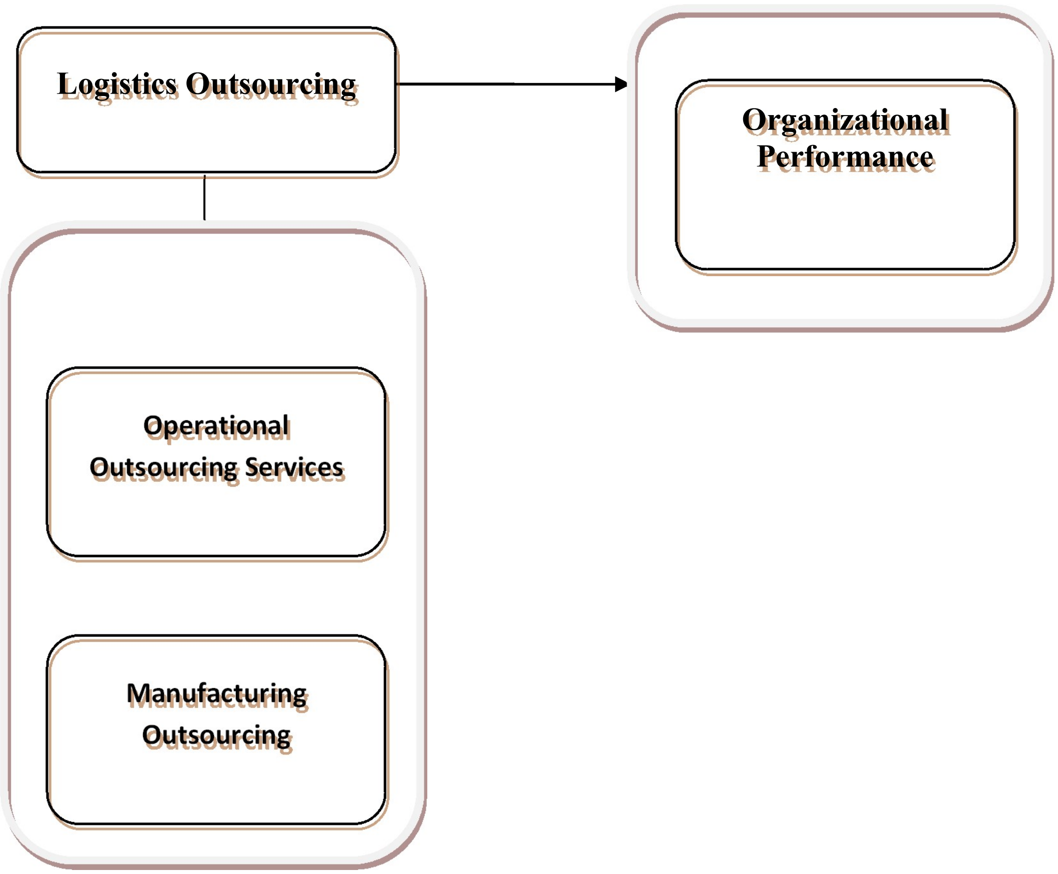

Fig. 1: Conceptual framework Logistics Outsourcing and Organizational Performance

Source: Designed by the Researchers, 2023

Based on the conceptual framework, the following null hypotheses stated were formulated to guide the study:

Ho_1: Operational outsourcing services does not significantly relate with organizational performance of oil and gas firms in Rivers State.

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Ho_2: Manufacturing outsourcing does not significantly relate with organizational performanceof oil and gas firms in Rivers State.

METHODOLOGY

The study employed descriptive research design and the target population was two hundred and ninety-five (295) oil and gas firms in Rivers State.The sample size of this study was 170 oil and gas firms, and the number of respondents were three (3) executives drawn from eachof the 170 sampled companies based on non-probability sampling techniquecompany study. The selection of the three (3) executives from each of the 170 sampled companies was based on non-probability sampling technique. The number of respondents was 510 management staff. Descriptive statistics such as mean, standard deviation and frequency distribution was used for demographic analysis, while,the Pearson's Product Moment Correlation technique was used to test the extent to which logistics outsourcing relates with organizational performance.

Reliability of the Instrument

Reliability of data collection instrument was verified by utilizing Cronbach's Alpha coefficient. Appreciably, all items are reliable and are employed to study logisticoutsourcing and organizational performance of oil and gas firms in Rivers StateThe information concerning reliability statistics is shown in Table 1.

Table1:Shows the reliability measure of Logistics Outsourcing and OrganizationalPerformance

Scale	Dimension	Items	Reliability
OOS	Operational Outsourcing Services	3	0.951
MO	Manufacturing Outsourcing Services	3	0.934
OP	Organizational Performance	3	0.952

Source: **SPSS 22.0 Output, based on 2023 field survey**

RESULTS

Of the 510 copies of questionnaire that were distributed to the respondents, 345 copies were returned, yielding a response rate of 87.3 percent while, the usable copies numbered 334 leading to a response rate of 75.1%. Hence, these 334 copies were used for the analysis.

Test of Hypotheses

Decision Rule

Significant/probability value (Pv) < 0.05 (level of significance = conclude significant relationship.

Significant probability value (Pv) > 0.05 (level of significance = conclude insignificant relationship.

Relationship between Operational Outsourcing Services and Organizational Performance

Table 2: Relationship between Operational Outsourcing Services and Organizational Performance(N=334).

		Operational Outsourcing Services	Organizational Performance
Operational Outsourcing Services	Pearson's correlation	1	.9988
Sig. (2-tailed)			.0000
N		334	334
Organizational Performance	Pearson's correlation	.9988	1
Sig. (2-tailed) .0000			
N		334	334

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

Table 2 indicated the correlation among all variables. From the table above, we can observe that there is a positive large correlation between operational outsourcing services and organizational performance of 0.9988. This correlation is situated in interval of [0.10-0.9] which is qualified as positiveand large correlation; this means that changes in operational outsourcing services strongly correlate with changes in organizational performance.

Relationship between Manufacturing Outsourcing and Organizational Performance

Table 3: Relationship between Manufacturing Outsourcing and Organizational Performance (N=334).

		Manufacturing Outsourcing	Organizational Performance
Manufacturing Outsourcing	Pearson's correlation	1	.9136
	Sig. (2-tailed)		.0000
	N	334	334
Organizational Performance	Pearson's correlation	.9136	1
	Sig. (2-tailed)	.0000	
	N	334	334

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

Furthermore, Table 3 shows that there is a positive and very high relationship of 0.9136 between manufacturing outsourcing and cost efficiency which is situated in interval of [0.1-0.99] qualified as a very large relationship. This means that changes in manufacturing outsourcing very strongly correlate with changes in organizational performance.

DISCUSSION of FINDINGS

In order to find relationship between logistics outsourcing and organizational performance, the researcher tested the relationship between logistics outsourcing activities (operational outsourcing services and manufacturing outsourcing) with organizational performance. The findings of this research provided various insights about the effect of logistics outsourcing on organization performance and the results obtained during the study are discussed in this section.

This explorative research revealed various interesting findings regarding the relationship between outsourcing and organization performance. The results show that operational outsourcing services are positive significantly correlated with organization performance as the correlation coefficient found equal to 0.9988 with a p-value of 0.0000. Positive significant correlation between operational outsourcing services and organization performanceis consistent with prior research of Prahalad, Hamel and Kotabe (1990) who found a positive and significant relationship between outsourcing and cost efficiency within organizations. However, this finding opposes reasoning of core competency theory which emphasize that the core activities of an organizations should be maintained in house and implemented by the organization itself. Instead, our findings support the transaction cost theory which focus more on operation and production cost. This means that organizations can outsource their operations or production from external provider when they believe or are convinced that such activities or services can be done cheaper and/or better.

The study found out that manufacturing outsourcing significantly relate withorganization performance. This is evidently from the p-value of .9136 with a p-value of 0.0000. This also showed a similar relationship with organization performance meaning an increase in manufacturing outsourcing increases the organization performance. Thus, the more an organization relies on external sources for its manufacturing then the high likelihood of her experiencing positively organizational performance. This might be due to non-stoppage of provision of quality goods and services. From the study it was clearly evident that most managers outsource production, even not minding the level of profits their companies makes.

From the study managers of the oil and gas firms agreed that manufacturing outsourcing had led to timely delivery of goods and also enabled the organization to economize the production cost and spend less. The study also found out that logistics outsourcing increased the quality of products/services as reduced the cost of overtime of the employees. The study further found that managers were in agreement that manufacturing outsourcing was more reliable and cost effective than in house services. Similarly, the study found that managers slightly agreed that due to outsourcing machine operation cost was reduced. The findings of this study concur with Hamlet (2018) who revealed that many organizations outsource their manufacturing to get rid of the overhead cost associated with operating a manufacturing facility. Some of the overhead costs include utilities, such as gas, electric and water, production equipment maintenance costs, indirect labor such as quality assurance staff, machine technicians, product handlers, shipping and receiving employees.

Also, this study supports Ikegwuru and Ihunwo (2018) findings that there exist equally significant and direct effects of the dimensions of logistics outsourcing on the success of physical distribution management. Most significant was the significant interaction existing between businesses function outsourcing and the success of physical distribution management

CONCLUSION AND RECOMMENDATIONS

This study assessed the degree to which logistics outsourcing relates with organizational performance of oil and gas firms in Rivers State by means of a quantitative analysis, which makes obvious that in attendance are ample substantiations that the components of logistics outsourcing investigated by this existing study were optimistically connected with organizational performance, presenting a good judgment to assert that very strong and significant correlation exists between outsourcing activities (operational outsourcing services and manufacturing outsourcing) and organizational performance, suggesting that their presence enchant business growth and enduring operational performance for organizations. The study therefore, concludes that there is a significant and positive relationship between logistics outsourcing and organizational performance of oil and gas firms in Rivers State, and recommends that the management of oil and gas firms should use adequate logistics outsourcing strategies such as operational outsourcing services and manufacturing outsourcing to connect to organizational performance for sustainable growth in business.

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