
Impacts of Logistics Outsourcing on Organisational Performance in Selected Oil and Gas Companies in Rivers State

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Abstract

The study on logistics outsourcing and organizational performance was carried out to determine the extent to which outsourcing as a business strategy affect or contribute to organizational performance in tandem with efficiency and productivity in the attainment of organizational goals. The study focused on Nigeria oil and gas industry and investigated Logistics outsourcing and how it contributes to organizational performance using selected oil and gas companies in Rivers State, Nigeria. The study is premised on the understanding that every business organization was established, including oil and gas companies to maximize profit by adopting strategies that reduces costs. It is on this note that modern business organizations have resorted to outsourcing as a strategy by concentrating in core operations of comparative advantage, while non-core areas are outsourced. The core competency the or ywas adopted for this work to provide a holistic analysis of the relationship between Logistics outsourcing and organizational performance. Two research questions and corresponding hypotheses were formulated. A questionnaire titled Logistics outsourcing and organizational performance questionnaire (LOOPQ) was designed to elicit primary information and data from respondents who were chosen from the oil and gas companies and service providers. Secondary data was obtained from company records. Simple statistic tools of percentages, tables and charts were used to analyze the data. The study found that there is a significant relationship between Logistics outsourcing and organizational performance in the selected oil and gas companies in Rivers State. The study found that the impacts of logistics outsourcing on the oil and gas industry includes: provision of financial saving from reduction in labour and operation cost, internal efficiency due to reduced internal workload, improved service delivery through specialist services, knowledge transfer, enhance core competency and ultimately increased organisational performance. The study recommends that Logistics outsourcing should be embraced by Nigerian business organizations generally and factored into Nigerian Local Content Policy.

Keywords: Logistics Outsourcing, Organizational performance, Core Competency, Productivity, Labour and Operating Cost

1.1 Introduction

The oil and gas industry is a complex business, which involves several stages, ranging from upstream to mid-stream and the downstream sectors. Upstream involves the whole process of exploration and Oil and Gas production (Inkpen and Moffet 2010, Odagmeet *al.*, 2016). This is subdivided into research and development, exploration, development, production, gas processing, LNG liquefaction. The midstream is basically transportation and trading of products while the downstream includes: LNG regasification, refining and petrochemicals. However, the next step after the discovery of Crude Oil in any location is drilling. In this regards, equipment and personnel are moved to rig location (onshore or offshore) for the drilling operation. This operation requires shipping of materials to and fro the offshore locations, transportation and provision of camping facilities and accommodation.

Over the last decade, new business strategies have rested essentially on the need to outsource necessary aspects of business processes to sustain growth, minimize cost and make more profit. The drive for greater efficiencies and cost reductions in the face of fierce competition has forced many organizations to increasingly specialize in a limited number of key areas. Today, oil companies are settled in an established owner role and entrusted several of their previous activities to service companies who has obtained greater responsibilities with additional risks.

Oil companies hire seismic vessels to find potential reservoirs, they are hiring rigs with drilling equipment and personnel from drilling companies, they rent and buy completion equipment and personnel to complete the wells, and when the need arises, they rent intervention vessels from specialized competent service companies. This has been a process of emitting competences out of the company. Therefore, it is explicit that so much logistics support services are required in the oil and gas sector and this the companies often has difficulty in doing it alone. To this end, companies contracts all/part of their logistics sub functionalities to an external firm to enable them focus on their operational core areas. This practice is termed logistics outsourcing.

Langley, (2002) posited that outsourcing is a business strategy in which a firm gives their non-core activities to service providers to facilitate company control over its resources and share risks. Mohiuddin and Su (2013) believed that to outsource helps in acquiring services from outside sources instead of in-house production while they focus on their core matters which are necessary for the company's growth and sustainability. Thus, many firms have resorted to outsourcing their logistics functions as a means of obtaining effectiveness and gain competitive advantage

Guistiniano (2013) pointed to the fact that outsourcing is a growth-oriented corporate strategy and not a mere means for cost reduction. Kidi (2014) agreed that in an attempt to leverage and consolidate on the merit of outsourcing, organizations are embracing the outsourcing models. Yeboah (2013) on the other hand, argued that changes in outsourcing correlates with changes in quality, especially of product or services. Since logistics outsourcing has been established as an integral part of the oil and gas business for more than six decades to day (Hätönen & Eriksson, 2009), the need therefore for a critical study of the relationship between logistics outsourcing and organisation performance have become imperative.

1.2 Aim and Objective

The aim of this study was to investigate the relationship between logistics outsourcing and organisational performance in selected Oil and Gas companies in Rivers State

Specific objectives were to:

- 1 Examine the extent to which logistic outsourcing affects organizational performance in the selected oil and gas companies in Rivers State.

- 2 Investigate the extent to which outsourcing reduces operating and labour costs in selected oil and gas companies operating in Rivers State

1.3 Research Questions

The following research questions were raised in view of the study objectives

1. What are the effects of logistic outsourcing on organizational performance in the selected oil and gas companies in Rivers State.
2. To what extent does outsourcing influence operating and labour cost reduction in the selected oil and gas companies in Rivers State

1.4 Research Hypotheses

Two hypotheses were formulated for the study.

Hypothesis 1

H₁: There is a relationship between logistics outsourcing and organizational performance in the selected oil and gas companies in Rivers State

Hypothesis 2

H₁: There is a relationship between logistic outsourcing and operational and labour cost reduction in the selected oil and gas companies in Rivers State.

1.5 Significance of the Study

Findings from this study provide guidelines for decision-making process, especially as they relate to logistics outsourcing and organizational performance. In addition, this work is relevant to the Nigeria Maritime Administration and Safety Agency (NIMASA) for decision making in the maritime labour regulation, shipping and maritime capacity development. The captains of industries are also privy to it as finding from this work can motivate industries and organizations to strategize on how best they can maximize profit through outsourcing and show how it translates to organizational performance or productivity.

2.1 Literature Review

2.2 Theoretical Framework

The core competence theory was propounded by Prahalad and Hamel in 1990 as the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies internally.

Basic Assumptions

1. Organisations perform better when they concentrate on their core competent area
2. Core competencies are particular strengths relative to other organizations

Application of Core Competence theory to the Present Study

Core competence fundamentally provides added value, technical know-how, a reliable process, good market coverage, industry knowledge, product development or cultural values peculiar to the organization in terms of specialisation.

Today, competition is fierce and survival is for the fittest, firms and organizations adopt measures and strategies to be ahead of their competition. Also, organizations are better positioned to maintain their financial and market positions in the industry if they concentrate on their areas of competencies and strength and outsource their non-core activities.

2.3 Conceptual Review

Since the industrial revolution, firms have grappled with how they leverage on their competitive advantages to increase their market share and their profits. The model for most of the 20th century was a large company that can “own, manage, and directly control” its assets and operations. From 1950s and 1960s, the rallying philosophy was diversification to broaden corporate bases and take advantage of economies of scale. By diversifying, companies expected to protect profits, even though expansion required multiple layers of management (Quinn, 2000).

Aliona et al (2013) posit that logistics outsourcing takes responsibility for non-core business functions, brings reductions of stocks and costs as well as order-to-delivery lead-time, accelerates capital turnover and capitalizes on synergies to achieve efficiency. Aktas and Ulengin (2005) carried out a research on the most outsourced activity in the oil and gas industry and found that the most popular outsourced activity was logistics operations.

On the benefit derived from outsourcing, he discovered that the advantage of using logistics outsourcing service is the cost reduction that leads to increased income. (Bendor and Samuel 1998, in Kairul (2011). provides a unique power from different dimensions that is not available within an organization’s internal departmental competence such as flexibility and procurement of new technologies.

Parashkevova (2007) investigated the nature of satisfaction obtained by logistics consumers and posited that the success of logistics outsourcing is evaluated by the client as satisfactory and of medium significance, with room for improvement. Parashkevova posited that the logistics process is based on its basic rule called the 7R standards which includes:- the right product with the right quality in the right quantity that has to be delivered at the right time and right place to the right customer at the right cost”. This concept has led to a huge development in the quality of service delivered by logistics providers.

2.4 Empirical Review

Jüriado (2014) investigated logistics outsourcing in the forestry and timber industry in Estonia, using 803 forestry and timber companies using regression model. The model results suggested Logistics outsourcing does not always lead to superior performance in the forestry and timber industry. Jüriado, found that costs increased with outsourcing but damage to timbers and products during transportation occurred more frequently for companies that used internal logistics than companies who outsourced. Kidi (2014) agreed that in an attempt to leverage and consolidate on the merit of outsourcing, organizations are embracing the outsourcing model. Waugh and Luke (2011) examined logistics outsourcing by 44 manufacturers in South Africa and found majority of the organisations were under pressure to focus on core competencies and to cover expanded geographic markets. Somuyiwa et al. (2015) studied logistics outsourcing services on transport costs in selected manufacturing companies in South Western Nigeria using the t-test

and found that it improved customer service and reduce costs of operation. Szuster (2010) carried out an extensive research on the outsourcing of transport service in food processing, electromechanical, and furniture industries and concluded that outsourcing of basic logistics functions like transport was based on operational and cost-based reasons. However, these studies had considered basically majorly the cost advantage of logistics outsourcing. Hence, this study investigates not only the cost benefits but the overall impact of logistics outsourcing on organisational performance in terms financial returns, operational time, internal efficiency, productivity and human capacity development on the Nigerian oil and gas industry.

2.4 Requirements for Logistics Outsourcing

The most important requirement for logistics outsourcing in the oil and gas industry is **Safety** due to the critical nature of products and materials that are involved in the process.

Secondly, **experience**. The industry strongly believes it requires experienced partners that understand their operations and the complexity of the logistics. Thirdly, **service**, a 3PL should have outstanding prompt service delivery and level the commitment to their services is crucial at all times. The fourth is **cost**. Cost reduction being the top motivator reinforces the requirement of competitive costs for outsourcing logistics. Though cost is an important reason to outsource, it is not necessarily a reason to select the 3PL form. **Financial Stability** is the next requirement concerning a 3PL choice because oil and gas companies are relentless in ensuring that they reduce cost and maximize profit and lastly **Time**. Goods and services must be delivered at the required time

2.5 Organizational Performance

Organizational performance is the extent to which an organization achieves a set of pre-defined targets that are unique to its mission.

2.5.1 Measuring Organisational performance

Research shows that several methods have been developed and applied in measuring Organizations performance

2.5.2 Balanced Scorecard Model

Kaplan (1984) proposed that effective organizational performance should be measured using a "balanced scorecard". According to Kaplan, organizational performance measurement requires measures that are not purely financial in nature, because many of the financial indicators are a result of critical operational measures. For example, accounting measures only report what has happened in the past, and not the investments in future opportunities. Therefore, argued that a combination of financial and operational measures is necessary for measuring overall organizational performance. Balanced scorecard measures include market share, changes in human resources skills and abilities, customer satisfaction, product innovation, productivity, quality, and stakeholder performance.

One critical weakness of the balanced scorecard approach is that it is like a fit-for-purpose model and not generic or a generalised parameter. Generalization across companies (e.g. Generalisation of variables or results among Food industry, Cement industry, Oil and Gas industry or Paper industry) is only possible when the balanced scorecard variables utilized are applicable to the entire population of interest. For instance, innovation and learning could mean different things for different organisations or industries; however, it is most suitable for an all-around measurement of performance as it takes all the four key parameters including Financial, customer satisfaction, research and innovation, and internal satisfaction of a successful organisation into consideration. Therefore, for the purpose of this study, the balanced score card was adopted in

the measurement of organisational performance because the population of interest is the oil and gas companies. The research does not compare the performance of an oil and gas company to a food industry or cement industry where the variable of satisfaction and performance defers. Moreover, financial gains, customer satisfaction, research and innovation for Shell Petroleum and Development Commission means the same thing for Exxon Mobil and Total E&P. Also, when there is an increase or decrease in Oil prices, it is same for all Oil and Gas companies. Thus, the balanced scored card is the most suited model of measuring organisational performance for the present study.

3.1 Research Methods

The survey research method was adopted for this study.

3.2 Research Design

The survey research design adopted in this study involved the collection of information from a sample of individuals through their responses to questions administered to respondents in the logistics providers and consumers.

3.3 Population of Study, Sampling Technique and Sample Size Determination

The target population of this study included management and senior staff of the selected logistics providers (Intels Nigeria Limited, MGM Logistics Limited and Orlean Invest Africa Limited while the logistics consumers such as Exxon Mobil, SPDC and Total E&P in Rivers State.

A total of 2211 members of staff were drawn from 3 logistics providers and consumers based on available personnel data provided by the companies as management and senior staff in charge of logistics outsourcing in the six(6) companies of interest.

It is important to state that because of the large number of staff of these international oil and gas companies involved in the research (Exxon Mobil, SPDC and Total E&P) a purposive sampling technique was adopted, which ensured that the management and senior staff involved in the management of the company's logistics functions and those that work directly with the logistics providers were the focus population

The sample size for the study was determined using the Taro - Yamane formula (Baridam, 2001) given as $n = \frac{N}{1 + N(e)^2}$

Where: n= The expected sample population,

N= The population of the study, e = level of significance

$$N = 2211$$

$$(e)^2 = 0.05 \times 0.05 = 0.0025 ,$$

$$N(e)^2 = 2211 \times 0.0025 = 5.5275$$

$$1 + N(e)^2 = 1 + 5.5275 = 6.5275 ,$$

$$N / 1 + N(e)^2 = 2211 / 6.5275 = 338.72$$

Thus, the sample size for the study was rounded up to 350 for convenience

3.4 Source of Data and Method of Analysis

Both primary and secondary data sources were obtained. The primary source consisted of information extracted from the administered questionnaires while the secondary data were from books, newspapers, magazines, journals, internet, company records, Personnel data 2015 from the Logistics Manager of the logistics providers and consumers.

The study employed Qualitative and Quantitative method of analysis using the Statistics Package for Social Sciences (SPSS) and simple percentages and chi square for test of hypothesis.

Decision Rule: The hypothesis is accepted when the χ^2_{cal} is greater than the χ^2_{tab} value and rejected if the reverse is the case.

3.5 Reliability of the Research Instrument

Test re-test method was adopted. Also, same questions were asked to the three (3) different logistics providers and consumers to ensure repeatability and consistency.

3.6 Validity of the Research Instrument

The research instrumentation was developed by the researcher in liaison with her supervisors.

4.1 Data Presentation

Table 4. 1: Questionnaire Response Rate

Selected Companies	No. of Questionnaire Administered	No. of valid Questionnaire Retrieved	No. of invalid Questionnaire	Percentage Valid Respondents%
SPDC	78	72	6	92.30
Total E&P	76	71	5	93.40
Exxon Mobil	48	44	4	91.67
Intels Nig. Ltd	115	98	17	85.21
MGM Nig. Ltd	24	22	2	91.67
Orlean Invest Africa Ltd.	9	8	1	88.89
Total	350	315	35	Average= 90%

Source: Survey Data (2017)

Results presented in **Table 4.1** showed that SPDC received 78 copies and 72 valid (92.3% response rate) were retrieved. The respondents from Exxon Mobil Nigeria got 48 copies and 44 were valid (91.67% respondent rate) and Total E&P received 76 and 71 copies of valid questionnaire were retrieved (93.4% response rate).

For the logistics providers, 115 copies of structured questionnaire were administered to the respondents from Intels Nigeria Limited, out of which 98 copies valid (85.21% response rate) while MGS Nigeria Limited got 24 copies and 22 copies were valid (91.67% respondent rate and Nine (9)

copies were administered to the management staff of Orlean Invest Africa Limited due to their low staff strength and 8copies (88.89% response rate) were valid. Therefore, a total of 315 copies of questionnaire were retrieved from the oil and gas companies and logistics providers making up 90% response rate on the average. These valid questionnaires were used for the analysis.

4.2 Data Analysis

4.2.1 Answers to Research Question

To investigate the effect of logistics outsourcing on organisational performance, four research questions were raised and the answers are analysed in the following section.

4.2.1 Answer to Research Question 1

Research Question 1

1. What are the effects of logistic outsourcing on organizational performance in the selected oil and gas companies in Rivers State?

To give a substantial answer to research question 1, four questions (Questions 10, 11, 12 and 13 were raised in the questionnaire for the logistics consumers to answer and reason for their answers were demanded (**See questionnaire**)

Answer to research question 2

Research Question 2

To what extent does outsourcing influence operating and labour cost reduction in the selected oil and gas companies in Rivers State.

Questions 14 15 16 and 17 (**see questionnaire**) were raised in the questionnaire for the logistics consumers to elicit answers to research question 2

Table 4.2 – 4.16 shows the responses to these questions.

Table 4.2. Logistic Outsourcing to Improve Service Delivery – Logistics Consumer

Companies	Responses				Total Respondents (%)
	Agree	Strongly Agree	Disagree	Strongly Disagree	
Total E&P	6(8.45)	62(87.32%)	3(4.23)	0	71(100)
Exxon Mobil Nigeria	4(9.09)	40(90.91)	0	0	44(100)
SPDC	5(6.94%)	58(80.56%)	9(12.50%)	0	72(100)
Total	15(8.02%)	160(85.56%)	12(6.42%)	0	187(100%)

Source: Survey Data (2017)

An organisation is set to perform excellently when the actual output is in line with the organisation’s intended or set goals and objectives within a specific time.

Based on the responses presented in **Tables 2- 4** and **Figure 2**, the major impacts of logistics outsourcing on organisation are: increase in output and unit production, improvement in service delivery and increase cost savings from labour cost and related services. Consequently, this implies that the companies had more financial returns and profits to their organisations.

The fact that materials are transported to base as at when due, the company can concentrate on core areas of the organisation. The cost savings accumulating from logistics outsourcing is a huge financial gain to the company. The response in **Table 2** indicated that an average of 85.56% of respondents from the selected oil and gas companies (Exxon Mobil, SPDC, and Total E&P strongly agreed that their service delivery have improved as a result of outsourcing of logistics.

Table 3 Logistic Outsourcing to Organisational Performance – Logistics Consumer

Companies	Responses				Total Responses
	Highly Significant	Significant	Insignificant	Not Significant	
Exxon Mobil Nigeria	41(93.18%)	2(4.54%)	1(2.78)%	0	44(100%)
SPDC	58(80.56%)	12(16.67%)	2(2.78)%	0	72(100%)
Total E&P	60(84.51%)	8(12.27)%	3(4.23%)	0	71(100%)
Average Total	159(85.03%)	22(11.76%)	5(3.21%)	0	187(100%)

Source: Survey Data (2017).

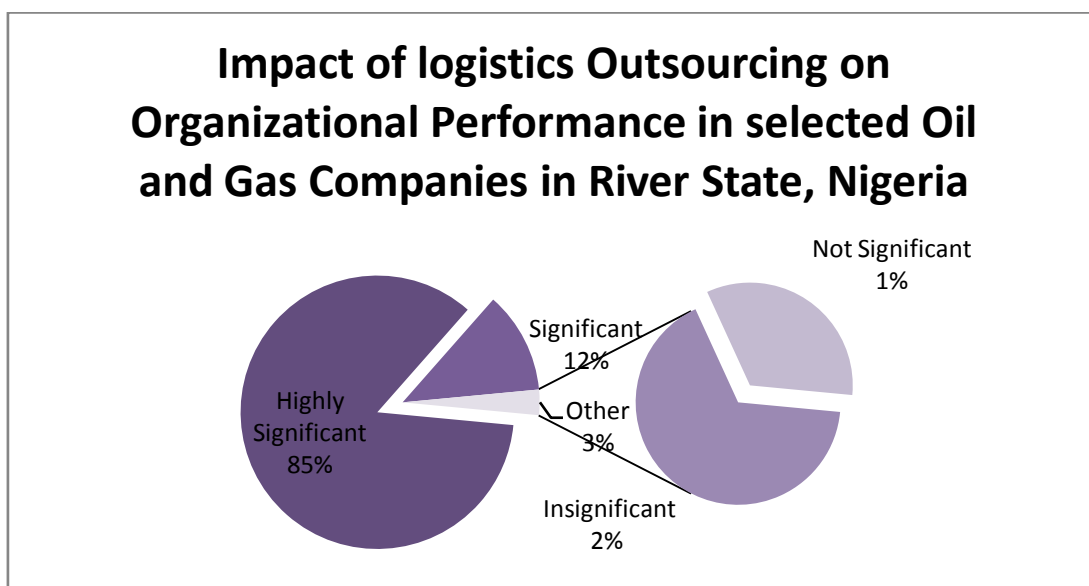


Figure 1 Contributions of Logistics Outsourcing to Organisational Performance

Combining the various responses from the logistics consumers, the cumulative effect of logistics outsourcing in the selected oil and gas companies under study is seen in **Table 5** where 74.65% of respondents from Total E&P, 83.33% from SPDC and 81.82% from Exxon Mobil all maintained that logistics outsourcing has been highly instrumental to the increase in financial returns of their organisations. The profits arising from the reduction of staff strength, economy of space and reduced expenses on transportation and acquisition of extra equipment have added to the financial gains of the oil and gas companies. For instance, if shell were transport all their materials from base to all the locations, land and offshore rigs, buy all the truck they use and also hire all the drivers to drive all the trucks. Convey drilling, production and exploration materials to the various locations by themselves, Ship all their goods from one state to the other and buy and employ those that would manage ships themselves. The cost and work load would be unbearable and could end up losing focus on their goals and run at a loss. Therefore, the oil companies perform better and make more money from cost savings when they outsource logistics.

Table 4. Extent to which Logistics Outsourcing contributes to financial returns /profit in organisation - Consumer

Companies	Responses				Total Respondents (%)
	High	Very High	Low	Very Low	
Exxon Mobil Nigeria	36(81.82%)	8(18.18%)	0	0	44
SPDC	60(83.33%)	12(16.67%)	0	0	72
Total E6P	53(74.65%)	18(25.35%)	0		71
Total	149(79.68%)	38(20.32%)	0	0	187(100%)

Source: Survey Data (2017)

Test of Hypotheses

The research hypotheses were tested using Chi square (χ^2) based on the anticipated relationships. The statistical Package for Social Sciences (SPSS) used to accurately calculate the chi square values for test of hypotheses.

Hypothesis 1

H₁: There is a relationship between logistics outsourcing and organizational performance in the selected logistics service consumers in Rivers State.

Table 5: Chi Square values for test of Hypotheses one using SPSS

Variable	χ^2_{cal}	$\chi^2_{(tab)}$	Df	P-values	Decision
Relationship between logistic outsourcing on organizational performance in the selected oil and gas companies in Rivers State	230.930	16.919	9	0.05	χ^2 (cal) is greater the $\chi^2_{(tab)}$. Hence the H ₁ is accepted

The value of χ^2 (cal) as seen in Table 5 is 230.930 with a degree of freedom of 9 and confidence level of $p > 0.05$ the χ^2 (tab) is 16.919 Since χ^2 (cal) is greater than χ^2 (tab) the H_1 which states that there is a relationship between logistic outsourcing on organizational performance in the selected oil and gas companies in Rivers State.

Test of Hypothesis Two

Using Chi square (χ^2) and the statistical Package for social Sciences (SPSS) the hypothesis were tested as shown in Table 5

H_1 : There is a relationship between logistic outsourcing and labour cost reduction in the selected oil and gas companies in Rivers State.

Table 6: Chi Square values for test of Hypotheses Two using SPSS

Variable	χ^2 (cal)	χ^2 (tab)	Df	P-values	Decision
Relationship between logistic outsourcing and labour cost reduction in the selected oil and gas companies in Rivers State	246.958	12.592	6	0.05	χ^2 (cal) is greater the χ^2 (tab). Hence the H_1 is accepted

The value of χ^2 (cal) as seen in Table 6 was calculated as 246.958 with a degree of freedom of 6 and confidence level of 0.05, the χ^2 (tab) is 12.592. Since χ^2 (cal) is greater than χ^2 (tab) the alternate hypothesis H_1 which states that there is are relationship between logistic outsourcing and labour cost reduction in the selected oil and gas companies in Rivers State.

4.1 DISCUSSION OF FINDINGS

4.1.2 Effect of Logistics Outsourcing on Organisational Performance

From the results of the statistical analysis and the test of the hypothesis it is clear that there is a significant relationship between logistics outsourcing and organisational performance in the selected oil and gas companies in Rivers State. The data obtained indicated that over 85% of the responses from the three (3) oil and gas companies (Exxon Mobil, SPDC and Total E&P) showed that logistics outsourcing had a highly significant impact on the organisational performance (See Figure 1).

In the light of this, Narasimhan and Jayaram (2011) posits that organizational performance refers to ability of an enterprise to achieve such objectives as high profit, quality product, large market share, good financial results, and survival at a pre-determined time using relevant strategy. Applying the Balance Score Card, proposed by Kaplan (1984) which considers organisational performance in four perspectives namely: Financial perspective, Innovation and learning perspective, Customers perspective and Internal business perspectives. Organisational performance was measured using this method for the purpose of this research and are discussed as follows:

4.1.3 Financial Performance Perspective of the Oil and Gas Companies

One of the most repeatedly stated advantage of logistics outsourcing as showed from the responses of the logistics consumers (oil and gas companies) in this study was that they made high cost savings. The lower cost of operation and labour, reduction in overhead costs makes outsourcing very attractive. Since productivity and efficiency are on the increase, a business can be more successful, better-prepared for market challenges and have a streamlined cash flow (Maloni and Carter 2006). Outsourcing frees an organization from investments in technology, infrastructure and people which are not in their core areas of operations (Juttner et al 2016). The oil and gas companies save much money when they outsource accommodation by renting containers, hotels and equipment from logistics providers. They make huge financial savings for not building, maintaining and employing staff to handle these areas. Therefore they boycott great deal of irrelevant investments and expenditures.

Moreover, there is cost and risk sharing for damages and uncertainties between the logistics providers and consumers. No wonder, 79.68% of respondents from the oil and gas companies including Exxon Mobil, Shell and Total E&P strongly agreed that they had great financial returns from savings accumulated from logistics outsourcing (**Table 4**).

4.1.3.1 Empirical Validation from Previous Studies

The findings agrees with the works of Macharia et al (2017) in their studies on the inventory and transportation outsourcing in Kenya found that outsourcing Inventory Management and transportation Outsourcing improved the performance of Oil and Gas projects in Kenya and enabled in meeting objectives which emphasize that Inventory Management Outsourcing was an essential strategic issue imperative for Oil and Gas project. As trained experienced personnel handles equipment from the logistics services providers, it becomes a cost reduction strategy. Training cost of personnel for such jobs are averted. More importantly, huge Salaries at the company's standard for service such as health benefits, retirement, insurance and liabilities are taking off the oil and gas companies expenditures. For instance, the annual salary, allowance SPDC or Exxon Mobil would have paid to ten (10) stores keepers and their liabilities (such as families) are averted while the company can only employ supervisors and assistants to monitor the work of the logistic providers.

Oil and Gas companies employ fewer staff and pays them well to work more efficiently, It is a known fact, that less staff attracts less bulk payment which are easy to maintain and control which results in Staffing flexibility thus, they do not only save big but they also operate optimally and improve their organisational performance as affirmed by over 85% of respondents.

Also, the works of Ten and Wolff (2005) on the importance of logistics outsourcing in enhance survival and supply chain agrees with this finding. Ten and Wolff (2005) noted that for companies to maintain a steady winning position, they must increase their productivity twice their average. In order to achieve such targets, companies contract out services with the objectives of smoothing production cycles, gaining from specialization and channel their effort towards the areas where they enjoy comparative advantages (Ten and Wolff 2005). While they outsources their non-core activities to experts with the hope of achieving reliability, quality service delivery and cost reduction which translates to improve financial returns and thus improving organisational performance.

4.1.4 Customer's Perspective of Measuring Organisational Performance

The customer perspective has to do with the impact of the logistics outsourcing on the logistics consumers from the customers' perspective. Although, actual figure in dollars or naira were not

given due to security and company policy constraints, the recommendations from the logistics consumers such as Exxon Mobil, Shell Petroleum Development Company (SPDC), and Total E&P presented in **Appendix B**. They confirmed that the logistics providers were efficient, reliable, prompt, professional and outstanding in their services to enable them to fulfil their set targets (**See Appendix B**). All the selected oil and gas companies under study confirmed that, they had an improvement in service delivery and reduced operational time. Combining both the perspectives of the logistics providers and consumers selected oil and gas companies in Rivers State, over 80% of respondents strongly that logistics outsourcing has reduced operating time, Just-in demands were met and their skilled personnel as used without extra cost since the oil and gas company has a contract with these logistics providers.

The logistics providers are always on ground for the management of their base, warehouses, storage facilities maintenance of their facilities. For instance, the logistics providers always have their men on the rig to relate the needs or demands from the site to the office for immediate supply.

4.1.4.1 Empirical Validations from Previous Studies

The findings on cost reduction from this study is in consonance with works of Kannan and Tan (2005) on cost benefits of effective logistics outsourcing suggested that the most importance advantage of having a good logistics provider on ground is to minimise cost of just in demands and obtain just in supply in a short time. From the interaction with the selected oil and gas companies, logistics consumers believed that they minimise spaces and spent less for services. Assuming Total E&P needs one hundred(100) trucks of drilling fluid, the management of the trucks, employment of truck drivers, maintenance of 100 truck drivers and the space for 100 trucks are all taking off, what a cost reduction strategy, flexible and productive. This findings also substantiated with the studies of Ogola (2013) who observed that the effect of logistics outsourcing of services by the publishing firms on performance were increased productivity, flexibility, better quality of products, reduction in the operating cost of the firm, technology advancement and customer satisfaction.

4.1.5 Internal Business Organisational Performance Perspective

The oil and gas sector consists of several complex business operations that cannot be carried out alone by one company. The core areas of their operations are exploration, drilling and production of oil and gas for large scale consumers. The transportation of materials to and fro involved in the various stages of their activities, management and maintenance of the facilities and distribution of the produced oil and gas are outsourced to logistics providers to gain competitive advantage and increase productivity.

The oil and gas companies enjoys economy of scale as they share common services and facilities under 'same roof' of a logistics provider as obtained in the Onne port in River State, as the oil companies uses the services of Intels, MGM Logistics Limited and other logistics providers. By outsourcing, the internal workload is reduced enabling them to concentrate on their core activities and better time management internally is attained. Therefore, there is an internal increase in productivity and efficiency, their business becomes more successful, better-prepared and positioned for market challenges (Juttner et al 2016). More responses from the data gathered showed that they achieved an increase in output/production due to logistics outsourcing and a total of 80.21% strongly agreed that their business operations were optimized due to outsourcing (**Table 3-4**).

4.1.5.1 Empirical Validations from Previous Studies

These findings are in consonance with the works of Munovi, (2015) who noticed that firms can maximize returns on internal resources by concentrating investments and energies on core competencies thus an application of the core competence theory in the present study. By Outsourcing, the oil companies are able to transfer resources from non-value added staff functions to value-added core functions (Lijo & Ramesh 2012). The oil and gas keep on outsourcing to gain competitive advantage because of the high competitive oil and gas environment were some companies are folding up and survival for the fittest is the rule. Many companies are retrenching staff that are not in their core area and cutting down some core area staff, thereby helping in staff management as noted by previous authors like Masi,(2006, Meade and Sarkis, (2002).

From the foregoing, there is no doubt that the oil and gas companies under study, outsources non-core areas of their operations to effectively position themselves to maintain their market position and relevance. Thus, strengthening the company's ability and capacity in their core areas or functions in which they have comparative advantage and competence. Consequently, the organisational performance is improved as the internal businesses are optimised.

4.1.6 Innovation and Learning Perspective

Sometimes, the logistics consumers train or allow the members of staff from the logistics providers to participate in some training activities such as safety and material handling for the purpose of cohesion and integration. This provides an opportunity for inter-skill learning and sharing of knowledge. This enhances the performance of the logistics provider leading to better productivity and performance of the consumer's activities. On the job training in oil exploration and production and material handling is also possible. The oil and gas companies in turn gains access to skilled labour at lower cost thereby Improving service delivery and profit making.

4.1.6.1 Empirical Validations from Previous Studies

Gadde and Hakansson (2001) observed that gaining access to the technological and innovation resources of suppliers has been an important driving force for outsourcing in recent times (Quinn, 2000). Therefore, by applying the balanced score card in measuring the organisational performance of the Oil and gas companies in Rivers State as exemplified in this study whereby organisational performance are measured from four perspectives namely: The financial, Customer , Internal business and the Innovation and Learning perspectives, with the extensive application of the core competence theory in discussing the results analysed using SPSS tool for chi square computation and descriptive analyses, it is thus, established that there is a significant relationship between logistics outsourcing and organisational performance of the selected oil and gas companies in Rivers State under study.

5.0 Conclusion

Logistics outsourcing increases the performance of the oil and companies. This is because, the oil and gas companies outsources the non-competence area of the oil and gas production to logistics providers that specialises in that such services while they channel majority of the resources (financial, human, technology, time) into their areas where they have competitive advantage leading to core competency. This strategy of job specification and division of labour enhances productivity, capacity building and improve job efficiency. Therefore the impact of logistics outsourcing on the oil and gas industry include: provide financial gains from financial saving from reduction in labour and operation cost, internal efficiency due to reduced workload,

improved service delivery, increase in organisational performance and enhance core competency. The study recommends that Logistics outsourcing should be embraced by Nigerian business organizations generally and factored into Nigerian Local Content Policy.

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APENDIX A - Questionnaire Logistics Outsourcing and Organizational Performance Questionnaire (LOOPQ)

PART ONE: WORK/ORGANIZATIONAL PROFILE

- 1) Name of Organization:
- 2) Major Activities:
- 3) Position in the organization:
- 4) Length of Service
- 5) Educational qualification:

(a) First degree [] (b) Higher Diploma (c) Professional degree [] (d) Post graduate degree []

6) Major clients -----

7) Sector competitors

A. INFORMATION ON LOGISTICS SERVICE PROVIDER/CONSUMER

8) Is your organization a logistics outsourcing provider or consumer? -----

9) **Does** Logistics outsourcing form an important operational asset (bringing income) of your organization?

Yes No

If yes, In what ways -----

Please tick the following as appropriate? (For Questions 10 -24).

10) To what extent does Logistics outsourcing contributes to your organizational performance?

A. Highly Significant b) Significantly c) Insignificant d) Not Significant

11) Increased Output/Production per employee has improved through logistics outsourcing?

a) Very High b) High (c) Moderate d) Low

12) To what extent has logistics outsourcing contributed to financial returns / profit in your organization?

13) Logistics outsourcing has improved service delivery in your organization?

a) Agree b) Strongly agree c) Disagree d) Strongly disagree

PART TWO: Effects of Logistics Outsourcing on Organizational Performance

A. Information on Logistics outsourcing and operation and Labour cost Reduction

14) To what extent does logistics outsourcing influence labour cost reduction in your organizations?

a) Very High b) High (c) Moderate d) Low



15) logistics outsourcing influence operational cost reduction in your organizations?

- a) Agree b) Strongly agree c) Disagree d) Strongly disagree

B. Information on Logistics outsourcing and business operations

16) How has logistics outsourcing affected time reduction in your organization?

- a) Highly significant b) Significantly c) Insignificantly d) Not significant

17) How has Logistics outsourcing led to a decrease in operating cost in your organization?

- a) Highly Significant (b) Significantly c) Insignificant d) Not significant

C. Information on Logistics outsourcing and target setting, financial returns and Management of Logistics Outsourcing

18) What are the effects of logistics outsourcing on target setting in your organizations?

- a) Faster response to customer demands b) reduction in the operating cost
- c) Increase in profit d) has brought about specialized industry knowledge.

Please mention others not listed if any

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19) Has logistics Outsourcing led your organization to get into other markets? YES /NO

If yes, How

- a) Highly significantly b) Significantly c) Insignificant d) Not significant

20) Has Logistics outsourcing led your organization to be more competitive? YES /NO

- a) Highly significant b) significantly c) Insignificant d) Not significant

21) Logistics outsourcing has led to faster response to customer demands

- a) Agree b) Strongly agree c) Disagree d) Strongly disagree