

Realization of Logistics Operations Within Nigerian Manufacturing Industries

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ABSTRACT

In understanding the impact of logistics functions and processes as an important source of competitive advantage and on the survival of manufacturing industries in both global and local market, the level of awareness of logistics activities must be conducted. Therefore, this study focused on assessing the level of awareness of logistics activities in Nigerian manufacturing industries. A field survey with a well-structured and self-administered instrument of information collection were used to get necessary information from the respondents. One hundred and fifty manufacturing industries were selected intentionally to represent the best state of logistics activities awareness within Nigerian manufacturing industries. The findings revealed that the total average awareness level of logistics activities within the Nigerian manufacturing industries is average. Also, transport logistics is the most popular form of logistics activities in Nigeria, followed by warehouse/distribution logistics, domestic logistics, after-sales logistics, and procurement logistics. The findings also revealed that fourth party logistics and green logistics are the least popular logistics activities in Nigeria. This is due to the lack of new and effective information flow in their logistics management processes. The study therefore recommends that stakeholders in the Nigerian logistics industry, business owners and manufacturing industries should adopt one or more forms of logistics functions in their core business activities to aid sustainability, competitive advantage, performance, and economic growth.

Keywords: Logistics activities, Manufacturing industries, Awareness, Survey, Competitive advantage, Economic growth

INTRODUCTION

For an organization to compete in a global economy, an efficient logistic management is considered a strategic priority. The organization has to implement a logistic management strategy by assessing all logistic functions

and defining how logistic processes will function adequately within the organization, thereby contributing to the overall supply chain management goals (Rodrigue et al., 2009). The logistic concept is defined as a thread that connects crucial processes and provides the basis for the design of systems that will cost-effectively deliver value to targeted customers (Christopher, 2003). Logistics is also defined as part of supply chain that plans, implements, controls the efficient and effective forward and reverse flow, storage of goods, services and related information between the points of origin and the point of consumption in order to meet customer's requirement (Pesut, 2009). According to Harrington (2002), logistics is the way of achieving total performance of an organization business by integrating some effective logistics management activities that are performed together to attain lower cost. Logistics operation through market strategies enables the concept of having the right merchandise at the right destination combined with the right marketing in the right place, and all show the way to customer satisfaction (Pienaar and Vogt, 2006). Thus, logistics management practice boosts a firm's performance and promotes a firm's value by satisfying of customers' needs, minimal cost in supply, and reduction of profitless inventory. As described by Hamilton and Webster (2009), logistics activities can be considered as the operational component of supply chain management which contains procurement, inventory management, transportation, data collection and reporting. This implies that logistics activities and processes are important elements that a company's supply chain capabilities and competences are based upon. The inbound logistics, outbound logistics, procurement logistics, reverse logistics, green logistics, fourth party logistics, global logistics, domestic logistics, third party logistics, production logistics, after-sales logistics, asset control logistics, transport logistics, integrated logistics, inventory management, warehouse/distribution third party logistics, industrial logistics are identified as logistics activities and their management is vital to the supply chain execution and the organizations as well (Rahman, 2011; Ballou, 2003; Richards, 2011; Pienaar and Voght, 2009). Logistics chain operational and functional activities remain between the marketing task and the production role and perform a lesser role of firm strategies that lead towards higher performance. Therefore, logistics chain practices comprise of a broad logistics activity which extend from the raw materials to the final consumer and output enabling tools (Sandberg and Abrahamson, 2011). In order to become competitive and successful, companies must manage their logistics, which boosts efficiency, lessen costs and improve performance. One area which manufacturers must take advantage of is the newest business innovations to improve overall performance and one area where such intervention improves performance is in logistic activities, such as transportation, inventory management, warehousing, material handling and other logistic activities (Saini et al., 2018). The efficiency and effectiveness of the logistics operation has a significant influence not only on the business performance of manufacturers but also on the customer's awareness of the quality of the products and services provided by the company. Effective logistics management can provide major source of competitive advantage to a company by ensuring that it is able to frequently respond quicker, more competently than competitors to its customers' requirement

on a worldwide basis (Somuyuwa et al., 2016). Presently, Nigerian manufacturing industries are challenged to reorganize their transportation and logistics management method to achieve efficiencies, customer satisfaction, and profit margins. This means that logistics activities in Nigeria must be well combined and apply methods that will be determined by consumer demand, replacement policy, regulated costs, updated efficiency, and improving on trading partners relations (Obasan, Ogunkoya, and Hassan, 2016). Manufacturers Association of Nigeria (2015) reiterated that for manufacturers in Nigeria to participate efficiently in the global market as significant players, their products must be competitive in quality, low cost, responsive to current demand, and always available. Similarly, an effective supply and logistics chain functional activities must be established in combination with chain partners, the application of lean and flexible methods, and timely and accurate information which are all required to develop organizational performance. Another study conducted by Umar (2019) on the role of logistics activities in manufacturing firms' performance in some states in Nigeria confirms that managers of manufacturing industries cannot solely depend on the contributions of logistics to improve performance. It was therefore recommended that management in the manufacturing sector can find ways of improving those outbound logistics activities they undertake, including drivers, such as information technology to enhance performance. To understand the impact of logistics activities and processes as a major source of competitive advantage and on the survival of manufacturers in both global and local market, the level of awareness of logistics activities must be conducted. In Nigeria, no single literature is found reporting the level of awareness of logistics activities within manufacturing industries. Therefore, the aim of this work is to assess the level of awareness of logistics activities in Nigerian manufacturing industries.

METHODOLOGY

A well-structured and self-administered instrument of information collection was put in place for this study. This was utilized since it is the best and most practical instrument. According to Harris & Brown (2010), questionnaires are useful when gathering standardized information over a short period of time. The questionnaire was primarily designed to assess the level of awareness of logistics activities among the selected companies. One hundred and fifty manufacturing industries were selected in Lagos, Nigeria. The questionnaire consists of two areas; Section one elicits demographic and other personal information from respondents, section two contains questions that surveyed the awareness of logistics activities in Nigerian Industries. The Likert scoring scale 1-5 was used to rank the impact factors in the various logistics activities. The most important factor being 5 and the least 1 where 1 = not aware, 2 = slightly aware, 3 = moderately aware, 4 = strongly aware and 5 = very strongly aware. The research used the mean item score (MIS) to present the discoveries of total responses for each logistics activities in sections two and was taken as its level of awareness. One hundred and fifty copies

of questionnaire were administered by personal visit to all logistic management departments of selected manufacturing industries in Lagos, Nigeria. An aggregate of 150 questionnaires was expected to be received back from the respondents, but, 106 questionnaires were received. This represented usable response rate of 71%. The target group in the research includes logistics managers, supply chain managers, logistics engineers, customer service personnel, inventory managers, consultants, operations managers and purchasing manager in the selected manufacturing industries. Efforts were made to describe the questions and the terms used in the questionnaire. The respondents were instructed to request for information they do not have from the relevant departments. Questionnaire with unsure information were cancelled and in rare cases, where doubts exists, telephone confirmations were made.

RESULTS AND DISCUSSIONS

Profile of the Respondents

In table 1, the distribution of the sample according to sex reveals that 68.9% of the respondents are male, while females accounted for 31.1%. This indicates that majority of the respondents are male. The findings also show that 60.4% of the companies surveyed are owned by local firms, 17% are owned by the government, 12.3% are owned by foreign firms, while 10.4% are owned by other forms of ownership. This means that majority of the industries surveyed are owned by local firms. Also, table 1 revealed that 23.6% of the respondents were in distribution/marketing, 18.9% were in production, 17.9% were in customer service, 11.3% were in transportation, 10.4% were in storage and warehousing, 10.4% were in other areas of logistic management, and 7.5% of the respondents were in purchasing. Similarly, this finding indicates that majority of the respondent's business area of logistics management are in distribution/marketing. In addition, the table revealed that 69.8% of the respondents have business experience of 0 to 5 years, 21.7% of the respondents have 6 to 10 years of business experience, 3.8% of the respondents have 11 to 15 years of business experience, 1.9% of the respondents have 16 to 20 years of business experience, and 2.8% of the respondents have more than 20 years of business experience in the logistics industry. Likewise, this value of the percentage indicates that majority of the respondents have business experience of 0 to 5 years in the logistics industry. Finally, the findings in Table 1 show that 92.5% of the respondents are bachelor degree holders, 4.7% of the respondents have a diploma, 0.9% of the respondents' highest level of education were a primary school certificate, 0.9% were secondary school certificate holders, and 0.9% of the total respondent population are master's degree holders. This finding indicates that majority of the respondents are bachelor degree holders

Awareness of Logistics Activities

The second section of the questionnaire was designed primarily to ascertain the levels of awareness of logistics activities within the Nigerian manufacturing industries. Data collected from the survey are presented in Table 2.

Table 1. Demographics of respondents of the survey Source: Field Survey, 2019.

Variables	Frequency	Percentage of Respondents (%)
Sex		
Male	73	68.9
Female	33	31.1
Company Ownership		
Local	64	60.4
Foreign	13	12.3
Government	18	17
Other	11	10.4
Area of logistics Management		
Purchasing	8	7.5
Transportation	12	11.3
Storage and warehousing	11	10.4
Production	20	18.9
Distribution/Marketing	25	23.6
Customer Service	19	17.9
Other	11	10.4
Years of Experience		
0 - 5	74	69.8
6 - 10	23	21.7
11 - 15	4	3.8
16 - 20	2	1.9
More than 20 Years	3	2.8
Educational Qualification		
Primary	1	0.9
Secondary	1	0.9
Diploma	5	4.7
Bachelor's Degree	98	92.5
Master's Degree	1	0.9

From the result of the descriptive analysis in Table 2, transport logistics was ranked first by the respondents as the most recognized form of logistics activities in Nigeria with a mean score of 4.76 and standard deviation of 0.526. Domestic logistics was ranked second with a mean score of 3.47 and standard deviation of 1.318. Warehouse/distribution third party logistics was also ranked second with a mean score of 3.47 and standard deviation of 1.311, after-sales logistics was ranked third with a mean score of 3.44 and standard deviation of 1.339, and procurement logistics was ranked fourth with a mean score of 3.43 and standard deviation of .331. However, the least informed logistics activities by the respondents are fourth party logistics (4pl) (ranked thirteenth with a mean score of 2.94 and standard deviation of 1.466), and green logistics (ranked fourteenth with a mean score of 2.87 and standard deviation of 1.448).

DISCUSSIONS

The findings from this study are in line with the study of Rahman (2011) which mentioned that if logistics activities such as transportation,

Table 2. Awareness of logistics activities Source: Field Survey, 2019.

Awareness of Logistics Activities	Mean (\bar{x})	Standard Deviation (σX)	Rank (R)
Transport logistics	3.75	1.310	1
Warehouse/Distribution	3.47	1.311	2
third party logistics			
Domestic logistics	3.47	1.318	2
After-sales logistics	3.44	1.339	3
Procurement logistics	3.43	1.331	4
Production logistics	3.40	1.392	5
Outbound logistics	3.34	1.420	6
Industrial logistics	3.30	1.346	7
Third party logistics (3PL)	3.28	1.365	8
Asset control logistics	3.25	1.265	9
Integrated Logistics	3.22	1.380	10
Inbound logistics	3.22	1.493	10
Global logistics	3.17	1.313	11
Reverse logistics	3.12	1.357	12
Fourth party logistics (4PL)	2.94	1.466	13
Green logistics	2.87	1.448	14

procurement/distribution, and procurement logistics are properly identified, they will be vital to logistics management execution and the organizations as well. According to the respondents, transport logistics is the most popular form of logistics activities in Nigeria, followed by warehouse/distribution logistics, domestic logistics, after-sales logistics, and procurement logistics. Thus, their level of awareness is rated as very high. Transport logistics is a vital and significant part of the process of economic competitiveness that ensures important distribution for manufacturing, enhanced production as well as effective and efficient transport which connects businesses to global markets. Transport logistics is very popular among Nigerian industries because it ensures effective and efficient distribution for manufacturing processes. However, the findings also revealed that fourth party logistics and green logistics have low mean item scores and are the least popular logistics activities in Nigeria. Lower level of awareness of fourth party logistics and green logistics is due to the lack of new and effective information flow in their logistics management processes because an effective information flow enables industries to make better planning decisions in type of logistics activities to adopt.

CONCLUSION

The levels of awareness of logistics activities within Nigerian manufacturing industries have been successfully investigated. The total average awareness level of logistics activities within the Nigerian industries is average. Being the factor with the highest mean ranking, transport logistics will no doubt help important distribution for manufacturing in Nigeria and also connect businesses to global markets. Also, out of the sixteen logistics activities listed

in this study, fourth party logistics (4PL) and green logistics have low levels of awareness, hence very low implementation levels in Nigerian industries. It is therefore important that stakeholders in the logistics industry, business owners and organizations should adopt one or more forms of logistics functions in their core business activities to aid sustainability and economic growth. It is recommended that the public should be sensitized on the awareness of logistics activities and functions in Nigeria. Furthermore, awareness training and education of professionals, public, logistics managers and stakeholders in the logistics management on logistics activities should be encouraged for its adoption and practice to be generally accepted. It is also important for Nigerian logistics firms to adopt an effective and new information flow in their logistics management processes because the growth of any logistics firm and its ability to compete globally with developed nations businesses depend on effective information flow. Finally, further research can be conducted to determine ways at which some lesser known logistics activities such as fourth party logistics, green logistics, and reverse logistics can be widely used among Nigerians.

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