

ANALYSIS OF OUTSOURCING LOGISTICS SERVICE AND CUSTOMER SATISFACTION IN MANUFACTURING COMPANIES IN SOUTH WESTERN NIGERIA

Dr. Somuyuwa Adebambo O*, Odepidan Omolola M, and Dr. Dosunmu Victor A.

Department of Transport Management, Faculty management Sciences
Ladoke Akintola University of Technology,
P.M.B. 4000, Ogbomosho, Oyo State.

ABSTRACT: *Outsourcing is a growing aspect of supply chain management and is receiving a lot of attention from manufacturing companies globally. This is because there is stiff competition and the need to satisfy customers demand variability, reduced lead-time and improve market share. This study establishes the extent manufacturing companies outsource services and the impact on customer satisfaction. The research was carried out within manufacturing companies in south western Nigeria. The population of the study consists of top management staff, this includes logistics, procurement and marketing managers. The sample of this study consisted 10 Manufacturing companies from the list of fifty (50) quoted companies on the Nigerian Stock Exchange modified by Manufacturing Association of Nigeria in 2005. The data collected was analyzed using regression analysis. The analysis indicates that manufacturing companies outsource Transportation and Distribution to a very large extent. Procurement, Warehousing, inventory control are also outsourced. The analysis also reveals that outsourcing has a significant effect to customer satisfaction. Overall, outsourcing seems not only to show positive benefits for cost reduction but also in service performance, thus, the study suggests that by outsourcing logistics activities companies can better service performance to their customers.*

KEYWORDS: Outsourcing, Logistic Service, Customer Satisfaction

INTRODUCTION

The efficiency and effectiveness of the logistics operation has a considerable influence not only on the business performance of manufacturers but also on the customer's perception of the quality of the products and services provided by the plant. Effective logistics management can provide major source of competitive advantage to a company by ensuring that it is able to continually respond faster, more efficiently than competitors to its customers' requirement on a global basis.

The manufacturing function of a company, for example, interacts with and is impacted by the logistics functions as it must respond to the demands of the logistics system for replenishment of products in stock and must maintain their ability to respond to special or usual customer demand (Lynch, 2000). In addition, outsourcing has an impact on customer service because a firm receives the same level of quality while paying less money for it (Mckinsey, 2003). Higher customer satisfaction leads to higher loyalty and comfort levels among customers and good word of mouth publicity (Hendricks and Singhal, 2003).

Outsourcing of logistics requirements holds the potential to optimize the role of logistics of such a company, which may therefore lead to many improvements and other possibilities for

the organization. It increase customer service level, reduce supply chain costs due to economies of scale, reduce capital requirements, increase competitive advantage and profitability. Logistics outsourcing adds value, particularly with respect to improved customer service and reduce costs, by allowing the company to focus on its core competencies with logistics specialists focusing on providing the logistics services.

Firms typically outsource a variety of activities in order to achieve specific objective, which includes reducing costs (Aimi, 2007; Jiang, Frazier, & Prater, 2006; Lau & Zhang, 2006), improving product quality, improving flexibility (Lau & Zhang, 2006), increasing market coverage or perhaps to gain ready access to additional capacity.

Outsourcing of logistic functions is an emerging industry in the world and the market continues to grow (Kersten, 2006). Meanwhile, other activities that do not offer such advantages will be outsourced to external suppliers or partners. This is because some companies are highly integrated; others specialize and outsource their remaining transactions in market. Basically when companies outsource their activities to service providers to produce their products and services, they usually move towards a business strategy which helps them in maintaining their competitive advantage in serving customers

The corporate world is changing rapidly; companies are under increasing pressure to maintain and increase their profitability while at the same time increasing customer service and market share in a global economy. The close relationship between logistics and customer service, and its effect on a firm's competitiveness dictate that companies handle their logistics function prudently so as to achieve its full potential as a source of competitive advantage. In this era of volatile business environment that is changing rapidly, organizations have to compete globally. It is becoming more and more difficult to meet customer demands. In this ever changing business climate customer wants quality products, superior service, expeditious delivery, and better value. Logistics outsourcing is an important option for companies that perceive the existence of gaps between what they want to accomplish with their logistics operations, and what they can achieve with their in-house expertise.

Economic principle is an ideal and commonly used basis in outsourcing decision making. Efficiency theory indicates that companies will allocate their resources within the value chain to those activities that give them a comparative advantage. Most researchers identified cost reduction or other cost related aspects as key factors for Logistics Outsourcing. Wilding and Juriado (2004) for example conclude after a broad literature review that cost aspects are most important in this context. Additionally, other factors related to costs are often mentioned. The reduction of assets owned by companies themselves leads to changes in their cost structure, turning fixed costs into variable costs (McGinnis et al., 1995, Van Damme and van Amstel, 1996, Sink and Langley, 1997, Razzaque and Sheng, 1998, Langley *et al*, 2002). The same effect leads to a reduction of capital employed (Van Damme and van Amstel, 1996, Lynch, 2004). Furthermore, logistics service providers are able to realize economies of scale (Van *et al* 1996), which enable them to perform logistics operations at lower costs. Since they pass a part of this cost advantage to their customer, manufacturing companies can reduce their costs as well. Beyond cost reduction, Langley et al. (2002) have identified increasing transparency concerning logistics costs as benefit of outsourcing decisions.

It is against this background that the paper sets to analyse the causal relationship between outsourcing logistics service and Customer Satisfaction with a view to ensuring that

Organizations or Company achieve their ultimate objective of competitive advantage through the highlighted channel of Outsourcing and Customer Satisfaction.

LITERATURE REVIEW AND CONCEPTUAL UNDERSTANDING

According to Council of Supply Chain Professionals formally known as Council of Logistics Management (2003), logistics, is the process of planning, implementing, controlling the efficient and effective flow, storage of goods, services and related information from the point of origin for the purpose of conforming to customer's requirements. It 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 (Vitasek, 2007). Logistics activities and processes are fundamental elements that a company's supply chain capabilities and competences are based upon. The close relationship between logistics and customer service, and its effect on a firm's competitiveness dictate that companies handle their logistics function prudently so as to achieve its full potential as a source of competitive advantage.

Capacity can be better utilized by the service provider because the peaks and drops in transport quantities offered by various clients can be counterbalanced, and because backhauls are often available. Thus the service provider can affect a great degree of efficiency, by exploiting economies of scale, among other things.

Third Party Logistic (3PL)

Outsourcing to third party logistics services (3PL) and contract logistics generally mean the same thing (Lieb et al., 1993). It involves the use of external companies to perform logistics functions, which have traditionally been performed within an organization. The functions performed by third party logistics service providers can encompass the entire logistics process or select activities within that process (Sahay & Mohan 2006). Third party logistics involves the use of external companies to perform some or all of the firm's logistics activities. A key rationale for such outsourcing is that with intensified global competition, firms are concentrating their energies on core activities that are critical to survival, and leaving the rest to specialist firms (Bhatnagar et al, 1999).

According to Ojala & Jamsa (2006) A third party logistics performs the activities which are carried out by an external company on behalf of a shipper and consists of at least the provision of management of multiple logistic services. These activities are offered to the customers in an integrated way, not on a standalone basis so the co-operation between the shipper and the external company is an intended continuous relationship.

Service Provided by 3PL

The 3PL starts work when manufacturing is completed. They deal with all issues related to distribution and also sometimes deal with disposal of leftover of raw material. The third party logistic companies are offering a number of services to the companies like public warehouse, dedicated warehouse, distribution and total logistic, (Tompkins Associates, 2009). Traditionally 3PL providers have been providing asset based services to the companies like warehousing, transportation, freight forwarding or customs brokerage. Latter on they emerged-one that is not asset based and is capable of creating an optimal solution in a global

environment, (Sowinski, 2000). There is a vast range of different operations that are provided by 3PL service companies. Some companies tend to specialize in certain types and styles of operations, rather than trying to offer all of the many alternatives that are available.

Fourth Party Logistic (4PL)

The logistic company “Accenture” is the introducer of term 4PL in the market and registered as trade mark in 1996. As per Accenture the definition of 4PL is “it is an integrator that collects the resources, capabilities, and technology of its own organization and other organizations to design, build and run comprehensive supply chain solution” (Bajec, 2009).

The fast acceleration of e-capabilities and junction of technology have heightened the need for an over-arching integrator for supply chain-spanning activities and 4PL being an evolution in supply chain outsourcing shares the sources of supply chain spanning activity with a client and select teaming partner, under the direction of a set 4PL integrator. The outsourcing 3PL is now accepted as business practice and fourth party logistics is accepting as a breakthrough solution in modern supply chain, which meets challenges tactfully and provide maximum overall benefit (Bauknight & Miller, 2009).

(Hubner & Elmhorst, 2007) is of the view that “The 4PL service providers participate in supply chain coordination instead of providing operational logistics and fulfillment services, like a traditional third party logistics provider would”. Moreover, the manufacturer makes a contract with fourth party logistic provider, designs the supply chain strategy and coordinates with customer. The 4PL has to coordinate with customers’ customer and with 3PL service provider and also has to make contracts on their own behalf with 3PL service provider to perform the logistics activities.

Services Provided by 4PL

The fourth party logistic manages the logistics process, regardless of what carriers, forwarders or warehouses are used. Therefore, 4PLs have become logical solution for business process outsourcing by providing visibility and integration across multiple enterprises. The Users of 4PL can put attention on core competencies to get the better output while managing and utilizing company assets and resources, as to inventory and personnel (Mukhopadhyay & Setaputra, 2006). A 4PL is treated as a strategic partner, rather than a tactical one and is a supply chain integrator that synthesizes and manages the resources, capabilities, and technology of its own organization with those of complementary service providers to deliver a comprehensive supply chain solution, (Mukhopadhyay & Setaputra, 2006).

The 3PL service providers are providing asset base and non-asset base services to the manufacturers. Simply we can say that it include the coordination of the distribution from one place to another, but 4PL are providing a superior expertise in warehousing, transportation and other logistic fields to the manufacturing companies. 4PL is mainly concerned with administrative service and embody administrative service in addition to the services offered by 3PL.

Reasons for Logistics Outsourcing

Reason	Purpose
Return on Asset	Reduce the cost of investment in warehouse facility, transportation equipment and order picking cost.
Personnel Productivity	Proper utilization of personnel and enhance the productivity by emphasizing the core business.
Flexibility	If current market and characteristics of product changes the need of logistic also change. It helps to fulfill the new customer requirements, ordering method and competitive offerings.
Cost	Companies go for outsourcing to enhance the capital saving by getting the outside logistic facilities at lower cost.
Customer and Specialized Services	Focus to increase the customer satisfaction between business to business and business to customer. Specialized services are becoming the rule, rather than the exception.
Packaging	Help the companies to convert the big boxes into small boxes and repack the products as per customer requirement.
Information Technology	When development of logistic system is on low priority and resources within company are scarce, then there can be significant advantages to utilize a provider. The new information systems and resources often can be met more efficiently through outsourcing.

Servqual and Servperf

This highlights how important improving service quality is to organizations for their survival and growth since it could help them tackle these challenges they face in the competitive markets. This means that service-based companies are compelled to provide excellent services to their customers in order to have a sustainable competitive advantage. Service quality is generally defined as the overall assessment of a service by the customers, (Eshghi et al., 2008) or the extent to which a service meets customer's needs or expectations.

The relevance of service quality to companies is emphasized here especially the fact that it offers a competitive advantage to companies that strive to improve it and hence bring customer satisfaction. Furthermore, service quality can be defined as the difference between customer's expectation for service performance prior to the service encounter and their perception of the service received. Negi (2009,) suggests that customer-perceived service quality has been given increased attention in recent years, due to its specific contribution to business competitiveness and developing satisfied customers. It is very vital to note that, service quality is not only assessed as the end results but also on how it is delivered during service process and its ultimate effect on consumer's perceptions (Douglas & Connor, 2003).

MATERIALS AND METHODS

Study Area

South-Western part of Nigeria lies between latitude 6°N and $8\frac{1}{2}^{\circ}\text{N}$ of the equator and longitude 3°E and 5°E of Greenwich Meridian Time (GMT). The zone consists of Six States. These are Lagos State that stretches along the seaboard, Ogun, Oyo, Osun, Ondo and Ekiti State. The South-Western Geo-political Zone occupies an area of 79,048 Square Kilometres. The Zone covers about one-twelfth of Nigeria, and into it are packed almost 25 million or about one-fifth of the entire population of the Country. The area is washed in the South by the Gulf of Guinea. On the east it is bounded by South-Eastern Nigeria. On the West, it shares a common frontier with the Republic of Benin; and on the North, it is bounded by North Central Geo-Political Zone that consists of Kwara State, Kogi State, Niger State and others. (Somuyiwa, 2010).

The majority of the people in South-Western Nigeria are Yoruba's, which occupies major urban centres of this Geo-political Zone. In a related development, major population concentrations are found in the state capitals and other important towns in the region. There have been considerable increase in the population figures of these states; for instance, Oyo state was estimated to be 3.5 million in 1991 and 5 million in 2005. Lagos was estimated to be 10 million in 2005, while Ogun state was estimated to be 3.5 million in 2005 population census (NPC, 2006). It is interesting to note that all these can be attributed to the economic activities, which tangentially determine the rate of the distribution of these products (Somuyiwa, 2010).

A total number of 500 top management staff was chosen this include, logistics, procurement and marketing manager. A structured questionnaire was administered on 150 respondents which were randomly selected in the various categories of manufacturing companies. It is targeted at the top management because they are involved in the decision making of the company. The questionnaire is based on 5 likert rating, the rating scales were used mostly in order to assess attitude and other phenomena of interest.

ANALYSIS AND DISCUSSION

A summary of the outsourced logistics activities in table 4.1 shows the various activities being outsourced by the manufacturing companies in order to meet customer demand and satisfaction. The tables reveals that transport activities because of relative advantages that include reduced costs through lower freight charges, less inventory in-transit and better production planning through increased transport visibility, improved customer service through more accurate delivery information and on-time delivery.

Table 4.1

NAME	ACTIVITY OUTSOURCED
7UP Bottling Company Plc.	Procurement, warehousing, inventory control
Nigerian Breweries	Transport, Distribution
International Breweries Plc.	Transport, Distribution,
Fan milk Plc.	Transport, procurement,
Flour Mills Nig. Plc.	Warehousing, Procurement
Cadbury Plc.	Transport, distribution,
Guinness Nigeria Plc.	Transport, Warehousing, procurement
Consolidated Breweries	Transport, Distribution and Warehousing
NBC Plc.	Transport, distribution

Source: Field Survey, (2015)

The study reveals that manufacturing companies outsource different activities, transportation is most outsourced. This is an indication that transportation is considered of a great importance in the operation of manufacturing firms because it is needed throughout the whole supply chain being the link between supply chain members. Because demand and supplies have become international processes short lead time is especially important for companies that operate in international or global environment. It is important in the distribution process which allows for a reasonable geographical coverage and meeting customer's demand.

Table 4.2: Regression Table

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	12.573	.947		13.270	.000
Customer Loyalty	.413	.143	.222	2.879	.005
Market Share	.292	.128	.182	2.285	.024
Timely Delivery of Shipments	-.524	.111	-.361	-4.702	.000

$$\text{Customer satisfaction} = 12.573 + 0.413x_1 + 0.292x_2 - 0.524x_3$$

Source: Output of Results based on field survey (2015)

The primary dependent variable is defined as Customer Satisfaction and the primary independent variables are Customer Loyalty (CL), Market Share (MS) and Timely Delivery of Shipment (TDS). The values for the independent variables were derived from the company's parameters for measuring their performance.

R is 0.53 this implies the combined effect that the independent variable has on the dependent variable. Adjusted R^2 is 0.281 and this implies that 28.1 percent of the variation on performance is explained by the three variables considered in the model. The significance of this value was tested with the analysis of variance (ANOVA) and the calculated F- value is 17.047 which is significant at ($P < 0.05$). In consonance with the study it can be said that Outsourcing of logistics activities by manufacturing companies is aimed at satisfying customer's needs and improving their overall performance profitability which give them opportunity for expansion in the general market and improve the customers loyalty in the face of competition.

Table 4.3: ANOVA Table

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	46.451	3	15.484	17.047	.000 ^b
Residual	118.987	131	.908		
Total	165.437	134			

Source: Output of Results based on field finding (2015)

The coefficient of Customer Loyalty and Market Share is 0.413 and 0.292 respectively which is significant at ($P < 0.05$) this implies that Outsourcing Logistics Activities enable Manufacturing Company to Satisfy Customers and develop a loyalty in them to their product

in a competitive environment. The study of Stock & Lambert, (2001) support the findings that the competitive manufacturing environment is one that is rapidly changing as globalization and technology force organizations to constantly seek ongoing improvement in all areas in terms of their knowledge, flexibility and performance. Logistics, for example, is receiving growing attention as an area in which efficiency and productivity increases can be made in order to improve customer service and to lower costs. Greaver, (1999) and Lynch, (2000) also added that the practice and processes of Logistics Outsourcing must be well identified, defined well and dealt with in order to avoid unnecessary mistakes and to ensure high level of Customer Satisfaction. Should organizations make incorrect decision regarding the Outsourcing of their logistics they risk compromising their Customer Loyalty, Market Share and bottom line.

The coefficient of timely delivery of Shipment is -0.524 significant at ($P < 0.05$) this implies that a decrease in Timely Delivery of Shipment tends to 0.524 unit decrease in Customer Satisfaction this indicates that a slack in upholding the just in time strategy in delivery leads to customers disloyalty and this endangers manufacturing company to achieve a balance in the competitive market. Waters, (2002) buttress that Just-In-Time technique looks for ways of avoiding this by moving to small, frequent deliveries with short lead times. Flexibility reduces lead time and ensures that specific customer requirements are met.

Cook (2002) is of the idea that customer service might involve after-sale activities such as delivery, setup, warranty work and technical support. Besides, it might involve extra attention while work is in progress such as courtesy, keeping the customer informed and attention to details. Service quality can be a key differentiator and helps to retain customers. Moreover, businesses rated highly by their customers for service quality tend to be more profitable and grow faster than businesses that are not rated highly. Quick response to customers' needs can be a competitive advantage to many firms. It involves quickly bringing a new product or service to the market, quick delivery of existing products or service to a customer after they have ordered and quickly handling customer complaints (Stevenson, 2007). Besides, Cook (2002) emphasizes that the ability to provide an excellent service is a pre-requisite to both attracting and retaining customers.

CONCLUSION, POLICY IMPLICATION AND RECOMMENDATION

Based on the findings made in the study, shows that outsourcing logistics activities contributes to organizations ability to control costs, improve customer service and allow company to focus on its core competencies. The aim of this research has been to investigate the impact of outsourcing logistics activities in manufacturing companies in south western. This literature review and survey manufacturing companies shows the benefits that can be achieved through logistics outsourcing and highlights how important it is for an organization to clearly define its reasons for outsourcing. It also points out the potential problems with outsourcing and the need for organizations to identify and recognize the problems and deal with them accordingly. It is evident that logistics outsourcing is increasingly viewed as a strategic initiative with far-reaching consequences, and that it requires careful consideration and a thorough process to improve the chances of success.

From the findings of the paper into the impact of outsourcing logistics activities in manufacturing company in south western Nigeria it appears that the most prominent reasons for outsourcing is that the majority of the organizations are under pressure to focus on core

competencies and to cover expanded geographic markets. Organizations are also under pressure to improve customer service and reduce costs.

The result of the research has added to the extent literatures in Logistics and Supply Chain Management in particular with emphasis on information to major Stakeholders in companies in decision making on how to leverage their profit and improve performance in the competitive environment, through outsourcing that will not only enhance their profit but encourages Customer Satisfaction.

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