

## Supply Chain cost identification as a means of cost reduction strategy. -A case study of Ghana Supply Company Limited

Musah Osumanu Doumbia<sup>1</sup>, Emelia Ohene Afriyie<sup>2</sup>, Evans Ndum<sup>1</sup>, George Abaka Blankson<sup>2</sup>

1. Department of Purchasing and Supply, Accra Polytechnic, Accra- Ghana.

2. Department of Secretaryship and Management studies, Accra Polytechnic, Accra - Ghana

Email of corresponding author: doumbiaos@yahoo.co.uk

### Abstract

This paper examines the concept of supply chain (SC) to explore non-value adding activities in order to offer a firm, a cost reduction strategy. This strategy starts with mapping the SC and identifying each and every activity along it, starting from the last tier supplier to the final consumer. The aim of the paper is to examine the SC processes of Ghana Supply Company Limited (GSCL). A small-scale case study was adopted with both primary and secondary data sources being used. The primary data focused on the use of personal interviews and questionnaires while secondary data was sourced from journals, the internet and other publications pertinent to the topic. Sample of ten questionnaires were administered on the personnel of the Procurement, Warehousing and Shipping departments constituting a population of twenty-nine (29). Close and open-ended questions were asked to enable respondents to come out with divergent answers. Findings of the study revealed that the supply chain operations of GSCL to a large extent is well coordinated as evidenced by the integration of activities such as procurement, shipping, warehousing and fleet management under the direct control and supervision of the Director of Operations.

**Key words:** Supply chain, cost reduction, value adding activities

### 1. Introduction

For many organizations, senior leadership sets forth annual department goals. In the case of purchasing department, these goals often include cost reduction. Regardless of the savings achieved the previous year, purchasing managers are facing year-over-year cost reduction initiative. Whether it was three or ten percent, savings is expected to be attained year after year. Sustainable cost savings is now a strategic endeavour that includes the entire supply chain to reach untouched areas of cost opportunities (Yuva, 2004). Undoubtedly, supply chain activities to a large extent have a greater impact on the final price of a product and could be viewed as the total network of interconnected operations which involves all the network of upstream firms that provide directly or indirectly the supply of goods and services to an operation. And the network of downstream firms responsible for delivery and after-market service of its products and /or services to the ultimate consumer.

Stevens (1989) also states that while business often spent a lot of time and thought on strategic issues in the area of manufacturing, finance and marketing, the focus for the supply chain is rarely strategic. It tends to be operational. If the supply chain issues are disregarded such that, the supply chain is excluded from the strategic debate, there is imbalance, exploitable opportunities are missed and the impact of the competitive threat increased.

The objective of this paper is to examine processes deployed in the supply chain of Ghana Supply Company Limited (GSCL). It also aims at examining the supply chain activities and cost reduction strategies as practiced by the Ghana Supply Company Limited. An awareness of the major causes of inefficiencies will help in the formulation of more realistic and successful strategies towards efficient supply chain management.

### 2. Methodology

Primary and secondary data sources were used for the study. Personal interviews and questionnaires were the data collection tools deployed. The questionnaires were administered to personnel of the Procurement, Warehousing and Shipping departments of Ghana supply Company Limited. The use of close and open-ended questions enabled respondents to come out with divergent answers to the various questions asked. Personal interview was used to back up the questionnaires and to get first-hand explanations of some of the answers proffered. The secondary data was sourced from journals, the worldwide web, major textbooks and other

publications on the topic.

### *2.1 Research design*

The design adopted both qualitative and quantitative research methods. While quantitative procedures were directly used to analyze numeric data obtained from identified variables, the qualitative approach focused on in-depth interpretation and analysis of responses from the questionnaires and interviews. Descriptive or correlation procedures were employed for detailed analysis of relationship among variables. This approach aimed at eliminating or reducing any weakness, which a single research approach would have brought.

### *2.2 Sampling technique*

The purposive or preferential sampling procedure was adopted for this study that is, the researcher selected the population members based on his own judgment and knowledge of the target population, those who will constitute a prospect for accurate information and in conformity to the objections of the research aims.

The sample population, which is a representation of the elements of the target population, covered the entire procurement department that has the director and three sectional heads and a labour force of twenty-nine (29). The sample size, defined as the number of elements to be included in a study.

### *2.3 Data Analysis Procedure*

The main statistical technique employed was to compare responses from the various respondents after which all responses were tallied and grouped. The percentage method was used to strike out the percentage of respondents with similar opinions in relations to the total number of respondents that completed the questionnaires. Statistical tables and pie charts were also used to give the reader a better understanding and in some cases graphic ideas of the study.

## **3 Literature Review**

The term supply chain like any other term in purchasing and supply has been difficult to approximately define to suit a particular situation. However, in this paper, a definition is adopted from Womack and Jones (1996), which defined supply chain as "all the specific actions required to bring a specific product from raw materials to a finished product in the hands of the consumer. The supply chain is the upstream of the organization's value chain and is responsible for ensuring that the right materials services and technologies are purchased and delivered at the right price at the right time in the right quality. Following from the above definitions of the supply chain, it can be deduced that the scope of the supply chain is composed of the various links, which leads to the satisfaction of the end user. The link begins with the production of the raw material. However, this (raw material) might be extracted or grown and continues through numerous stages during which the raw material is refined, processed, formed and assembled into finished products. It also includes packaging, delivery, and retailing of the product to the ultimate consumer.

### *3.1 The supply chain management*

Martin Christopher (1992) defines supply chain management as the network organizations that are involved through upstream and downstream linkages in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer. To gain competitiveness a firm's supply chain must be well coordinated and integrative; this view is supported by Ellen (1993) in their definition of the Supply Chain Management as 'an integrative philosophy to manage the total flow of a distribution channel from the supplier to the ultimate user.' Traditionally, each link of the supply chain was undertaken by a separate organization, each of which acted independent of others, and between which relationships were short-lived and adversarial and often lack the liaison necessary to promote the efficient functioning of the whole organization. However, developments with regards to material management and logistics management have reinforced the need for an overall co-ordination by general managers of the supply chain across organizational boundaries and a revision of the way supply chain are structured and managed.

### *3.2 Goal of the supply chain*

The goal of the supply chain is to improve the overall performance of an organization by enhancing its responsiveness to the market place by reducing the total cost of supply.

The objective is to ensure that multiple enterprises function as efficiently and effectively as a single enterprise with full information, visibility and accountability which makes service to the final consumer the output of the process. At the heart of this integration is:

Information system:-which shares long term demand schedules, and release dates with all member of the channel. Such systems obviously require long-term partnership contracts with trust necessary to the sharing of sensitive information.

Activity systems: - which integrates processes and work-flows across organizational boundaries.

Relationship Support Systems: which support both of the above. Indeed the goal of the supply chain is to maximize profit through enhanced competitive market which is achieved by lower cost to serve and achieved in the shortest time frame. Such goals are only attainable if the supply as a whole is closely co-ordinated in order that total channel inventory is curtailed, bottlenecks removed, time frame compressed and quality problems solved or eliminated.

According to Cooper and Ellram (1993) the following are the potential goals of the supply chain: Reduce waste / non value activities, reduce amount of handling, increase customer service or responsiveness, reduce excessive inventory, both finished or raw materials, improve supply chain common, increase speed, increase accuracy of information flow, increase information sharing, improve co-ordination of effort, continuous channel improvement. Chase et al (1998) describes the goal of the supply chain management as that of reducing uncertainty and risk in the supply, thereby positively affecting inventory levels, cycle time, processes and ultimately end consumer service levels.

### *3.3 Warehousing*

According to Burton (1989) a warehouse is an integral part of a complex organization and rarely exists as an end in itself. Its efficient operations depend upon an adequate understanding of the needs of the whole organization and cannot be dealt with in terms of stock control or distribution or as an extension of the needs of the production engineer or the accountant. The warehouse organization exists to bridge the gap between the economic methods of production and the needs of the consumer. The task is to provide what is required, when it is required, in the conditions in which it is required and to do all these economically. Goods or inventory in the buyer's internal supply chain should be minimized and should move or flow quickly as possible in order to capture the maximum added value for the organization and by extension supply chain partners.

Inventory and materials handling cost can make significant contribution to an organization's profitability and is one more example of an area where proactive purchasing and supply chain management can reduce cost and add value for the organization.

## **4 Results and Discussion**

Ten (10) self-administered questionnaires were distributed to five (5) management and five (5) staff members. Each was satisfactorily completed and returned intact. Every one of these questionnaires was weighted ten (10) points to give a total of a hundred percent (100%). Data analysis was as follows:

All respondents representing a hundred percent 100% unanimously agreed that, the organization has a separate department responsible for procurement. Although it is referred to as the Operations Department.

Seventy percent (70%) of the respondents agreed that the procurement function is strategically placed in GSCL. However, three (3) respondents, representing (30%) had a contrary opinion. They disagreed and thought that the procurement function is rather tactically placed.

As regards the question on how adequate quality philosophy is explained in operating policies and procedures. Responses obtained indicated that GSCL employs constant checks on various processes from beginning to end to ensure performance security and eliminate waste. Total Quality Management (TQM) is also practiced to ensure that things are done right the first time and every time and proactive measures are taken to avert defect detection.

Commercial and Shipping Documents are well-scrutinized to conform to trade policies and regulations. Technical experts handle technical specifications while chemical products are tested by laboratory professionals to ensure adherence to International Organization for Standardization (ISO) Standards.

Responses on how potential suppliers are evaluated and monitored indicated that financial capability, technical adequacy, past performance, vendor rating systems and period assessments were the benchmarks used for Supplier assessment and appraisal. However, other methods of evaluation include references, testimonials, bid security, performance bonds, manufacture's signature, and inspection of certificate of incorporation, certificate to commence business and tax clearance.

Responses on cost reduction strategy and improvement of the quality of products and/or services included proper procurement planning, effective lead-time management, unannounced visits to vendors premise to verify quality assurance systems. Frequent liaison with clients to optimize service delivery. Capacity building of staff via workshops and seminars and finally the testing of samples where necessary and destination inspection by appropriate authorities as well as point of delivery inspection.

## 5 Conclusions

The aims of every supply chain management include ensuring maximum integration and co-operation of the supply chain members for smooth and effective operations. Findings of the study revealed that the supply chain operations of Ghana Supply Company Limited to a large extent is well coordinated as this is evidenced by the integration of activities such as procurement, shipping, warehousing and fleet management under the direct control and supervision of the Director of Operations. It also revealed that the GSCL uses proper procurement planning and effective lead-time management as a strategy for reducing its supply chain cost. The planning stage involves all parties concerned with the purchase to ensure meaningful contribution from members. This is evidenced by for example the expeditious processing of exemption documents on time to avoid delays and payment of concomitant demurrage charges at sea or airports.

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