ROLE OF SUPPLY CHAIN MANAGEMENT ON OPERATIONS MANAGEMENT

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ABSTRACT

The Era of Globalization has brought intense pressure on business enterprises the world over. There has been a paradigm shift in the way organizations operate, with the customer becoming the major focus. The shift has seen supply chain management and operations management work closely at cross functional levels to improve on customer value and organization performance. Key to this working relationship is the sharing of information, alphanumeric and in document form. However, there are still some sticky issues of knowledge gap arising from the complexities and uncertainties occasioned by the many supply chain players whose structures, objectives, organization, goal and strategies are always in conflict. There is therefore need of alignment and managing the alignment through knowledge management among the chain players.
Introduction

In the recent past, the transformations in the world market place has been so intense and in many instances rapid. Due to globalization, the world is now viewed as a global village, meaning that the world economies have been more integrated than before. This phenomenon reflects a new business orientation based on the belief that the world is becoming more homogeneous (Czinkota, et al 2008). As a result, there has been a paradigm shift in the demands of customers and the way business process are configured to meet the ever changing dynamics in the market place. These shifts in business process re-engineering have been helped by the role that information systems play in business today. Information technology has brought about ubiquity, global reachness, universal standards, richness, interactivity, information density, customization and social networking (Laudo and Laudo, 2012).All these developments point to the fact that organizations today are serving a global sophisticated customer as opposed to the local customer of yesteryear. Indeed companies must now compete on different platforms as opposed to the traditional resource based platforms. Many organizations are now competing on their supply chain and operations management strategies to meet the needs of the ever changing global customers.

Background

Supply chain management has risen to prominence in the last decade. Every company today either sources globally, sells globally or competes with some company for a market share. The realization that supply chain management can contribute to the company’s competitive advantage has helped to elevate the function to the position of strategic focus (Saunders, 1997).SCM has now recognized as a cost reduction function and contributes to the development of corporate strategy in which case, the SC strategy is aligned to the corporate strategy to be able to satisfy the customer needs (Baily et al, 2008, Lysons and Farrington, 2012 and Dobler and Burt 1997). Supply chain management can be defined as “the integration of networks of organization that are involved through upstream and downstream linkages in different processes and activities that produce the value in the firm of products and service ultimate customer and a
The network aspect implies co-ordination of various players in the chain to deliver customer value. Initially the players in the chain operated loosely without any sort of coordination and the real value of the chain could not be realized. In managing supply chains companies engage information flow and sharing on planning, demand, inventory, lead time, delivery and shortages(Ch. and Barro,2008).Supply chain management is seen as a strategic level concept(Stank et al, 2005),this concept is based on three key elements - value creation, integrated of key business process and collaboration. They define SCM as “philosophy of management that involves the management and integration of asset of selected key business processes from the end user through original suppliers that provides products services and information that add value for customers and stakeholders through the collaboration efforts of supply chain makers”

According to Kluyver and Pearce (2006), the ultimate strategy is long term sustainable superior performance. Thus superior performance for a manufacturing organization depends on its ability to be fully integrated with all partners in the supply chain through collaboration relationships and sharing of information thus, sum total is greater than single whole. Such strategy focuses on how both internal and external business processes can be integrated and coordinated to serve customers and consumers individual partners in the chain.

An operation is that part of a business organization responsible for producing goods and services needed by the customer. Operation management is defined by Naylor (2002) as an activity “concerned with creating operating and controlling a transformation system that takes in a variety of input and produces outputs of goods/services needed in customers”. The inputs that are used in the transformation process includes raw materials, labor, time and information. The operation function deals not work in isolation it works at cross functional levels with these functionals areas in the organizations to bring about synergies that result in efficient management of process and activities that result in efficient and effective delivery of goods and services to the customers (Slack et al, 2007). The collective success or failure of the organization function has an impact on the ability of the firm and to some extent nation to complete with other nations and the economy. As earlier indicated operations function works with Finance, Human resource,
Marketing, Design and development, Supply chain management, Production management. All activities and processes in there functional areas are all linked to production of goods and services. Operations management and supply chain management are intrinsically linked and no business organization can exist without both.

**Literature Review**

Supply chain management implies integration of both internal sequences of organization their structure, functions facilitate activities that are involved in production of goods and services. The sequence starts with supplies of basic raw materials and extends to the final customer. Research shows that in the current business environment, supply chains compete(Christopher 1992).This area of business was initially considered as clerical to the manager but has now emerged at the fore front of business planning in contribution to corporate strategy(Lyson and fanington 2012). Effective management of supply chains has become more complex because of varied expectations and structures that different business organizations have, the expanded product variety, shorter product life cycle, globalization increased out scorching and the need to eliminate waste (Mangan and Christopher 2005).

Supply chain management (SCM) incorporates multiple premises from suppliers to customers. Organizations have come up with difficult strategies to enhance customer value and customer requirement. The shift from local to global scene with attendant Global competitive pressure, broader product mix global sourcing and the need for time based competition requires that companies give special attentions to relationship between supply chain capabilities and value chain flexibility (Soon and Udin 2011).The adaptation of (V.C.F) allows many chain players to understand the value chain drivers which enable them to generate value and be flexible thus eliminating the bullwhip effect. Whereas it been demonstrated in SCM the competition advantage arises from supplier’s resource utilization as some of competitive advantage (Antai, 2011).Interesting, whereas supply chains VS supply chain can lead to competitive advantage it is with noting that once the product reach the market competition will be based on market forces of supply and demand.
The term integration and coordinating in SCM indicates the need for nurturing and managing closer relationship including trust commitment co-operation, coordination and collaboration among the members of the chain to achieve customer service reliability and competitive advantage. Empirical evidence to the need to change in attitudes associated with adversarial attitudes dominated with conflicts tone of mutual support and co-operations (Wilding and Humphries 2006). These integration of both internal and external players (Archer, 2006) require information flow and sharing among participants in the chain.

In supply chain networks, co-ordination relations are necessary. These co-ordination relations (Mikkoha 2008) are supported by social market networking among the SCM participants. The continuous change in business environment means continuous change in the supply chain configuration; twice it has been viewed as the dominant function of the supply chain configuration (Christopher, 2005) in being driven by cost pressure, and competitive pressure increased consumer choice, shorter product lifecycles and increased concern for environments. Change in SCM (Hoek et al. 2010) has its own challenges and for it to be successful, it should be managed by cross functional teams to ensure all functional goals are fulfilled.

Operations manager (OM) is responsible for the creation of goods and services by managing the transformation and converting of inputs and outputs. During the transformation process, feedback and control measures at various points are undertaken in the conversion systems. With increasing Global competitive pressure (Gupta and Boyd, 2008) the guest to improve manufacturing performance is the new catch word. Indeed new concepts (Gupta and Boyd 2008) like Just in time (JIT) total quality management (TQM),lean manufacturing (LM),supply chain management (SCM),Agile manufacturing (AM) have been proposed in literature and are being implemented. The implementation of these philosophies require that are operations in the enterprise must be customer focused and should work at cross functional decision making process. There is also the need for system thinking where everybody works towards achieving overall organizational objectives on which will results in avoiding sub optimality.

Many companies rely on human capital for operations. Indeed no activity can take place without the involvement of human beings. All operations process requires humans and therefore humans
are part of operations systems both as decision makers and operators. The application of human factor in operation management (Neumann and Dual 2010) can have supportive effect on both human and system outcomes. Improve quality increased productivity improve communications implementation of new technology, health, attitudes, safely and physical workloads may be the results of human factor in operations management.

Theoretical Perspective

Supply chain management (SCM) is apparently a new field of study and practice. In the recent past much attention had not been accorded this discipline as it was relegated to clerical functions in most organization. SCM theories borrow heavily from other social science discipline like economics, marketing, accounting, Commerce and Business. SCM is becoming of increasing strategic importance (Storey et al, 2006) and key drivers to these phenomena include globalization, outsourcing, cost pressure and consumer shifts. There are many challenges facing SCM theory which arise from misalignment of managing the entire chain that come with different structures, business orientations and whose strategies are not aligned and incompatible is quite a challenge (Lundin and Norrman, 2010). These misalignments occur because there are mismatches of the requirements in terms of objectives, goals and incentives of each player in the chain.

Arising from the fact that supporting theories in supply chain management and logistics have been borrowed from other disciplines, some of the theories may not fit or explain supply chain management phenomena. Grounded theory (Manuj and Pohlen, 2012) can play active and important role in development of theory grounded in logistics and supply chain management. Supply chain management (SCM) is also part of the logistics network. The network consists of facilities and distributions resources that used in the acquisition activities of materials, transformation of the inputs into finished products that are distributed to the customers.

SCM is involved in the co-ordination and integration of the seamless flow of materials, funds and goods to the customer. The SCM payoff (Reyes, 2006) can arise from reduced transaction
cost through elimination of unnecessary steps in moving the product to the market. This can be made possible by optimizing the network through which allocation and distribution of products through distribution centers. The centers in the network are represented by nodes; which facilitates hold stocks that are transshipped to customers. The popularity of cross-docking, transshipment and direct shipment gives rise to the need to come up with a SCM linear model that can help to reduce costs by eliminating some processes. The game theory (Reyes 2006) in SCM can help improve efficiency, high level of customer service.

Most firms increasingly rely on extended networks of suppliers to produce and deliver products and services to their customers. It is worth noting that it is not possible to control what happens in the chain in respect to quality. The recent recall of batteries in the dream liner case emphasizes the need to pay closer attention to quality management. The network of supply chain management is based on agency theory. The agency (AG) is concerned with relationships. When there is relationship-commercial, AG relationship is formed as one party is the principal and the other party in the agent. In practice, however, the agent’s goals and those of the principal often differ. In SCM the buying firm acts like the principal who delegates to the suppliers to supply goods and services. The SCM practices are therefore grounded in the agency theory (Zu and Kaynalc, 2012) and require closer co-operative and working relationship.

SCM (Cousins et al, 2007) though recognized as an area academic debate, it has an international presence but cannot yet be classified as a “discipline” it is still being viewed as an emerging discipline. SCM can also be viewed from a transaction motive. This system involves subsystem which emphasizes the negotiation which may lead to exchange of products. In SCM the buying company (customer) is looking for goods while the suppliers of goods is looking for customer (the buying company). The exchange of information in the process leads to conclusions of an agreement for exchange (Cousins et al, 2007)

The chaos theory which is borrowed from natural science can find an application to SCM. In practice, SCM is the integration of key business process in a network of interdependent suppliers, manufactures, distributors and retailers in order to enhance the flow of goods and services and information from the social origin to the final consumers (Stapleton et al 2006). The
aim is to reduce the chain wide costs while maintaining the user service levels. In SCM, there are also a variety of products with different designs and processes. There are many customers whose demands keep changing and forecasting their demands is difficult, often resulting in bull whip effects. Many different strategies are implemented to reduce cost and optimize customer service level requirements. In the whole operations, there are notable disruptions along the entire supply chain.

**Knowledge Gap in SCM and Knowledge Management (KM)**

Knowledge management is increasingly becoming important in organizations. Knowledge (in human capital) has been identified as a source of competitive advantage. The firm’s performance depends (Wong and Wong 2011) on the proper management of both tangible and intangible resources. Accordingly KM deals with the intangible while SCM deals with the tangible i.e. raw materials, components products and finished good throughout the value stream. KM management is based on resource based view. The combination of KM and SCM determines the decision made by an organization. From the stand point that relationship in SCM is key to creating customer value, there are still uncertainties as to what concepts like integration partnership and collaboration are all about. The sharing and coordinating of opinion (Bowersox et al, 2001, cited by Wong and Wong, 2011), expertise and knowledge between personnel working in supply chain partners, facilitated by modern communication technology could open up collaboration and therefore the human factor is very important. There is therefore a gap in knowledge exchange in SCM and OM. Kurt and Zander (1992), cited by Done (2011) considers knowledge in an organizational context and asserts that organizations know something and this knowledge has performance effect and relative competitive opportunities. This is because there is cumulative knowledge which builds up over time in an organization. They further explain that knowledge can be classified as tacit and explicit. There is there need to further research the field of SCM and OM to ensure that the gaps that exist should be extinguished through knowledge learning.

**Conceptual frame work:**
Supply chain management (SCM) and operations management (OM) work at the cross-functional level to serve customers efficiently and effectively at reduced cost in the entire chain and operations. The key aspect of reducing cost and working efficiently (Lysons and Farrington, 2012) is the elimination of wastage. In SCM and OM literature, there are seven types of waste which have been identified. They include: overproduction, waiting time, transportation, processing, excess inventory, unnecessary mention and correction of different. The SCM and OM employ ways and means to minimize or eliminate their waste. The eliminating of the waste has amplifications on customer service, cost reduction, time, quality unveiling and technology. This forms the independent variables of the framework.

Conceptualization of Variables

The Conceptual framework:

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<tr>
<th>INDEPENDENT VARIABLE</th>
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<tr>
<td>CUSTOMER SERVICE</td>
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<td>COST REDUCTION</td>
<td>CROSS-FUNCTION</td>
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<td>IMPROVED TIME</td>
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Dependent variable:

In this framework there are two dependent variables. The two are SCM and OM that work at the cross-functional level to meet customer needs.

Supply chain management (SCM):

Supply chain management integrates and coordinates various businesses both internal and external to ensure that the needs of the customer are met. This is done through development of
relationships and sharing of information across the chain players to achieve competitive advantage.

**Operation management (OM):**

Operations management work at cross functional level with SCM, Finance, Human resource, production, research and development, design, transport and other areas to ensure that the process are carried out efficiently to meet customer needs. Competitive advantages achieved because products are brought to the market at faster rate than competitors. The competitive advantage is based on slacks performance objectives of operations management i.e. costs, quality, requirements, flexibility and reliability. The objectives are achieved through implementation of leading edge philosophies like total quality management (TQM), just in time (JIT), lean production (LP).

**Independent variables:**

**Customer service.** The value of SCM and OM to an organization and its contribution to improve performance and profitability. Customers need quality products and faster service. They also require customization and improved after sales service.

**Cost reduction:**

The way SCM and OM configure the entire process of acquisition through the transformation process to final delivery of product/service to the market will have an impact on costs. Costs are built into a product/service during these activities. When these activities are managed in a way that results in overall reduction in cost, then the value prefer lower prices of products/service that is affordable.

**Quality:** The explosion of globalization has had great impact on how quality is now being assured. Concepts like total quality management have been implemented to ensure that products/service offered to the market are of higher quality. Customers like higher quality products customized to their specifications. SCM and OM must ensure that proper techniques are put in place to ensure quality.
Time: In today’s business world, time is of essence especially when customer require quick response to their complains. They require shorter lead time in terms of needing requirements and the new product development and when it is introduced on the market is of essence. Late entry into the market means loss of business. Production throughput accounts for higher percentage of product availability and the time customers are prepared to wait. Time has therefore become an element of competition and can also be a source of competitive advantage.

Technology: Modern technology provides an opportunity to do things different from others. Technology provides new methods in design, production process, production methods, communication and business transaction. Adoption of new concepts like enterprise resource planning/Electronic data interchange, distribution requirement planning (DRP), E-procurement, all lead to help in reduction of costs in the entire chain.

Conclusion:

Supply chain management and operation management are key functions in an organization. They have direct impact on its performance. The two functions bring about the synergy required at cross functional area to serve customers. Key to customer service value is the implementations of the leading edge concepts that helps in creation of value to the customer and improve in organization profitability. The co-ordination required is enhanced by the constant flow of resources that are transformed into outputs. These resources must be acquired and managed in a way consistent with the corporate strategy.
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