

OPTIMAL SOLUTIONS FOR IMPLEMENTING THE SUPPLY-SALES CHAIN MANAGEMENT

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Abstract

The supply chain represents all physical flows, information and financial flows linking suppliers and customers. It leads on the one hand, the idea of the chain in which the various elements of an industrial production system are interrelated and secondly to a broad definition of supply (flow between plants, flow between a supplier and a customer, flow between two workstations etc.). For a number of enterprise managers, supply chain is a topic of major interest. In contrast, non-chain coordination, losses may result for the enterprise: obsolete inventory devaluation, impairment etc. Since the 1980's, several companies came together in the same service all functions dealing logistic flow from supply to distribution, through production management and resource planning. At the same time it was developed the notion of "time" to expand these flows and to increase quality and reduce inventory. 1990's promotes the trend of broadening the concept of integrated logistics to a more open organization, "supply chain" in which is contained the whole organization of the enterprise, designed around streams: sales, distribution, manufacturing, purchasing, and supply. This is the area where, through this work, I try to make a contribution towards finding practical solutions to implement an efficient supply chain that contribute to increased economic performance of companies.

Key words: management, supply, sales, chain, logistics

INTRODUCTION

The market has become increasingly competitive, and globalization, technological changes and customers are demanding more general points apply to most areas. To succeed in this competition, managers need to think and pursue business models that learn and exploit resources and lead their companies to focus on what they can do best [5]. Customers want realistic time delivery and complete information on stock availability. The ability to provide this information requires the implementation of an integrated logistics throughout the supply chain, starting from the vendor and end customer (both in terms of the flow of goods and information flow). Logistics cannot be duplicated in a short time without the considerable efforts by competitors. While competitors might try to emulate the efforts of a successful organization, those ahead will continue to be involved in continuous improvement programs, and the difference may become smaller and may be brought

more easily to customers. For this reason, many managers see logistics as a marketing weapon that integrates offensive and as part of their strategy [9]. They are building partnerships with organizations in the supply chain; organizations have essential and complementary capabilities.

Also, many managers choose to invest in systems and technologies to investigate various metrics and to seek new practical ways to identify important points in order to achieve effective cooperation, inter-organizational [7]. The successful implementation of a supply-sales chain depends on the manner and degree to which logistical capacity, cost per customer, organizational structure, service delivery, cooperation between suppliers and international cooperation within each organization are taken into account.

MATERIALS AND METHODS

Supply Chain Management (SCM) is the concept for handling the production

procedures in broad sense. Supply chain management aims, on the one hand, coordination of activities and cash flow from suppliers and partners to the end user and secondly, to integrate the management of flows along the chain, particularly through automation data. Important is to ensure the rapid movement of materials and information to ensure optimal customer service and reduce the company's cash assets in stocks. It integrates upstream supply chain, as well as the information flow relative to the application [8]. This are composed of three mains information:

1. *Information about the application:* it studies the market trend, where sales should flow projections, which are transformed into production master plan, then plan and finally supply the necessary components.
2. *Ordering information:* This flow of information includes trade offer and product development and order taking, order tracking and billing end. This process is based on the exchange of information about orders and invoicing. Increasingly, more and more, these systems move information via the Internet. For example, this happens when shopping for electronics or computer data - EDI (Electronic Data Interchange). The first case is used to harmonize procedures for billing and in the second case for information exchange.
3. *Information about achieving order:* These consist of coordinating the operations of

purchasing and supply components, production plans, inventory tracking components and order preparation and shipping them.

In relation to this representation of supply chains, their function specific observation shows that synchronization and adjustments between different elements involved in a chain are difficult to handle and often transposes by an increase in inventory levels to meet customer requirements.

SCM has three basic elements – supply chain business processes, supply chain management components and supply chain network structure [11],[12]. Figure 1 shows the entire elements in SCM frame and it displays the details of the whole processes from purchasing, management, production and distribution to customers. The information flow is like an individual system to link the whole supply chain from supplier and manufacturer to consumer. Unimpeded information flow could increase the operation accuracy for costs saving and promote the competitiveness of firms. The product flow proceeds through the whole production processes from material supply via manufactories till providing the finished products to consumers. The items in vertical direction show the various management tasks within the supply chain [2].

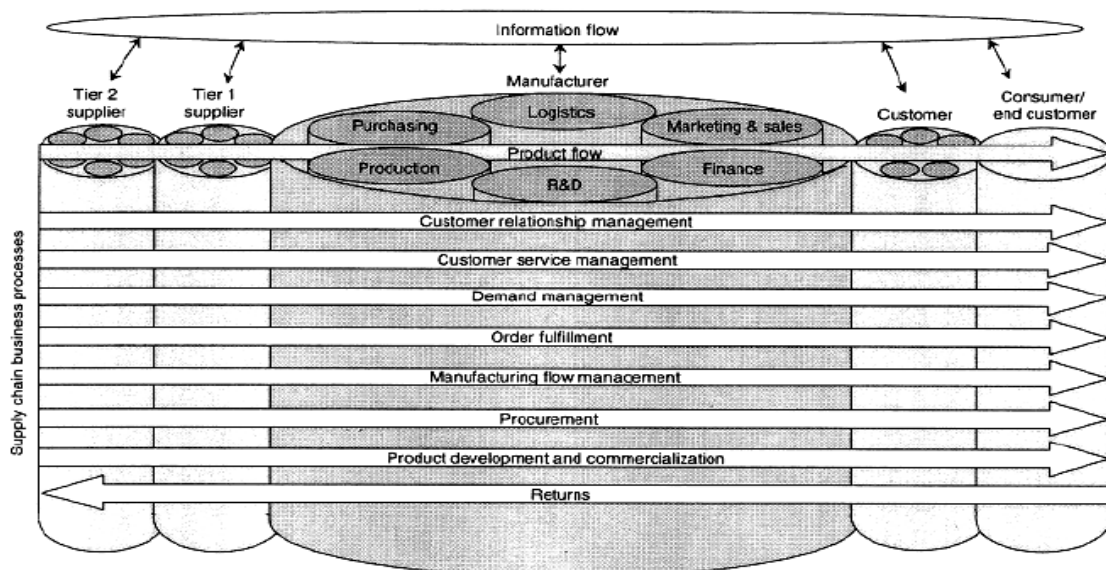


Fig. 1 Interaction of business processes and supply chain (Source: Cooper et al., 1997)

Particularly, the return flow, or reverse logistic, is one of the elements in the system but with converse direction from the others.

RESULTS AND DISCUSSIONS

Supply chain management is today in a competitive market, a major strategic challenge for industrial and commercial enterprises. This represents a significant potential for value creation for the customer: quality of service, performance in terms of time and reactivity. It also represents one of the main places where the dispute part of company profitability by streamlining supply chain costs and focusing on new distribution channels. This trend is further reinforced in a context dominated by the globalization of economic exchanges, diversification and shortening product life cycles, development of partnerships between companies [6]. At the same time, new opportunities were offered by evolving technologies and methodologies, particularly information systems. Supply chain means all steps involved, directly or indirectly, in satisfaction of a specific request of the customer, from the point of origin (raw materials) to the point of consumption (finished goods purchased by customers). Supply chain can be defined as a sequence of processes and flows that combine different entities (stages) to meet customer demand for a product, producing at the same time, and profit for all participants in the economic circuit. The supply chain is a network (an interdependent) of facilities, which mainly includes the following activities:

- provide materials to suppliers;
- transforming materials into semi-finished and finished products;
- the distribution of finished products to customers.

The *benefits* of implementing a supply chain are:

- materials/products are only present where needed and minimum quantity really necessary;
- generalization to reduce stock levels and therefore the cost of storage;
- streamline transport;

-improved production scheduling.

The *disadvantages* of implementing a supply chain can occur:

-while there are a large number of small customers when implementing supply chain management is either very expensive or impossible. In this case, the quality of customer service is essential and demanding partnership agreements is impossible.

-while there are a large number of small suppliers when implementing supply chain management is impossible and huge costs for suppliers.

Performance models supply chain

The idea to formalize and evaluate the performance of a supply chain has led since the 1990's, international group of professionals consisting of large industrial groups to propose global analysis and comparative approaches to companies [4].

WCS Model (Global Supply Chain)

developed by Michigan State University, proposes a comparison between companies based on their supply chain performance evaluation. Four dimensions are proposed to allow this assessment:

-Strategic choices in terms of structural decisions to streamline operations related to the supply chain.

-The means implemented to coordinate and synchronize the various links in the chain.

-Ability to respond to changing needs of the customer, adapting the supply chains organization.

-The means implemented for supply the chain performance measurement.

World-class supply chain model involves the following elements:

a).Strategy

- existence of financial objectives, impact on the implementation of trade and logistics;

- logistics partnership policy;

- rationalization of physical distribution network.

b).Coordination

- cooperation with other businesses through the supply chain;

- choosing appropriate information systems;

- exchange and sharing of information;

- simplification and standardization of practices in the supply chain.

c). *Reactivity*

- ability to remain attentive to the evolution of customer demand;

- ability to respond to urgent requirements and adapt to unforeseen events.

d). *Norming*

-comparison with other enterprise performance;

- implementation of performance indicators adapted: coefficient service logistics costs, inventory levels etc.

The approach that allows the preparation of this scale of analysis is based on two steps:

1.A questionnaire sent regularly various officials of the company (purchasing, production, trade, logistics) to assess the company's position in relation to these four dimensions;

2.Responses businesses, compared with the average of enterprises in the same sector as the performance results of companies with the best practices of competitors.

The objective is to identify deviations that could serve enterprises participating in these surveys to identify ways to improve.

SCOR Model (Supply Chain Reference Operations)

It was developed in 1997, in U.S. Supply Chain Council, a nonprofit organization composed primarily of practitioners committed to making progress on systems and practices in the field of supply chain management - delivery. It is a methodology in a group composed of several large groups of americans and aims to present some standard descriptive elements and elements of assessment flows in a supply chain [3]. In a context of globalization of the economy and the diversification of distribution networks: numerous factories, warehouses, platforms scattered in several countries, SCOR model aims to facilitate communication between different participants in the same supply chain. This communication by formalizing a standard language, uniform performance indicators, tools for comparing logistics organizations. This activity enables enterprises to more easily compare between

them and against the best. In addition, the model adds a significant financial: number of days of additional processing, financial cycle, asset turnover etc.

To perform this activity, SCOR model describing the organization according to four levels:

Level 1: *Type of process*. This level defines the scope and content of the model around the process: purchasing, manufacturing, distribution, return. It allows for a competitive performance bases.

Level 2: *Configuration of the supply chain*. Enterprises configure their supply chain by several models, e.g. direct or indirect distribution, manufacturing order or after predictions etc.

Level 3: *The decomposition processes*. Every great process, purchasing, manufacturing, distribution, return is decomposed into different processes incoming and outgoing information. Each of them is associated with performance indicators of best practices.

Level 4: *The decomposition process elements*. This level describes the actions to be implemented to achieve a competitive advantage and to adapt to competition. It follows four factors that allow understanding the determinants of competitive related supply chain management:

- Chain desired performance objective. It is about defining a target customer and supply value chain concerned. This offer must be differentiating relative to competitors, distribution network served by specially designed to deliver the customer value. This customer orientation is shared by all the officials of the company.

- Designing a supply schemes, physical distribution, and information system.

- Synchronize the various links in the chain in terms of these two factors receive

-Implement means of supply chain performance evaluation.

The overall objective of the model is to provide a structure linking the objectives of the organization and supply chain operations, delivery and implementation of a systematic approach to evaluation and performance monitoring. SCOR model processes are:

planning, supply, production, storage, (figure 2).
 transport - delivery and product returns



Fig. 2 Model of Supply Chain Reference Operations - SCOR (Source: Developed by the author)

This model for organizational processes aimed to correlate the description and definitions of activities and processes in the supply chain, delivery, performance measurement, best practices and requirements on software [1]. A key success factor is the use of information technologies that allow obtaining and providing real-time information in the supply-sales chain. Today, world-class organizations resort to means of IT such as extranet, EDI, common platforms CAD/CAM, software management.

Table1. Objectives of the service supply chain

Planning and flow	Inventory management and physical distribution	Order management and customer service
<ul style="list-style-type: none"> - Forecasts of sale - Planning the day of production lines - Tracking of finished products to generate increased margin (small amounts, deadlines guaranteed) 	<ul style="list-style-type: none"> - Accurate inventory management (to limit the amount of stocks at a few days and quantity of old products) - Operational management of warehouses, the carrying and the transportation 	<ul style="list-style-type: none"> - Taking full command (from planning to shipping) - Order tracking every step (command, planning, production, storage, delivery) to ensure perfect service and especially the extreme reactivity incidents during trial

Source: Developed by the author

Successful implementation of supply-sales chain depends largely on the manner and degree in which the following aspects are considered, at the level of each organisation [10]:

a. logistical capacity – namely the capacity of ensuring the effective flow of products, supply chain services and information, the capacity of ensuring a certain level of delivery requested by the customers, the capacity of internal and external integration;

b. cost per client - the cost of serving each customer, not just the total costs arising from participation in the supply–sales chain, in order to understand customer profitability for the organization and identification of ways in which the ratio between specific services offered to the customer and the costs involved can be improved;

c. organizational structure - giving up the hierarchical and functional vision of the organizational structure based on vertical relationships and moving to a process-based perspective, which involves horizontal relationships within the organization, as well as teamwork;

d. „appropriate” service delivery - through customer segmentation and personalization of service for each important customer to the organization, thus avoiding providing a unique, standardized level of customer

services, which would affect competition in the market;

e. obtaining cooperation between suppliers – in order to develop real partnerships;

f. international cooperation - ensuring flexibility and acceptance of common goals and strategies, along with other members of the supply–retail–delivery chain which transgress borders of any single country;

CONCLUSIONS

Research findings highlighted the following issues related to concern, contribution, expansion and investment.

➤ *Supply-sales-delivery chain management is a concern for managers at the top level of the organization.*

➤ *The supply-sales chain management is a major contribution to achieving the organization's objectives, according to which the higher level managers have the tools to support specific organizational objectives.*

➤ *The supply-sales chain management expands as scope and purpose.*

➤ *Achieving continuous investment in traditional and electronic solutions in the field of the supply-sales chain.*

➤ *The supply-sales chain management has an interoperable task (as a priority, logistics, finance, production and sales as key functions of the organization are actively involved in the supply-sales chain management).*

➤ *Financial performance indicators of the supply chain are a premise for communicating the results of the supply-sales-delivery chain management to the upper management level.*

Possibilities in improving supply chain are numerous, but so are the challenges that must be overcome in order to develop an optimal process. Companies that invest in SCM tools to identify such activities can reduce and eliminate those activities that do not add value, creating what is called reducing costs to maximize profits. Such companies can deliver products and services to market faster, cheaper and better quality, gaining a

compelling advantage over the competition less efficient.

According to the conducted research, it is considered that the supply-sales chain management has a major impact on the organization's strategy and its financial results. In addition, the direct involvement of managers at the top level is a premise for favourable development in this area, in order to enhance the contribution of the supply-sales chain to achieving the vision and the objectives of the organization.

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