

Identifying relevant aspects related to the development of the supply chain management

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Abstract: The knowledge of economy shifts radically the basis of competition and highlights the merger of firms; cooperation, without elimination the role of competition; the flexible and customized production. In this context, interest in supply chain management has increased and firms saw the benefits of collaborative relationships within and beyond their own organization. This article aims at identifying relevant aspects related to the development of the supply chain management - SCM. For that, we performed an exploratory research from the review of the literature with a theoretical and qualitative approach. As a result, it is observed that the new economy, called knowledge of economy, has changed the basis of competition stressing the collective efficiency. In this context, for the development of supply chain management, aspects as location, structure, degree of relationships, and technologies of information and communication (ICTs) should be considered.

Keywords: knowledge of economy, collective efficiency, supply chain management.

1.1 Introduction

The new economy, also called knowledge of economy, shifts radically the basis of competition and highlights the merger of firms; the cooperation, without eliminating the role of competition; the customized and flexible. It also points out the collective efficiency which demands a new model of management of network relationships (CUNHA, 2007).

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In this context, profound changes in organizational structures are observed leading to the obsolescence of isolated companies and the emergence of networks of companies (network design: supply chain modeling approaches) and supply chain managements (CUNHA, 2007).

Pires and Sacomano (2010) highlight that over the last few years the supply chain management (SCM) has become a new boundary to be explored by industrial entrepreneurs in order to obtain more competitiveness.

Based on this new paradigm of competitiveness, the objective of this article is to ponder about the relevant aspects of the development of supply chain managements. Therefore an exploratory research was performed. Material was taken from books, articles and thesis involving the theme. This methodology is the most adequate for the proposed objectives. This research has a theoretical nature with a qualitative approach.

This article is structured as follows: the context and the objective of the research are presented in the introduction; the second section shows the description of the methodology followed by the concepts that involve the supply chain; the fourth section is based on the considerations about efficient practices of the supply chain management; the fifth section highlights major factors to the development of models of supply chain management. The final considerations present the discussion of the results and suggestions for further studies.

2 Methodology

This is an academic research which encompasses technical and bibliographic procedures.

The academic research is an activity performed in a pedagogical academy which aims at arousing an intellectual search in the academic community. It is mainly conducted by professors, graduation and post-graduation students. Due to its theoretic content, the bibliographic research consists of the main technical procedure approached in this study. This type of research is characterized by the consultation of books, periodics, articles and materials available on the Internet. The first step consisted of the search for indexed scientific articles on databases. After gathering the theoretical material, the problem was fixed and the conceptual basis was developed. Following the conceptual analyses, a report was written in order to offer a synthetic view over the state of art of academic knowledge regarding the theme supply chain management.

3 Supply Chain Management

Nowadays, as a global context it has become common for companies to adopt a

more collaborative behavior focused on their central competencies, outsourcing the less critical processes in order to increase the company's competitiveness. As a consequence, the success of a company will depend on how it can manage the relations along the supply chain management. Therefore, the focus on management extrapolates the barrier of each firm, demanding the management amplification to the entire network in which it is included, encompassing suppliers and the distribution channels.

Pires (2004) observes that the first initiatives in SCM date back to the seventies and were related to the integration of stockrooms/warehouses and the transportation of the goods, thus the priority was given to logistic aspects. Nowadays the focus has been given to the management of internal changes, which the company would promote with the objective of reducing costs. The practice of industrial coordination involving collective profits appeared in the eighties and was introduced by business consultants drawing the attention of the academics of the area; this interest increased in 1990 (PIRES, 2004).

Pires (2004) summarizes the growing interest in supply chain management (SCM) in three main reasons: 1) the growing verticalization and specialization of companies which search for suppliers that are able to provide high-quality and low-cost components; 2) the growth of competition in both national and international scenario; 3) the understanding that the maximization in one of the stages of the supply chain and cannot guarantee its best performance.

After theoretical review it can be inferred that SCM has innumerable definitions, therefore the existence of one definite concept for the term is not possible. The concepts on table 01 highlight the integration, coordination and network overview of SCM.

Table 01 - Concepts of SCM

Autor (ano)	Conceito de SCM
Council of Supply Chain Management Professionals (2010)	The planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies. Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. It includes all of the logistics management activities, as well as manufacturing operations, and it

	drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology.
WOOD JR. (2000)	Methodology developed to align all the activities of production in a synchronized way to optimize its values
PIRES (1998)	An expanded, updated and holistic view over the administration of traditional materials which encompass the management of all the productive chain in a strategic and integrated way. SCM presupposes that companies are to define their competitive and functional strategies based on the roles they have in the productive chain that they are inserted in (both as suppliers and as clients).

Source: elaborated by the author.

4 Orientation of the development of a supply chain management

Authors such as Wood Jr. (2000) and Cunha (2007) observe that in order to establish a supply chain, there must be a change in orientation in which the client is to be focused not the product itself. Also there must be a change in the profile of the relationships established among companies, from an attitude of conflict management to attitudes such as partnership and support. Yet Christopher (2009) presents a sequence of actions which starts by the comprehension of what clients value, followed by the definition of the value proposition, the identification of market leaders, and finally the development of strategies in the supply chain.

According to Barbosa and Sacomano (2001), in order to perform to an efficient implementation of SCM it is necessary to integrate the internal processes of the main company to only afterwards, expand it to other companies of the productive chain. Thus, the main company, generally involving merchandise, must be a reference to other companies of supply chain in aspects such as management of the integrated operations.

Christopher (2009) points out some barriers to the implementation of supply chain management: traditional organizational structure, evaluation systems which do not measure the value addition along the chain, the excessive focus on the productivity, the misuse of ICTs and insufficient technical and managerial capacity.

Considering these barriers, the effective objectives and practices in SCM, a reflexion is suggested about the relevant aspects which are to be considered in SCM development: localization, structure and relationships, and technology of information and communication.

To Christopher (2009); Ganeshan and Harrison (1995) the business location decision constitutes a basic determinant to the construction of SCM. According to authors, the decision about manufacturing, assembling, stocking, transferring and

consolidating can make the difference between profit and financial losses. Due to the differences among countries, factor costs and exchange rate variations as well as decision-making about business location are fundamental to the success of the projects of SCM. These decisions are able to cause strategic and operational impacts on competitiveness in the supply chain.

In a reflection on flexibility and localization, Treville and Trigeorgis (2010) observe that the decisions made about location in supply chains are focused on cost reduction, and that this approach in regular situations can lead to the construction of low-cost supply chains that when facing unexpected situations can be extremely costly. For these authors, the decision-making process involving business location must be taken into careful consideration especially involving themes such as flexibility and direct contact among the members of the chain.

Christopher (2009), Ganeshan and Harrison (1995), Treville and Trigeorgis (2010) highlight that the decisions involving location are to privilege not only the low cost of operational transactions, but also the flexibility demanded in times of inevitable changes.

The structure and relationships are important dimensions to the understanding of the morphology of the supply chain and its dynamics. According to Pires and Sacomano (2010) several studies point out to the position of the companies in the structure and the way they establish relationships in the chain which affects its development.

On a structural point of view, the chains can be dense or diffuse. A dense chain structure occurs when companies, from a specific chain, are attached to each other (LAZZARINI, 2008 apud PIRES and SACOMANO, 2010), providing a structure with several relations and major division at work.

In agreement, Lambert, Cooper and Pagh (1998) suggest the classification of the members of a supply chain management into primary level channel and support level channel. The primary level channel participants are represented by the companies which execute activities that aggregate value along SCM. Support level channel participants provide support to companies which supply resources, knowledge, etc., to the primary level channel members of SCM but they do not take direct part in the process of value aggregation.

The implementation of SCM requires companies which take part in the chain to replace former systems of information, generally poorly integrated, by more extensive and integrated systems.

Pires (2004) states that along with the emergency of SCM, the growing demand for technologies of information and communication emerge in a way that: 1) in a short term, these technologies are to be able to handle business transactions and electronic commerce along the productive chain, providing assistance to companies to align the supply and the demand of goods through the share of information; 2) in a medium term, they can help in the decision-making process providing support to an effective demand planning, the first step of production and delivery in supply chain planning; 3) in a long term they can be able to handle the execution of strategic analysis with tools which might provide the construction of real sce-

narios and considerations of the what-if type. To Pires (2004), nowadays there are few companies which present adequate ICTs connected to the external environment in a way that they are able to obtain the necessary information that these companies indeed need.

5 Final Considerations

The conquest of dynamic competitiveness depends on the growing search for optimal systems both in and out of the organizational boundary. In this context the emergence of supply chain managements provided a new form of business organization. The creation of a new model of competitiveness with emphasis on the competition among supply chains highlights that organizations are part of a transitional stage which in the beginning focused on an individual efficiency and nowadays concentrates the attention on a collective efficiency which presupposes the valorization of the customer's need and satisfaction.

This article presents a casting of variables which should be considered during the planning of SCM development: location, structure, degree of relationships, and the use of ICT. It was also observed that the implementation of the concept of SCM demands significant changes not only in internal procedures but also in external ones mainly due to the partnership between clients and suppliers.

This paper highlights that there are challenges for the implementation of SCM plans but also provides reasons for the promotion of these plans. It also points out to the fact that there are not sufficient studies in the empirical and theoretical atmosphere about the development of SCM. A significant amount of these studies deepen in specific themes such as agility, lean, reliability, bullwhip effect, postponement, etc. This fact highlights the necessity of development of priorities in researches related to the construction and implementation of SCM under a new paradigm of network; comparative analyses among different chains; studies about the flux and management of knowledge in SCM; researches about the influence of the evolutionary speed in governance, structure and partnership in supply chains.

Finally it is highlighted the importance of the development of this line of research in order to adopt a holistic overview of SCM considering the demand chain of each company as unique and the particularities originated from this network in the current context of knowledge of economy.

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