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Issues in Supply Chain Management: Progress and potential

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ABSTRACT

In a 2000 article in *Industrial Marketing Management*, "Issues in Supply Chain Management," Lambert and Cooper presented a framework for Supply Chain Management (SCM) as well as issues related to how it should be implemented and directions for future research. The framework was comprised of eight cross-functional, cross-firm business processes that could be used as a new way to manage relationships with suppliers and customers. It was based on research conducted by a team of academic researchers working with a group of executives from non-competing firms that had been meeting regularly since 1992 with the objective of improving SCM theory and practice. The research has continued for the past 16 years and now covers a total of 25 years. In this paper, we review the progress that has been made in the development and implementation of the proposed SCM framework since 2000 and identify opportunities for further research.

1. Introduction

In this journal in 2000, a Supply Chain Management (SCM) framework was presented as a new business model and a way to create competitive advantage by strategically managing relationships with key customers and suppliers (Lambert & Cooper, 2000). It was based on the idea that organizations do not compete as solely autonomous entities but as members of a network of companies (Anderson, Hakansson, & Johanson, 1994). In fact, it is common that companies purchase from many of the same suppliers and sell to the same customers, so the organizations that win more often are those that best manage these relationships. In order to successfully manage key relationships across a network of companies, the authors proposed a framework comprised of eight cross-functional, cross-firm processes. Implementation of the processes requires the involvement of all business functions.

Sixteen years have gone by since the 2000 SCM article in *Industrial Marketing Management* and the terms supply chain and SCM have become common in the corporate world and in academic research (Varoutsa & Scapens, 2015). However, there is still not a consensus view of what SCM involves or how it should be implemented (Vallet-Bellmunt, Martínez-Fernández, & Capó-Vicedo, 2011). Given the number of university programs devoted to SCM (many with specialized research centers on the topic), it is startling there are only two cross-functional, cross-firm, process-based frameworks that can be, and have been, implemented in major corporations (Lambert, García-Dastugue, & Croxton, 2005): The Supply Chain Operations Reference (SCOR) model developed and endorsed by the Supply-Chain Council (now part of The American Production and Inventory Control Society), and the SCM framework described by Lambert and Cooper (2000).

While many areas for research still exist, the research team led by the first author of the 2000 article has addressed many of the research questions raised in that article. The results of 16 years of research devoted to further development of the framework have been reported in a total of 30 publications including two books, one in the fourth edition. Our purpose in this article is to summarize the progress made, describe how managers can benefit from using the framework and identify opportunities for further research. In the next section, we provide a summary of the contributions to SCM made by Lambert and Cooper (2000). This is followed by a description of the research priorities that the executive members identified since the early days of the research center[1] and a timeline of the publications that resulted from the research. Then, the methodologies used to refine and extend the original SCM framework since 2000 are described. Next, we provide the research findings including: an updated definition of SCM; an evaluation of the premise that the new basis for competition is supply chain vs. supply chain; an explanation of why supply chain management is about relationship management; a description of two tools that can be used to structure key supply chain relationships; an overview of supply chain mapping; and, a summary of changes to the original supply chain framework described in the 2000 article. This is followed by a section on the SCM framework in 2016 which includes: a description of the current state of the SCM framework; revised process descriptions and figures; guidelines for implementing the SCM processes; findings on value co-

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[1] The research center involves executives from non-competing firms and academics who have been meeting regularly since 1992 with the objective of improving SCM theory and practice.

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creation; an explanation of how SCM process performance affects EVA; a description of process assessment tools; and, an updated list of management components. Then, the SCM framework is compared with the Supply Chain Operating Reference (SCOR) model. The paper ends with opportunities for future research and conclusions.

2. The supply chain management framework in 2000

The original article (Lambert & Cooper, 2000) described the outcomes of empirical research conducted by a team of academics and executives who met regularly since 1992 with the goal of developing a normative SCM framework. The contributions of the article included: 1) a clarification in terminology regarding the differences between logistics (an organizational function) and SCM (the management of a network of companies); 2) a definition of SCM that focused on the integration of eight macro business processes across firms; 3) a requirement that the eight SCM processes are managed by cross-functional teams that involve all key business functions; 4) a recognition of the importance of managing business relationships within a complex network of companies; 5) a description of methods for mapping the supply chain network structure and for identifying the supply chain members with whom key business processes should be linked (i.e., customer and supplier segmentation); 6) a description of the eight key SCM processes that need to be implemented; 7) an explanation of nine management components to manage each process; 8) a list of recommendations for implementation; and, 9) a summary of directions for future research.

The predominant definitions of SCM that existed at the time the research center began in 1992 resembled the contemporary understanding of logistics management. The nature of logistics and SCM as functional silos within companies remained unchallenged, which created confusion for managers and academics. For many, this confusion continues to exist (Hingley, Lindgreen, & Grant, 2015). Also, the complexity required to manage all suppliers back to the point of origin and all intermediaries to the point of consumption by a single function made the popular definitions of SCM unrealistic and impracticable at a minimum. The following definition of SCM, developed with input from the members of the research center, changed the focus from a functional orientation to one that emphasized the management of business processes across companies to create a competitive advantage.

> "Supply chain management is the integration of key business processes from end user through original suppliers that provides products, services and information that add value for customers and other stakeholders" (Lambert & Cooper, 2000, p. 66).

The research conducted with the member companies combined with concepts from the marketing channels literature led to a "conceptual framework of supply chain management" (Lambert & Cooper, 2000, p. 69) that described three major interrelated steps that needed to be designed and implemented in order to successfully manage a supply chain. The first step consisted of identifying the key supply chain members with whom to link processes.

The second step consisted of determining what processes needed to be implemented with each of the key supply chain members. In order to successfully achieve cross-firm process integration, the development of standard supply chain processes was considered necessary because communication problems may occur when firms have different number of processes, different process definitions or different activities included within each process (Lambert & Cooper, 2000; Piercy, 2009). The eight key SCM processes identified by the research team are shown in Fig. 1, which comes from the 2000 article and provides a simplified representation of the eight key SCM processes cutting across functional and intercompany silos.

The third step was to determine the right level of integration and management to be applied to each process link. The research team identified nine management components that should be considered when implementing the processes. The level of integration of a supply chain process link could be adjusted by increasing or decreasing the number and intensity of the components implemented in that link.

Lambert and Cooper (2000, p. 65) stated that: "Thus far, there has been little guidance from academia, which in general has been following, rather than leading, business practice." In an effort to keep the SCM framework relevant for the business community and academics, all of the elements described in this section have been improved upon or extended since its publication in *Industrial Marketing Management* in 2000. In order to reflect these changes, the definition of SCM was updated, the eight key SCM processes were developed in detail (one article was devoted to each process) and complemented with detailed implementation guidelines and tools. Also, the management components were updated. These changes are described in the following sections of this paper.

3. Supply chain management research priorities and publications, 1992 to 2016

On April 23 and 24, 1992, executives from six companies met with the lead author to begin a research center. There were a number of

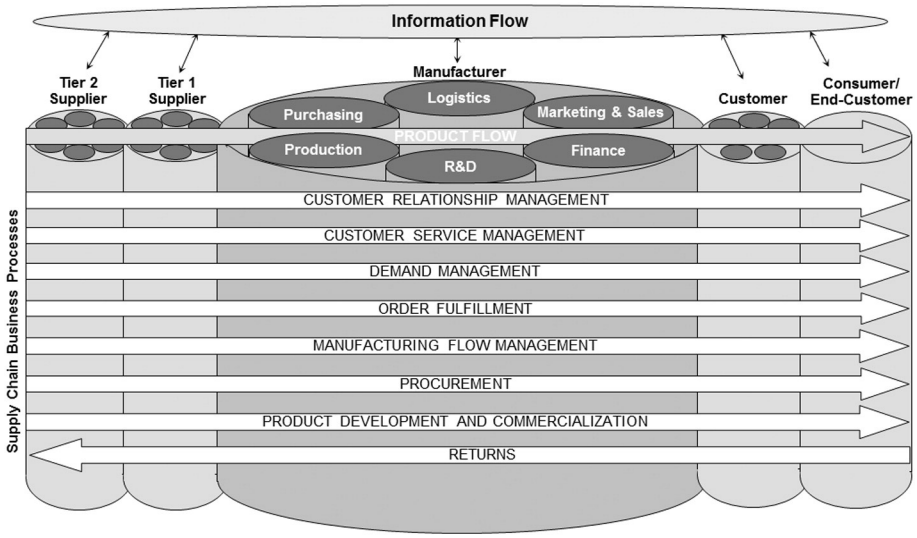

Fig. 1. The supply chain management framework in 2000 (Source: Lambert & Cooper, 2000).

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