Globalization and the advances in the development of new technologies have a deep impact on the development and the positioning of companies on international marketplaces. In addition, customers are more demanding in terms of quality, lead time, and order fulfillment. Firms must anticipate customers’ requests and adapt to market changes. This quest for flexibility and reactivity affects the conception and the management of firms and more generally their logistic systems and contributes to the development of partnership relations, to the emergence of mergers or strategic alliances between companies. As a result, a firm can no longer be considered as an isolated entity but as a component of a wider supply network.

The purpose of this special issue on Collaborative Supply Chain Management was to publish selected research articles from academicians and practitioners that examine the aspects related with internal and external logistics and operations management within a collaborative context. As a result, a total of 13 articles were initially submitted. After the double-blind review process, 5 articles were finally accepted for publication on this special issue. Such articles are based on empirical, analytical and/or conceptual research approaches and display an interesting picture of the research currently conducted about collaboration and coordination issues within the supply chain from different author’s countries and affiliations.

The article of Núñez-Muñoz and Montoya-Torres studies a three-echelon direct-sell supply chain model by focusing on the problem of coordinated decision-making between the members of the chain. This article is a formal approach to try to measure the impact of the degree of coordination between the members under stochastic demand behavior. Cellular automata and computer simulation models are used to analyze various cooperation scenarios in order to quantify both the impact on operating cost of making coordinated decisions about production planning and delivery and in which measure these costs are whether or not associated to imperfect coordination.

The article of Nfaoui, El Beqqali, Ouzrout and Bouras focuses on the analysis of multi-echelon supply networks and considers applying the multi-agent paradigm for the study of collaborative coordination strategies in such supply chain. As multi-agent computational environments are suitable for a broad class of coordination and negotiation issues involving multiple autonomous or semiautonomous problem solving contexts, they propose an agent-based distributed architecture for the management of rush unexpected orders. They validate their architecture by considering “emergency production situations” at a real-life industrial case located in North Africa and coming from the toilets and showers manufacturing sector.

The article of Gomez-Padilla analyzes the role of contracts for coordination between two
companies in a supply chain. In the studied situation, one company supplies one product to the other company, who is a retailer. The companies intend to coordinate by two types of decisions: economic (i.e. by fixing prices on a contract), and physical exchange (i.e. by defining the inventory level to be held). Two types of contracts will be presented: one contract with a simple pricing scheme and two contracts with inventory holding cost shared among the companies of the supply chain. The objective is to show that contracts with inventory holding cost share allow the two companies to efficiently coordinate the chain.

In short-term decision-making, few studies in the literature have been done about the impact of collaboration strategies on the performance of production scheduling rules. The article of Rodriguez-Verjan and Montoya-Torres is devoted to the study of information sharing between the members of a supply chain in a dynamic context. These authors consider a typical make-to-order direct sell supply chain without finished products inventory, similar to the one implemented by Internet PC sellers. They compare various scheduling algorithms in order to study different scenarios of information sharing among the members of the chain: full information sharing, no information sharing and partial information sharing. Discrete-event simulation models are developed in order to get some insights about the impact of such information sharing scenarios on the performance of the chain.

The article of Torres and Mejía focuses on the study of the synchronization of production, distribution and supply processes in a value chain in order to satisfy the customer needs and at the same time optimizing the operational costs. These authors present a multi-product, multi-echelon inventory system which comprises one manufacturer, a number of distribution centers and a number of retailers which are dependent of such distribution centers. They design a replenishment policy to achieve coordination and collaboration among the agents of their supply chain. The near-optimal order quantities for each of the supply chain agents are calculated with a mathematical model in which the integrality constraints are relaxed.

I hope this set of articles can reflect some of the efforts that have been put about collaboration and coordination issues on supply chain management in order to keep up with the fast pace of performance improvement currently required from individuals, organizations, countries and regions to become or remain competitive in the global market place.

The completion of this special issue has involved hard work and contributions by several people in addition to the authors of the articles. Professor John Wang, Editor-in-Chief of the International Journal of Information Systems and Supply Chain Management fully supported the idea of guest-editing this special issue. The large number of submissions for this issue resulted in the calling on the services of many referees from many countries. I therefore thank these anonymous individuals for helping with the review process. They each spent many hours in reviewing, critiquing, and re-reviewing the articles considered for this issue. Without their efforts, this issue could not have been completed on schedule. I am also grateful to those authors whose articles could not be included in this issue for a variety of reasons. I trust that their work will eventually appear elsewhere in the literature. Finally, I am thankful to Dr. Gustavo Ramírez Valderrama, Dean of the School of Economics and Management Sciences, for allowing me to work on this special issue.

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