Chapter 2
E–Supply Chain Collaboration and Integration: Implementation Issues and Challenges

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ABSTRACT
Formulation of supplier integration strategy is essential to optimize the value chain. In the chapter, the authors review the literature on integration of supplier relationship practices and its impact on optimization of value chain. The review is based on e-collaborative framework for optimized value chain, which comprises the supplier integration strategy, i.e., information sharing, e-business systems, and policy-based supplier selection have positive influence on the long-term planning and supply chain practices. The chapter reviews 368 articles on empirical research in e-collaboration and supply chain management. It finds the majority of authors are using a combination of the entity of analysis, while still focusing on the firm level rather than the network level. In this, another encouraging fact is that most of the authors prefer to consider a combination of various elements of exchange in their analysis. The potential limitation of the study is that it does not attempt to trace out trends using regression techniques. The extension of this study could be statistically testing the figures observed in this chapter and setting a grounded theory approach for future research in e-collaboration and supply chain.

INTRODUCTION
Supply Chain Management (SCM) collaboration includes logistics, transportation, strategic alliances, industrial marketing, purchasing, economics and organizational behavior (Kern and Willcocks, 2002; Zheng et al., 2000), describes a wide variety of transactional to relational business relationships at firm level.

Co-operative supply chain relationships achieve benefits for the participants (Christopher, 2005; Stevens, 1989), however, it is also apparent that full SCM implementation is not being achieved (Kempainen and Vepsalainen, 2003). This is because partners are still taking a short-term view, often in the face of increasing market-place complexity and uncertainty and are limiting the extent to which they extend their collaborative
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focus (Fawcett and Magnan, 2002). SCM can be seen as an integrative, proactive approach (Matthyssens and Van den Bulte, 1994) to manage the total flow of a distribution channel to the ultimate customer-like “a well-balanced and well-practiced relay team” (Cooper and Ellram, 1993).

The advent of e-business has created several challenges and opportunities in the supply-chain environment. The Internet has made it easier to share information among supply-chain partners and the current trend is to try to leverage the benefits obtained through information sharing (also called visibility) across the supply chain to improve operational performance, customer service, and solution development (Swaminathan and Tayur, 2003). A key feature of SCM is an early decision to reduce the number of suppliers in the chain (the elimination of multiple sourcing) (Ellram, 1991) because maintaining close, intense relationships can be very expensive in management effort (Cavinato, 1992; Langley and Holcomb, 1992). The intention is to have no more “partners” than necessary and to work more closely, effectively, and over the longer term (Peck and Juttner, 2000; Scott and Westbrook, 1991) with those who have the most critical impact on the overall operation (Cooper et al., 1997).

Giannakis and Croom (2004) propose an SCM paradigm conceptual framework, the “3S Model” containing the synthesis of business resources and networks, the synergy between network actors and, the synchronization of operational decisions. The International Marketing and Purchasing Group’s dyadic interaction approach summarized by Kern and Willcocks (2002), supply chain integration reviewed by Fawcett and Magnan (2002) and, networks of relationships described by Harland et al. (2001) and Kempainen and Vepsalainen (2003) all suggest that exposing the relationship management aspects of supply chain relationships and their impact on performance (Giannakis and Croom, 2004) is highly problematical.

In Fast-Moving Consumer Goods (FMCG) sector, this collaboration aspect has been expressed through the Efficient Consumer Response (ECR) movement. ECR encompasses multiple technological and managerial innovations which aim to transform retailers, distributors, and manufacturers into more efficient inter-linked organizations placing special emphasis on collaboration (JIPOECR, 1995). One of the first forms of supply-chain collaboration has been the practice of Vendor-Managed Inventory (VMI) or Continuous Replenishment Program (CRP), as it is often called in the context of grocery retailing, where the buyer shares demand information with the supplier who, in turn, manages the buyer’s inventory. The practice of Collaborative Planning Forecasting and Replenishment (CPFR) has extended this collaboration to include the exchange of forecasts based on widely shared information (usually Point-of-Sales [PoS] data and promotion plans), having a more strategic focus and placing more emphasis on the demand side. Primarily, For an effective Supply Chain in a FMCG Industry, the existing supplier relationship is combination of 3Cs—Cooperation, Coordination and Collaboration and Open Market Negotiations among suppliers (as mentioned in Figure 1), and there is wide range of attributes covered under it, including Price Based discussions, Adversarial relationships, Supplier selection and Contracts, Information Exchanges using WIP Links and EDI and Supply Chain Integration using Joint Planning and Technology Sharing.

More specifically, the Supplier relationship practices including VMI/CRP has been implemented at the level of the retailer’s central warehouse, based on the daily sharing of the warehouse inventory report data and orders information. Most CPFR initiatives also focus on the central warehouse rather than on store replenishment, and deal mainly with mid-/long-term replenishment planning for promotion items and new product introductions. The VMI/CRP practice has been extensively studied by researchers but mainly from the perspective of evaluating the impact of information sharing on supply-chain performance rather
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