

Chapter 3

Integration in Supply Chain Management

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ABSTRACT

In today's competitive and fast-moving business environment, the viability of organizations depends on integrating with other supply chain members so their complementary skills and compatible goals help them survive and prosper. Therefore, firms link their internal process to external suppliers and customers, with different levels of integration, to reduce cost and improve responsiveness and service level. The aim of this chapter is to study integration as a main component of supply chain management discipline in achieving competitive advantage and performance improvements. The authors begin with reviewing sourcing decisions that stress firms' benefits in establishing long-term relationships with higher level of integration. Different types and levels of integration are defined, and a basic integrated supply chain model is studied to help in understanding the meaning and aspects of this term. Finally, the partnership development process including partner selection, contracting, and maintenance, along with various aspects of each phase, is reviewed.

SOURCING DECISIONS

Finite available resources and fierce environmental competition enforce organization towards make-or-buy decisions. The make-or-buy decision problem which is also known as “sourcing”,

“outsourcing”, or “subcontracting” (Eilram, 1991) is one of the most challenging issues confronting modern organizations (Canez, Platts, & Probert, 2000). The traditional approaches to make-or-buy question have been established upon financial and economic criteria (Platts, Probert, & Canez, 2002). However sourcing decisions should not be made only to achieve short-term cost sav-

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Table 1. Outsourcing versus partnership sourcing (Adapted from Maloni & Benton, 1997)

Outsourcing	Partnership Sourcing
Concerning tactical and Operational level	Concerning strategic level
Involving high profit/low risk non-critical items	Involving high supply risk strategic items or bottle neck items
Price-based supplier selection	Multi criteria supplier selection
Short-term contracts with suppliers	Long-term alliances with suppliers
Bid evaluation	Intensive value-added evaluation of suppliers
Large supplier base	Few suppliers
Proprietary information	Shared information
Power driven problem solving, improvement, success sharing	Mutual problem solving, improvement, success sharing

ings, several other important issues are required to take into account such as the benefit or loss of core competencies, associated risks, supplier influences and a strategic perspective (McIvor & Humphreys, 2000).

Outsourcing vs. Insourcing

The classic make-or-buy decision in manufacturing context turns to the more complex outsource-or-insource decision in supply chain context. The word outsourcing refers to “strategic use of outside resources to perform activities traditionally handled by internal staff and resources”. All the related responsibilities and authorities should be outsourced along with a special activity (Chase, Jacobs, & Aquilano, 2004), which may cause a rearranging in internal authorities and responsibilities (Ahaus & van de Water, 1994). On the other side, insourcing or partnership sourcing is a long-term relationship between manufacturers and suppliers to achieve certain objective which equips the organization with a high level of competitiveness (Lysons, 2000).

The decision of outsourcing or insourcing is a complicated problem. Many criteria contribute to this decision in strategic, tactical and operational level. Table 1 represents the characteristics of outsourcing in comparison to partnership sourcing.

van de Water and van Peet (2006) have classified the outsource-or-insource decision literature into two major categories. The first is about critical reasons of outsourcing through answering the question of “whether or not to outsource”. This category involved the following descriptive approaches:

- Transaction cost theory is a cost based view approach according to which only activities with low risk are acceptable for outsourcing.
- Resource based view approach emphasizes on insourcing of core competences. Core activities are perceived as adding value which form competitive advantage of the organization (McIvor, 2000).
- In situations that the organization needs some important strategic knowledge or skills, forming an alliance to exchange these assets is beneficial for both parties involved.

The second category is related to choosing a proper approach for outsourcing and involved more prescriptive design approaches, based on one or more of the above mentioned views. Some decision support models and multi attribute frameworks have been classified in this category (Ho & Atkins, 2006).

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