Chapter IX

Virtual Organizations That Cooperate and Compete: Managing the Risks of Knowledge Exchange

Claudia Loebbecke
Copenhagen Business School, Denmark

Paul C. van Fenema
Erasmus University, The Netherlands

‘Co-opetition’ describes the phenomenon that firms engage in a virtual form of interaction where they cooperate and compete with their counterparts. Such hybrid relationships challenge traditional notions of firm boundaries and strategic resource management. There seems a contradiction in the fact that partners are supposed to share knowledge which is at the same time a key determinant of their competitive advantage. This balancing act suggests the need for special competencies that enable companies to reap the benefits of temporary synergy, while avoiding risks associated with making knowledge available to external partners.

This chapter explores the art of controlling knowledge flows in ‘coopetitive’ relationships. We conceptualize types of knowledge flows and dependencies, resulting in four configurations. For each of these, risks in terms of deviations from the original agreement are examined. We propose control strategies that allow companies engaged in co-opetition to anticipate deviant trajectories and define adequate responses. Directions for future research on this topic are indicated.

THE VIRTUAL ECONOMY

Digital technologies are changing economic relationships for the exchange of products, services, and knowledge. Electronic interaction facilities and information environments complement and substitute traditional business models for customer transactions (Venkatraman & Henderson, 1998). Clients start to experience the Internet as a vast resource of information and a facilitator of their consumption cycles. This ranges from a priori obtaining information on products, services and outlets, to purchasing and
ex post support (Schwartz, 1999). In turn, companies approach existing and new clientele on the Web with a digital identity and experience environment (Breen, 1999).

Behind the emerging digital façade, organizations are changing their operations. ‘Virtuality’ impacts companies along two lines. First, companies start to operate in a distributed fashion. Electronic media and infrastructure allow employees to interact remotely on the same project or business process (Evaristo & van Fenema, 1999). Digital communication infrastructures make real time and asynchronous connectivity possible, independent of the location of actors involved (Dertouzos, 1999). New organizational forms emerge that translate the advantages of electronic communications into flexible modes for organizing work (DeSanctis & Fulk, 1999).

Virtuality also has a second connotation that is different but often interacts with the first one. It implies cooperation among multiple companies in such a way that a quasi-organizational entity emerges. Traditional business models assume that each firm is responsible for a well-defined and complete portion of the supply chain. This relative independence is transformed to a tissue of firms that are strongly connected. Market opportunities trigger combinatorial processes that result in ad hoc forms of cooperation (Meyerson, Weick, & Kramer, 1996). Each firm contributes interactively to a coherent, aggregated performance that individual organizations could not achieve (Goldman, Preiss, & Nagel, 1997). The intricate connectivity among contributing firms implies exchange of valuable resources like knowledge and information. In this chapter, we are interested in organizations that form a quasi single entity but have interests that partially diverge (Preiss, Goldman, & Nagel, 1997).

**KNOWLEDGE EXCHANGE AND CO-OPETITION**

Theorists adopting a resource-based approach to strategic management have emphasized a firm’s need for unique, internal resources and competencies (Nelson & Winter, 1982; Wernerfelt, 1984). Further refinements and extensions stress the role of corporate competencies to enable dynamic adaptation and competitive advantage (Barney & Hesterley, 1996). Ever since the contribution from Penrose (1959), this approach has recognized the importance of knowledge as one of the supreme enablers of competitive differentiation. Recently, some papers in *Strategic Management Journal*, in particular the Winter Special Issue 1996, and in *Organization Science* proceeded along this route by investigating synergies of knowledge management and strategic management theory (Grant, 1996a). From multiple perspectives this growing body of literature contributes to our understanding of managing knowledge transfer, integration and creation within corporations (Nonaka & Takeuchi, 1995).

In addition to intra-corporate knowledge sharing, some academics have started to investigate knowledge sharing processes across organizational boundaries (Loebbecke & van Fenema, 1998; Wathne, Roos, & von Krogh, 1996). Knowledge sharing has been defined as “the transfer of useful know-how or information across company lines” (Appleyard, 1996: 138). Research on inter-organizational knowledge sharing recognizes the fact that firms are nowadays involved in multiple temporal or more permanent agreements for cooperation (Kodama, 1994). Organizations find temporary modes for leveraging knowledge as one of their primary resources.

However, inter-organizational collaboration may confront companies with a para-
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