

Chapter 6

Agile Value Creation and Co–Evolution in Global Supply Chains

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ABSTRACT

Today's global economy requires that companies and their supply chains become more agile and lean to address the changing customers' requirements and market. A global customer-oriented supply chain network cannot be successful without agility and co-evolution. The literature on design, operation, evolution, and agile management of supply chains for such an economy is growing rapidly. However, existing research does not seem to reflect the co-evolutions of different segments of supply chains. This chapter sheds light on the concept of co-evolution and its application in supply chain management, as well as how it can contribute to creating value for all customers. It is worth mentioning that co-evolution and agility are ongoing processes. As technology changes and market varies, new challenges in terms of agility appear and companies should address them and modify their approach accordingly.

INTRODUCTION

Global disaggregation of production processes along with the development of information systems has had tremendous influence in the way supply chains function. These factors influence the strategies, designs, and operations of supply chains. Today, after years of streamlining internal operations, boosting plant productivity, improving value creation processes, and reducing costs, companies are focusing on agile supply chain strategies as the next frontier in organizational excellence (Akkermans, Bogerd, Yucsan, & van Wassenhove, 2003). Furthermore, as markets are becoming more transparent, customer demands are being met in a different and agile manner (Pepper & Rogers, 1999; Jensen, 1999) and, in general, the rate of change in the business world keeps increasing (Brown & Eisenhardt, 1998; Gleick, 1999). All these developments are having a profound impact on the ways in which supply chains of (extended) enterprises are to be managed (Akkerman et al., 2003). However, the global extensions of supply chains have created a complexity that makes it hard to envision any organization not using some form of a systemic approach to monitor, coordinate, or manage the evolutionary processes among the different and disaggregated segments of a supply chain in an agile manner. The rapid globalization of supply chain networks has put pressure on management to take into account risks, costs, and benefits design, operation, and management supply chains in agile manners. In today's competitive environment, to create value, a systemic and comprehensive approach is needed to avoid the risks of uneven evolutions among the different segments of supply chain networks. Uneven evolutionary processes are partly arising from integrating mixing traditional (legacy) and new technologies.

The literature on design, operation, evolution, and agile management of supply chain models

for the Internet age is growing rapidly (e.g., Li, 2009, Tarokh, & Mehryar, 2006, Gunaserkaran, Ngai, & McGaughey, 2006; Chesborough & Teece, 2002; Downes & Mui, 1998; Malone & Laubacher, 1998; Porter, 1998; Hagel & Singer, 1999). In particular, Li (2009) is emphasizing that, as the business environment evolves, agility in supply chains is becoming a core issue in the value creation process. However, existing models for designing and managing supply chains typically do not reflect the co-evolutions of different segments of supply chains, while considering the co-evolutionary processes captures valuable cost savings and benefits that accrue to organizations from the use supply chain network (Eisenhard & Galunic, 2000).

The key issue that makes agile value-creation and co-evolution in supply chains important to consider is that, although from a technical and a managerial decision making perspective agile value creation and co-evolutionary processes in improving the performance of organizations are recognized, they seem to be studied and considered independently as separate factors in industry. The literature review does not reveal a comprehensive study of agile value-creation and co-evolution of global supply chains. This may suggest that by some reason, academia appears to be less interested in studying the value created by co-evolutionary processes in supply chains than it is interested in agility of supply chains.

The objective of the current chapter is to discuss how co-evolution and agile value-creation can benefit a supply chain network. This chapter is organized as follows. After reviewing current literatures' definitions of supply chains and customer-oriented supply chain management, the concepts of agility and value-creation will be discussed, followed by a discussion on co-evolution in supply chain networks, conclusion remarks, and future suggestions for research in this area.

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