Department of Industrial Management and Logistics, Division of Engineering Logistics,

Faculty of Engineering, Lund University *2017-12-20*

Strategic decisions of supply chain and the interaction between operations strategy and supply chain strategy

Master thesis by Tingting Wang

Operational excellence plays a vital role in achieving an organization's success (Hayes et al 2005), while supply chain strategy is significant for a company to handle various issues along the supply chain and balance interdepartmental conflicts and the challenge of goal restructuring (Stevens 1989; Perez-Franco et. al. 2016). With excellent strategic alignment, an organization can use Operations strategy (OSs) and Supply chain strategy (SCSs) as useful weapons to accomplish its competitiveness.

A consensus on what a Supply chain strategy (SCS) is and what strategic decisions constitute it, as well as how OSs and SCSs can be related to each other to better realize an organization's objectives are significant for the industry, and leave as a gap in the research, which becomes the purpose of this paper to fill in.

Through systematic literature reviews and a semi-structured interview at Alfa Laval in Lund, a more comprehensive decision framework for SCSs is proposed. It covers not only the functional decision categories of sourcing, production, inventory and transportation with detailed policies and choices, but also cross-functional and inter-organizational decisions in terms of lead-time coordination and supply chain integration. A logic regarding how they are related and to be aligned is also presented. Besides, 'Inside-out' and 'Outside-in' conceptual models are built to describe the interactions between OSs and SCSs regarding which strategy comes first, how the other strategy can be tailored to it, and how the strategic fit process goes.

Two contingency factors for the conceptual framework and models are identified: the first factor would be the organizational structure that determines how the conceptual framework and models might be modified according to the practical needs. The other factor is the complexity of the operations and supply chain, which to some extent influences on which of the interaction model is more appropriate for a company. Normally, if the operations are simpler and easier while the supply chain is more complicated, the 'outside-in' model would be adaptable. Otherwise, in most of the case, supply chain design and management should be tailored to operating conditions and a firm should extend internally-oriented operations strategy to supply chain-oriented supply chain strategy as per the 'Inside-out' model.

The works are mainly theoretical-oriented, with certain empirical evidence from the case company Alfa Laval. For a generalization, more empirical studies are needed for further research.

Hayes, R. G., Pisano, D. Upton, and Wheelwright,S. (2005). Operations, Strategy, and Techn ology Pursuing the Competitive Edge. New York: Wiley.

Perez-Franco, R., Phadnis, S., Caplice, C. and Sheffi, Y. (2016). Rethinking supply chain strategy as a conceptual system. International Journal of Production Economics, 182, pp. 384-396.

Stevens, G.C. (1989). Integrating the supply chain. International Journal of Physical Distribution & Logistics Management. 19 (8), pp. 3-8.