

## Chapter 7

# What Drives Firms to Engage in Interorganizational Information Sharing in Supply Chain Management?

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### ABSTRACT

*With growing use of interorganizational systems, the scope of interfirm collaboration has increased considerably, particularly in the supply chain context. An important prerequisite of interfirm collaboration is information sharing. Extant research suggests clear advantages of information sharing. The research at hand addresses antecedents of interorganizational information sharing. Based on findings from interorganizational systems adoption and interfirm collaboration research, a structural model is developed and validated by a quantitative survey among Austrian retailers and manufacturers in the fast-moving consumer-goods sector. The proposed model analyzes the effect of internal factors (commitment, information policy, and technical readiness), interorganizational factors (relationship, trust, power, and trading partners' technical readiness), and economic factors (perceived benefits and costs) on information-sharing behavior. The results show the relevance of internal factors and perceived benefits. The study reveals particularities of information-sharing behavior and can help practitioners to understand what motivates their trading partners to share information.*

### INTRODUCTION

In the last years, the intensity of efforts for an enhanced collaboration between firms in supply chains has increased. Interorganizational systems

(IOS), that is, electronic linkages between trading partners that can eliminate manual information transfer, have largely contributed to this paradigm shift as they proved to be technological enablers for closer relationships and tighter coordination between trading partners. Collaboration techniques such as vendor-managed inventory rely on regu-

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lar sharing of information between the engaged firms (Angulo, Nachtmann, & Waller, 2004). As Lee, Padmanabhan, and Whang (1997) and Simchi-Levi, Kaminsky, and Simchi-Levi (2000) argue, interorganizational information sharing can contribute considerably to a reduction of the bullwhip effect, a distortion in the supply chain that increases with growing distance from the final consumer. In doing so, IOS has evoked changes in business processes across organizations.

Each business transaction requires a minimum of information exchange (i.e., placing an order, sending an invoice). Information exchanged between organizations that exceeds the minimum information is referred to as information sharing. Hence, information sharing denotes the regular exchange of data that goes beyond the transmittal of data necessary in any cross-organizational trading (Madlberger, 2008). Information sharing addresses a key problem in every supply chain, that is, the information asymmetry between trading partners. While the stock level of the supply chain is determined by upstream supply chain partners, these organizations are less informed about market demand than their downstream trading partners (e.g., retailers). Thus, the more poorly informed partners influence the stock level of the better informed players (Chu & Lee, 2006).

Information sharing can be considered a multidimensional construct that involves four dimensions of information characteristics: (a) the content, that is, the type of information shared (e.g., point-of-sales [POS] data), (b) the frequency of information shared (e.g., daily vs. monthly data), (c) the granularity of information shared (i.e., how detailed or aggregated the information is), and (d) the up-to-dateness of the information shared (e.g., data from a current period vs. past periods). Although information sharing does not have to be conducted electronically, it will hardly be economically justifiable if it does not involve IOS.

Game-theoretic research has clearly demonstrated the benefits of information sharing (e.g.,

Diaz & Buxmann, 2003; Gavirneni, 2002; Lee et al., 1997; Lee, So, & Tang 2000). These findings suggest that firms should at least consider it. Information sharing is, however, by its nature an interorganizational activity that depends not only on one's own intention to participate, but also on trading partners' willingness and ability. As a consequence, firms need to understand why and under which circumstances their trading partners are ready to share information. To give practically relevant recommendations about appropriate participation in information sharing and about trading partners that are advisable to share information with, we need a better understanding about motivations and drivers of information sharing. If firms realize why their trading partners show a particular information-sharing behavior, it is easier for them to pursue an appropriate information-sharing policy. Also, expectations of trading partners can better be understood. The research questions of this study are the following:

- To what extent do internal antecedents impact a firm's participation in information sharing?
- To what extent do interorganizational antecedents impact a firm's participation in information sharing?
- To what extent do perceived benefits and costs impact a firm's participation in information sharing?

These research questions are aimed to be answered by an empirical study in the Austrian fast-moving consumer goods (FMCG) sector. The article is organized as follows. In the next section, a literature review on characteristics and benefits of information sharing is provided. Then the research model and hypotheses are developed. In the subsequent sections, the research methodology and the study results are presented before the findings are discussed in detail. Finally, a contribution statement, study limitations, and implications for research and practice are provided.

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