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The role of information technology in strategic buyer–supplier relationships ☆

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ABSTRACT

Information technology (IT) has long been acknowledged as an integral part of inter-organizational business exchange. The extant research, however, tends to emphasize the focal company perspective and focuses on operational issues, perceiving IT and business relationships as separable. Through a qualitative dyadic case study, our study defines how IT is positioned with regard to various elements of a strategic buyer–supplier relationship and the respective actors' operational and managerial behaviors. The study defines the role of IT regarding the structural, action, and management layers of a relationship and shows how IT can be a strong element around which relationship management activities are implemented to improve the consistency and performance of the relationship. The study prepares the ground for further qualitative and quantitative research to enhance a holistic understanding on IT in relation to the structures and processes in inter-organizational contexts of business relationships and networks.

1. Introduction

Inter-organizational exchanges are increasingly enacted within long-term inter-organizational relationships (e.g., Coviello, Brodie, Danaher, & Johnston, 2002; Håkansson, Ford, Gadde, Snehota, & Waluszewski, 2009). The transition towards collaborative forms of operation alters the role of IT in a business relationship. While it has been suggested that technology might further impersonalize business relationships and make their management more challenging (Leek, Naudé, & Turnbull, 2003; Perry, Cavaye, & Coote, 2002), IT such as collaborative portals, platforms, and supply chain management (SCM) systems provides opportunities for enhanced collaboration (Sambamurthy, Bharadwaj, & Grover, 2003; Schubert & Legner, 2011). The domain of SCM widely reflects the collaborative perspective, and IT has been characterized, for example, as "the nerve system for supply chain management" (Gunasakaran & Ngai, 2004). Furthermore, IT alignment between supply chain partners has been shown to be linked with enhanced responsiveness to the marketplace, customer value creation and, ultimately, to firms' competitive advantage (Kim, Cavusgil, & Cavusgil, 2013; Wu, Yeniyurt, Kim, & Cavusgil, 2006).

The SCM literature has shown the crucial role of IT systems in enabling shared activities in the areas of electronic transactions, quality and cost control, supply planning, and prediction of demand (Barua, Konana, Whinston, & Yin, 2004; Kärkkäinen, Laukkanen, Sarpola, & Kemppainen, 2007; Kim, Cavusgil, & Calantone, 2006). This integrative role of IT shows in information availability, visibility, and management; efficient transaction management and execution; decision-making and planning; and cooperation and collaboration (Auramo, Kauremaa, & Tanskanen, 2005; Lancioni, Smith, & Schau, 2003; Simchi-Levi, Kaminsky, & Simchi-Levi, 2003). However, this literature stream tends to emphasize a focal company perspective with a focus on the operational issues of product and information flows (Lindh, 2006). Consequently, the question of how IT is positioned with regard to other elements of relationships and supply networks and their strategic management (see Boyd & Spekman, 2004; Campo, Rubio, & Yague, 2010; Jap & Mohr, 2002) remains largely unanswered. In other words, a major part of the previous research considers IT and related systems to be operational entities, not components intertwined with the structures and value creation processes of a relationship and its strategic management between the parties (cf. Salo, 2006).

Therefore, the purpose of this study is to position inter-organizational IT with regard to the structures and processes of a strategic long-term buyer–supplier relationship in order to define its role. Given the broad definition of IT as "all forms of technology utilized to create, capture, manipulate, communicate, exchange, present, and use information in its various forms" (Martin, Brown, Hoffer, Perkins, & DeHayes, 1998), we focus on elements of IT that link to the respective organizations and their mutual buyer–supplier relationship (see Lancioni et al., 2003; McLaren, Head, & Yuan, 2002).

The theoretical approach of the study, described in chapter 2, draws on the interaction and network approach (see Håkansson & Snehota,

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1995; Håkansson et al., 2009), and recent discussions within service marketing (Grönroos, 2011) and service-dominant logic (Chandler & Vargo, 2011; Vargo & Lusch, 2004). The study employs qualitative case research methodology, described in chapter 3, in adopting a dyadic perspective on two IT-enabled strategic buyer–supplier relationships. Chapter 4 presents the case analysis that provides a basis for the discussion and conclusions on inter-organizational IT as positioned with regard to the elements of the relationships in chapter 5.

2. Theoretical approach

2.1. The theoretical framework

The theoretical approach of the paper builds on the interaction and network approach of the IMP Group (see Håkansson & Snehota, 1995; Håkansson et al., 2009) by merging ideas of resource integration presented in recent discussions on service marketing (Grönroos, 2011) and service-dominant logic (SDL) (Chandler & Vargo, 2011; Vargo & Lusch, 2004). Whereas the IMP approach builds on the interaction and interdependencies between actors (see e.g., Ford, 2011), SDL and related discussions (e.g., Grönroos, 2011) emphasize resource integration and value co-creation between actors. At a more abstract level of analysis, service approaches tend to emphasize the action realm, and thus take the perspective on process integration between actors further than the IMP approach (Grönroos, 2011). However, in comparison to the IMP approach, which tends to accentuate the interplay between the structural realm of relationships and networks and the interaction, service approaches fall short in terms of considering the contextual properties that shape process integration. In other words, according to the IMP approach, interaction between actors is studied with regard to structural elements such as mutual interdependence, prior experiences, and current expectations that institutionalize further into long-term *relationships* and business networks (Anderson, Håkansson, & Johanson, 1994; Håkansson & Snehota, 1995; Håkansson et al., 2009). These differences between theoretical approaches are perceived here as complementary elements, and employed to comprise the research framework depicted in Fig. 1.

Fig. 1 shows a synthesizing framework that provides support for our study on the role of IT in buyer–supplier relationships. For analytical purposes, the business relationship is disaggregated to action, structural, and management layers (cf. Grönroos, 2011; Håkansson & Snehota, 1995). The following sections clarify the contents and interlinks of the described layers.

2.2. Structural and action layers of a relationship

The *action layer* in a focal relationship comprises dyadic *business exchange*, which reflects *organizational value creation* activities that are activated in the focal relationship, and the processes that constitute the offering (see Grönroos, 2011; Håkansson & Snehota, 1995). The idea here is that value creation processes (employed here in a traditional sense) that fundamentally legitimize an organization's existence (cf. Ansoff, 1971), and refer to all acts, events, and activities in which the organization converts different inputs into outputs, are at the core of the supplier and buyer organizations. These outputs are exchanged with the other party in the relationship through the flow of interlinked acts, actions, and episodes (see e.g., Håkansson, 1982; Håkansson & Snehota, 1995; Halinen, 1997).

Similarly, the *relationship infrastructure* reflects areas of the parties' *organization structures* that are activated in the focal relationship and support the joint processes. The organization structure refers to the competencies and resources on which the value creation process of both organizations draws. The relationship infrastructure comprises social and technical bonds. Social bonds refer to the emotional-cognitive structures affected by the relationship's history and expectations. Concepts such as attraction, trust, and commitment reflect the social bonds (Håkansson & Ford, 2002; Halinen, 1997). Technical bonds, in turn, include activity links and resource ties (Håkansson & Snehota, 1995) that can be procedural (i.e., predetermined communication practices), technological (i.e., information systems), or legal arrangements (i.e., contracts).

Together, social and technical bonds provide a context and structure that steer the business exchange between the parties. Conversely, this also works in reverse as the business exchange can either strengthen or weaken social bonds and, similarly, influence the adaptation and coordination activities that affect technical bonds (see Möller, 1994). However, the business exchange and the technical and social settings reflect each other, and co-develop over time.

2.3. Management layer: Balancing between the structural and action layers

The interplay between the relationship infrastructure and exchange process defines the relationship outcomes (Möller & Wilson, 1995).

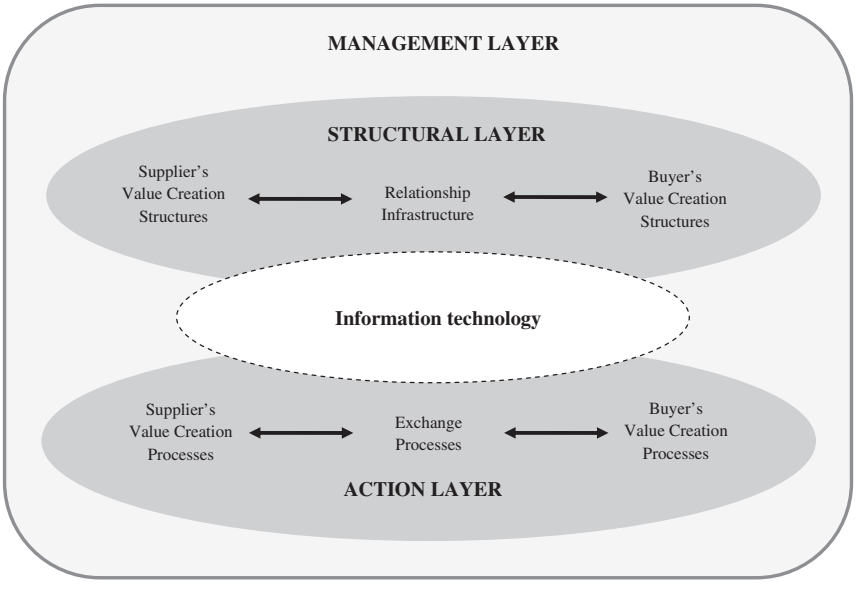

Fig. 1. The theoretical framework.

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