

# Why do Internet commerce firms incorporate logistics service providers in their distribution channels? The role of transaction costs and network strength

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## Abstract

The Internet has redefined information-sharing boundaries in distribution channels and opened new avenues for managing logistics services. In the process, firms have started to incorporate new service providers in their commercial interactions with customers over the Internet. This paper studies conceptually and empirically why Internet commerce firms (ICFs) have established relationships with these providers. Focusing on logistics services in outbound distribution channels, we rely on transaction cost theory to reveal that low levels of asset specificity and uncertainty drive Internet commerce firms to establish these relationships. Moreover, we apply strategic network theory to show that Internet commerce firms seek these providers because they offer access to relationship networks that bundle many complementary logistics services. In addition, logistics service providers make these services available across new and existing relationships between the Internet commerce firms, their customers, and their vendors. © 2006 Elsevier B.V. All rights reserved.

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## 1. Introduction

The growth of electronic commerce has driven Internet commerce firms (ICFs) – retailers and other organizations that market products over the Web – to increasingly share market demand data with other firms so as to enrich the order fulfillment services they offer to customers (Frohlich and Westbrook, 2002). Along these efforts, ICFs have started seeking logistics service providers to tap into resources and skills that could improve their fulfillment capabilities (Dutta and Segev, 1999).

These logistics service providers are not simply variants of transportation companies, and as such, they are not to be confused with what are known nowadays as third party logistics (3PL) firms. They offer logistics services, of course, but they could also enable ICFs to leverage other distribution parties' logistical resources and skills in order to fulfill their customer orders more effectively. They may use their assets to take care of product returns, for instance, or work with established carriers on “last-mile” deliveries. Or their value may be primarily in managing order information shared among distribution parties—e.g., centralizing inventory data, especially when products are being shipped directly from upstream echelons in the distribution channel. Logistics service providers such as Parcel Direct, for instance, participate in this kind of activity to ultimately

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assist ICFs in consolidating orders for drop-shipping to their customers.

Past research has identified the relationships with these logistics service providers in offline settings and has positioned them within logistics triads (Larson and Gammelgaard, 2001) and extended-enterprise logistics systems (Stock et al., 2000). Yet, what is groundbreaking about these relationships for an ICF is that they are driven by their potential to (1) generate low transaction costs, (2) bundle complementary logistics services, and (3) expand the availability of those services across customers, vendors, and “last-mile” delivery companies, such as UPS (Amit and Zott, 2001).

The goal of this study is to conceptualize and empirically assess how these drivers shape ICF management’s decisions to develop mechanisms to form and manage *dyadic* exchanges between their firms and *focal* organizations offering logistics services in outbound distribution channels. Prior literature has used the term “*governance*” to define these mechanisms (Barney, 1999, p. 138) and has delineated governance decisions through which a firm can infuse order in exchanges with a focal provider where potential conflicts threaten to undo or upset opportunities to realize economic gains (Williamson, 1999, p. 1090). These decisions center on the extent to which firms rely on a particular governance mode for a service. Since our research context focuses on outbound distribution channels, we define such *reliance* as the proportion of Internet orders for which a governance mode is used for a service supporting the fulfillment of those orders. This definition is consistent with that used by John and Weitz (1988) for distribution in an offline setting.

Our conceptualization and empirical assessment are unique because they recognize that governance in an exchange between an ICF and a focal logistics service provider is embedded within a networked structure that also comprises a broader collection of relational links among other distribution-channel members (Chen and Paulraj, 2004; Jones et al., 1997). In this context, our research is primarily concerned with ICFs’ reliance on *networked governance structures*. These structures have been defined as economic forms of organization that are built on reciprocal exchange patterns, enabling firms (in this case, ICFs) to obtain resources and services through dyadic relationships with other organizations (i.e., focal logistics service providers), as well as through broader relational links where these relationships exist (Powell, 1990; Gulati, 1998).

To fulfill the goal of this study, Section 2 positions our research in the strategic- and operations-management literatures. Also, it develops the theoretical

foundation and hypotheses that articulate a decision-making framework for ICF reliance on networked governance structures for logistics services. Section 3 discusses methodological issues pertaining to the data collection and the operationalization of the constructs developed as part of the theoretical framework presented in Section 2. We analyze the empirical results in Section 4. Finally, we conclude in Section 5 with a presentation of findings, academic and practical contributions, and future research opportunities stemming from our study.

## 2. Theoretical framework

Because networked governance structures are based on linkages among interdependent firms (Powell, 1990), they constitute an alternate form of exchange (Spulber, 1996) that expands two traditional forms: perfectly competitive markets and vertically integrated hierarchies (Williamson, 1975). Theoretically, decisions to adopt such exchanges rest on costs potentially incurred by ICFs when they establish market-based linkages with focal providers to manage – i.e., plan, organize, operate, and control – logistics services (Madhok, 2002). However, these decisions are also linked to scale, skills, and resources that ICFs may obtain in broader networks of services and entities accessible through their relationships with focal providers (Doz and Hamel, 1998; Gulati, 1998).

Consequently, our assessment of these decisions integrates two distinct theoretical perspectives: *transaction cost theory* and *strategic network theory*. Transaction cost theory helps us understand how efforts and risks in establishing links with focal logistics service providers are related to expenditures that impact ICFs’ reliance on these specialists. Through strategic network theory, and in accordance with its definition, we can establish how the access offered by focal logistics service providers to networked governance structures shapes ICFs’ relationships with the providers (Granovetter, 1973).

This integration adds to extant literature that has independently relied on transaction cost and strategic network theories to conceptualize similar phenomena at a strategic level (e.g., Eccles, 1981; Katz and Shapiro, 1985; Granovetter, 1992; Jones et al., 1997). The integration builds on work by Amit and Zott (2001), who used exploratory case studies to apply these theories to an Internet setting and concluded that neither of these theories can fully explain by itself value creation across different governance structures present in Internet business models. Therefore, Amit and Zott (2001) posit that transaction cost and strategic network

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