

**The impact of e-commerce on buyer-seller relationships in business
markets**

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Abstract

The rise of the e-commerce presents both challenges and opportunities for business to business marketers because of its ability to collapse time and distance. While information technology acts as a lubricant to stimulate trade among firms it can also affect the nature of close ties among firms and eventually could harm established relationships.

The purpose of the article is to explore the impact of e-commerce on business to business relationships. Drawing upon the theoretical contributions on the impact of information technology on the boundaries of the firm and the theories about business relationships developed in the marketing field, it is suggested that the extensive use of e-commerce to support transactions tends to polarize the portfolio of relationships of the firm. Because e-commerce facilitates both discrete and relational exchanges, it has a dual impact on business relationships. E-commerce favors discrete exchanges with a large number of partners and few strong relationships with strategic partners.

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Introduction

The rise of e-commerce presents both challenges and opportunities for business to business (B2B) marketers because of its ability to collapse time and distance. Empirical work on the specific impacts of electronic commerce on marketing is still in its infancy and much work remains. It is evident that e-commerce has the potential to facilitate business marketing activities, from sales to product development activities. However, while e-commerce acts as a lubricant to stimulate trade among firms, it can also affect the nature of close ties among firms and even harm established relationships.

The main objective of this article is to investigate the effect of e-commerce on buyer-seller relationships in business markets. B2B e-commerce refers here to all inter-organizational information systems intended to facilitate business-to-business electronic communication, information exchange and transaction support through a web of either public access or private value-added networks. Therefore, B2B e-commerce is not only associated with the sales and procurement activities, but also with collaborative product development, forecasting, production planning, and inventory management. This definition includes all the information technologies or information systems facilitating commercial transactions between enterprises: electronic markets,

the Internet, Electronic Data Interchange (EDI) systems, and Extranets.

Characterizing business relationships

Although there is not a strong consensus about the characterization of the spectrum of interorganizational forms in buyer-seller relationships, it is possible to describe long-term relationships as a continuum from repeated transactions over time with little likelihood of future exchange to mutually adaptive relationships. A move toward closer relationships involves the parties carrying out focal activities in a cooperative or coordinated way. Organizational boundaries become penetrated by the integration of activities as the supplier becomes involved in activities that traditionally are considered the buyer's responsibility and vice versa. Trust, commitment, information sharing, cooperation and adaptability are business behaviors associated with the relational pole of business exchanges.

Although in the recent marketing literature collaborative long-term relationships are usually considered as a superior type of exchange between firms, it is accepted that long-term relationships in certain industrial market environments are not necessarily ideal and feasible relationships to seek (Low 1996). Sellers have to admit that some buyer firms do not want or need strong ties with all of their suppliers and that the most closely connected suppliers are not necessarily the most trusted (Cannon and Perreault 1999).

Different types of relationships may cohabit simultaneously within the portfolio of one firm, from those based on discrete transaction forms to those based on long-term relational exchange (Bensaou 1999; Dyer, Dong, and Chu 1998; Salle, Cova, and Pardo 2000). In this way firms can achieve the

advantages of both the arm's-length and partner models (Dyer, Dong, and Chu 1998; Kaufman, Wood, and Theyel 2000).

Information-sharing mechanisms, boundary spanners' tasks and climate between buyer and seller vary following the requirements of the relationship. The buyer should maintain high levels of communication with strategic suppliers, provide managerial assistance, exchange personnel and make relation-specific investments. On the contrary, in the case of highly standardized products when many capable suppliers are available, buyers do not need to allocate significant resources to manage and work with suppliers (Cannon and Perreault 1999; Olsen and Ellram 1997; Dyer, Dong, and Chu 1998; Bensaou 1999).

The impact of e-commerce on business relationships

Do e-commerce favor the movement to more transactional or more relational exchanges in B2B markets? The extensive theoretical contributions on the impact of information technology (IT) on the boundaries of the firm disclose arguments supporting both alternatives. Unfortunately, empirical work in the area is very limited and the most significant contributions were realized before the appearance of the Internet (Bensaou 1997; Stump and Sriram 1997).

In the follow sections, the principal arguments on the direction of the impact of e-commerce are presented.

E-commerce favors discrete exchanges

Several arguments can be used to affirm that e-commerce favors more one-shot transactions and

has the power to disrupt established relationships.

E-commerce allows the firm to reduce the cost of external procurement before (lowering the cost of searching for suppliers or buyers and making price and product comparisons), during (avoiding the need to translate computer files into paper documents, a process that involve errors, delay and costly clerical personnel and reducing the cost of communicating with counterparts regarding transaction details) and after the transaction (lowering the costs of communication, to monitor contractual performance, or confirm delivery) (Lucking-Reiley and Spulber 2001; Gurbaxani and Whang 1991). As the transaction costs associated with maintaining a large number of suppliers decreases (as a result of the use of IT), transaction costs economic theory predicts that firms should optimally increase the number of suppliers (Stump and Sriram 1997).

E-commerce also increases the probability to find a suitable partner by reducing search costs and by facilitating the access to suppliers and clients all over the world (Lefebvre and Lefebvre 2000). A greater availability of partners eliminates a source of uncertainty and dependence that can otherwise induce the development of durable links with partners (Iyer 2001). The presence of numerous suppliers should permit the firm to choose a suitable alternative that minimizes productions costs for the desired product or service.

The Internet, contrary to more rigid e-commerce systems like Extranets or EDI, permits the development of electronic linkages between firms that do not have any established relationship. The firm can use these electronic linkages to increase competition between suppliers and obtain better exchange conditions (Bensaou 1997). The electronic link facilitates an efficient control of the transaction with reduced exchange of information (Bensaou and Venkatraman 1995).

The increasing use of technology in business-to-business relationships can also harm established relationships. Interaction with technology rather than with employees can affect the social aspects of business relationships identified as critical (trust, commitment, friendship, etc). In addition, the integration of technology in service encounters can accentuate customers' concerns related to privacy, confidentiality and the reception of unsolicited communications (Barnes, Dunne, and Glynn 2000). Furthermore, security and confidentiality are foremost concerns in business-to-business contexts. The use of inter-organizational information systems increases vulnerability to encroachment from unauthorized personnel (Vlosky, Fontenot, and Blalock 2000).

E-commerce favors relational exchanges

While the arguments presented previously indicate that e-commerce diminishes the necessity to make relational investments, it has also the power to strength relationships and increase joint action between partners.

E-commerce removes the possible limitations to communication originated in time and space restrictions and diminishes the time people spend in the regular monitoring of operational data exchange. Thereby, they have more time to concentrate in cooperative activities (Bensaou 1997). The technology becomes a supplemental interface option, rather than a substitute. To the extent that increased communication leads to closer relational ties between exchanging firms, e-commerce could dramatically enhance the effectiveness of interfirm exchange (Boyle and Alwitt 1999). Electronic linkages can facilitate the sharing of information, decrease operating costs, save time and resources, improve customer service, and generally improve B2B relationships (Stump and Sriram 1997; Vlosky, Fontenot, and Blalock 2000; Lancioni, Smith, and Oliva 2000).

Although the decrease in coordination costs, favored by the use of electronic linkages, could induce the firm to rely on more suppliers, as it is mentioned previously, there are reasons to believe that the sole utilization of e-commerce would not cause a move to the market. First, coordination costs are not only related to the cost of IT investments but also to the cost of establishing human relationships and business processes, which increases with the number of business partners. Second, when the buyer needs to induce suppliers to make investments that cannot be specified and enforced via contractual mechanism, reducing the number of suppliers can be interpreted by suppliers as a credible commitment and an incentive to make non-contractible investments such as quality, responsiveness and innovation (Bakos and Brynjolfsson 1993).

Because long-term relationships allow the firm to recover IT investments, enable partners to benefit from learning curve, and provide incentives to invest in relationship specific resources, IT supported explicit coordination will be made with long-term suppliers rather than short-term ones (Kulkarni and Heriot 1999; Clemons, Sashidhar, and Row 1993).

A dual impact

Accepting the idea that a firm possesses a portfolio of relationships, in which cohabits different types of relationships, it is imperative to know how e-commerce affects this portfolio. The central proposition of this article is that because e-commerce facilitates both discrete and relational exchanges, it allows the firm to favor discrete exchanges with a large number of partners and few strong relationships with strategic partners.

In fact, the extensive use of e-commerce to support transactions tends to polarize the relationship

portfolio of the firm. On the one hand, in the case of highly standardized products bought sporadically or frequently and not related to the core competence of the firm, e-commerce will be used to find available suppliers, obtain a better price, and reduce the resources allocated to the transaction. Additionally, e-commerce will act as a substitute for other interface options. In the transaction economics language the firm will make a "move to the market" minimizing relational elements between partners. On the other hand, in the case of strategic suppliers, the firm will use e-commerce to fortify the relationship and increase joint action. E-commerce will act as an additional interface option between partners. Electronic linkages will allow the partners to develop an electronic interdependence with an extensive information exchange useful in situations of high-uncertainty and for products close to the firm core competence (Bensaou and Venkatraman 1995). It could be said that partners will act more as a unified chain than as separate units. In the transaction cost theory language the firm will make a "move to the hierarchy", without integration of property.

In the case of exchanges closer to the transaction pole, the purpose of the utilization of e-commerce is exclusively to reduce costs. Information exchanges are reduced to an exchange of data useful to the transaction and there are not social exchanges between partners. Conversely, when exchanges are part of a relationship, the purpose of the use of e-commerce is not only to support the transaction but also to fortify the relationship. E-commerce is used to facilitate social and information exchanges oriented to increase mutual knowledge between partners.

References

- Bakos, Yannis and Erik Brynjolfsson (1993), "From vendors to partners: Information technology and incomplete contracts in buyer-supplier relationships," *Journal of Organizational Computing*, 3 (3) , 301-328.
- Barnes, J. G., P. A. Dunne, and W. J. Glynn (2000), "Self-service and technology: Unanticipated and unintended effects on customer relationships," in *Handbook of Services Marketing and Management*. T. A. Swartz & D. Iacobucci (Eds.). Thousand Oaks, Calif: Sage, 89-102 .
- Bensaou, M. (1997), "Interorganizational cooperation: The role of information technology an empirical comparison of U.S. and Japanese supplier relations," *Information Systems Research*, 8 (2) , 107-124.
- (1999), "Portfolios of buyer-supplier relationships," *Sloan Management Review*, 40 (4) , 35-44.
- Bensaou, M. and N. Venkatraman (1995), "Configurations of interorganizational relationships: A comparison between U.S. and Japanese automakers," *Management Science*, 41 (9) , 1471-1492.
- Boyle, Brett A. and Linda F. Alwitt (1999), "Internet use within the U.S. plastics industry," *Industrial Marketing Management*, 28 (4) , 327-341.
- Cannon, Joseph and William Perreault (1999), "Buyer-seller relationships in business markets," *Journal of Marketing Research*, 36 (4) , 439-460.
- Clemons, Erik, Reddi Sashidhar, and Michael Row (1993), "The impact of information technology on the organization of economic activity: The "move to the middle" hypothesis," *Journal of Management Information Systems*, 10 (9) , 9-35.
- Dyer, Jeffrey H., Sung C. Dong, and Wujin Chu (1998), "Strategic supplier segmentation: The next "Best Practice" in Supply Chain Management," *California Management Review*, 40 (2) , 57-77.
- Gurbaxani, Vijay and Seungjin Whang (1991), "The impact of information systems on organizations and markets," *Communications of the ACM*, 34 (1) , 59-73.

- Iyer, Gopalkrishnan R. (2001), "Internet-enabled B2B linkages: Economic, strategic and relationship issues," in *2001 American Marketing Association Summer Educators' Conference* , Washington, D.C.
- Kaufman, Allen, Craig H. Wood, and Gregory Theyel (2000), "Collaboration and technology linkages: A strategic supplier technology," *Strategic Management Journal*, 21 (6) , 649-663.
- Kulkarni, Subodh and Kirk Heriot (1999), "Transaction costs and information costs as determinants of the organizational form: A conceptual synthesis," *American Business Review*, 17 (2) , 43-25.
- Lancioni, Richard A., Michael F. Smith, and Terence A. Oliva (2000), "The role of the Internet in Supply Chain Management," *Industrial marketing Management*, 29 (1) , 45-56.
- Lefebvre, Louis A. and Elisabeth Lefebvre (2000), "Virtual enterprises and virtual economy: Manifestations and policy challenges," *International Journal of Technology Management*, 20 (1/2) , 58-71.
- Low, Brian K. H. (1996), "Long-term relationship in industrial marketing: Reality or rhetoric," *Industrial Marketing Management*, 25, 23-35.
- Lucking-Reiley, David and Daniel F. Spulber (2001), "Business-to-business electronic commerce," *Journal of Economic Perspectives*, 15 (1) , 55-68.
- Olsen, Rasmus F. and Lisa M. Ellram (1997), "A portfolio approach to supplier relationships," *Industrial Marketing Management*, 26 (2) , 101-114.
- Salle, Robert, Bernard Cova, and Catherine Pardo (2000), "Portfolio of supplier-customer relationships," in *Getting Better at Sensemaking*. A. G. Woodside (Ed.). Stamford, Connecticut: Jai Press Inc, 419-442 .
- Stump, Rodney L. and Ven Sriram (1997), "Employing information technology in purchasing: Buyer-supplier relationships and size of the supplier base," *Industrial marketing Management*, 26 (2) , 127-136.
- Vlosky, Richard, Renée Fontenot, and Lydia Blalock (2000), "Extranets: Impacts on business practices and relationships," *Journal of Business & Industrial Marketing*, 15 (6) , 438-457.