

## Chapter 5.10

# Trust in B2B E-Commerce Virtual Communities

**Eric Turner**

*The George Washington University, USA*

### INTRODUCTION

In any virtual community, issues of trust can dictate the level of interaction among participants within that community. In business-to-business (B2B) electronic commerce (e-commerce), trust is an important factor in an organization's willingness to expose itself to certain business risks without perfect knowledge of another organization's capabilities, commitment or intentions. Within a *virtual B2B community*, the negotiation for the purchase and selling of goods, services and information involves little or no physical interaction such as eye contact or handshakes. Additionally, there is limited accessibility to physical locations that may display goods or be a source of information that could be used for assessing the trustworthiness of organizations. Although the

Internet provides a medium for interconnecting a broad range of potential business partners at relatively low start-up and ongoing costs, the inherent information asymmetries create additional risks not present in traditional commerce. Individual organizations are required to dynamically assess and mediate these risks through the implementation of strategies for limiting the exposure of valued information assets and protecting resources. Since it is not feasible, nor practical, to eliminate all risks associated with online B2B collaborations, a means for establishing and maintaining levels of mutual trust is essential among multiple organizations that participate in electronically based transactions.

## DISCUSSION

### The B2B E-Commerce Marketplace as a Virtual Community

The emergence of strategic B2B partnerships aided by the implementation of information technologies such as the Internet continues to be a significant business organization phenomenon. These electronic markets are essentially a form of virtual community, providing a means for organizations to share common interests and goals of conducting commerce and establishing profitable partnerships (Hegel & Armstrong, 1996). Economic self-interest is a primary motivating factor in an organization's decision to enter into B2B commerce with another organization. Research by Coase (1937) and Williamson (1985) explain organizational activity in terms of the transaction cost economics or the tradeoffs between the production cost advantages of outside procurement and the transaction cost advantages of internal production. Cash (1985) defines interorganizational systems as telecommunications-based computer systems employed by users at two or more organizations to support the sharing of data, allowing trading partners to electronically exchange structured information or transact business. These interorganizational systems linking business partner databases can provide strategic payoffs and improve operations internal to both the supplier and the buyer, particularly when accompanied by investments in business process changes and complementary assets (Clemens & Row, 1992; Chatfield & Yetton, 2000). Zaheer and Venkatraman (1995) use the term relational governance to highlight the sociological aspects, including a level of *interorganizational trust*, that is a necessary and important component of any interfirm transaction or exchange.

### The Internet and Increased Adoption of B2B E-Commerce

Historically, primary factors that affected the adoption of interorganizational systems included *supplier-buyer power relationships*, interorganizational trust and technological capabilities (Hart & Saunders, 1998; Markus, 1983). This was particularly true in the mid-1980s, where the development of electronic data interchange (EDI) standards (X.12 and EDIFACT) provided a structured means for organizations to exchange documents over interorganizational systems (Stearn & Kaufmann, 1985). However, traditional closed point-to-point network infrastructures supporting EDI compelled organizations to limit implementations to select strategic partners. For many organizations, the expense of creating and maintaining the enterprise network infrastructures and implementing the software and support needed to participate in EDI was too complex and costly. These conditions increased the importance of power relationships and technical capabilities as factors affecting the adoption of EDI. In conjunction with the high cost of development and implementation of EDI, organizations were faced with high switching costs, resulting in an effective lock-in for most participants and, subsequently, high opportunity costs.

The emergence of Internet-based e-commerce has resulted in increased participation in B2B e-commerce by business organizations, including many small- and medium-size organizations that previously were excluded. The Internet's anywhere-to-anywhere connectivity, open system standard architecture and relatively low-cost access to supporting e-commerce software lowers the barriers for participation in and organization of virtual B2B communities. These virtual B2B communities offer the flexibility to more easily find new potential suppliers and buyers and provide for greater latitude in the selection of potential business partners. This has resulted in an overall reduction in the effects of supplier-

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