Introduction

The traditional manner of conducting business has changed with the advent of information technology and the focus of efforts to improve performance and relations among organizations has shifted from the organizational level to the inter-organizational level (den Hengst and Sol). Inter-organizational systems have been effective in improving efficiency and reducing costs (Swatman and Swatman, 1992; Subramani, 2004). They also help in reducing environmental uncertainty by facilitating communication and providing information (Henderson, 1990; Scala and McGrath, 1993) and encouraging closer relations with suppliers and customers (Cash and Konsynski, 1985; Swatman and Swatman, 1992; West, 1994; Siau, 2003). Numerous studies have been conducted to examine the impact of IT in inter-organizational relationships (Christiaanse and Huigen, 1997; Christiaanse and Venkatraman, 2002). Drawing on Malone et al (1987), Riggins and Rhee (1998), technology can enhance existing relationships between trading partners by promoting closer integration and increasing degree of interdependence.

Abstract

The emergence of inter-organizational system has facilitated easy and fast flow of information among the trading partners. This has affected the business relations among the trading parties involved. Though the inter-organizational systems have helped a lot in improving the business relations, the vulnerability and the virtual environment of such systems raise the issues of trust that may affect the long-term business relations. This article makes an attempt to empirically examine the relationship between the levels of assurance with regard to deployment and implementation of relevant technology tools in addressing the identified technology-related trust issues and ultimately enhancing the perceived level of trust in inter-organizational business relations. The empirical evidence presented in this article is based on a survey of 106 Indian companies using inter-organizational systems for managing their business relations.

Keywords: Authentication, Business Relations, Electronic Commerce, Inter-Organizational Systems, Non-Repudiation, Privacy, Technology-Related Issues, Technology Tools, Trust, Security

Trust and Technology in Inter-Organizational Business Relations

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between the trading partners. Furthermore, Bakos and Brynjolfsson (1993) proposed that IT use in business exchanges leads to closer cooperative relationships. Mukhopadhyay, Kekre and Kalathur (1995) asserted that technology leads to improved information sharing between trading partners. Although, the use of effective technology helps in sharing accurate and relevant information among the trading partners in less time (Anderson and Weitz, 1989; Malone, Yates and Benjamin, 1987), thereby greatly influencing their relationships, yet lack of trust in technology aided environment is often cited as a major hurdle in the growth of inter-organizational systems.

The role of inter-organizational trust has often been recognized as most effective in business relations. Trust in the physical trading environment is often built by various factors like face-to-face interactions, physical evidences, etc. The faceless environment offered by technology in electronic transactions, at times, is unable to provide such evidences, thereby generating reluctance on the part of the trading parties. Inter-organizational trust in an electronic business environment may relatively improve if the old adage “trust needs touch” (Olson and Olson, 2002) is addressed. In the virtual environment offered by inter-organizational systems, ‘touch’ needs to be replaced by effective evidences offered by technology. The issue is whether and how technology can be used to provide various ‘trust building cues’ to the trading parties, thereby improving the performance and relations in inter-organizational systems. The present article makes a modest attempt to address this issue. It also attempts to identify certain technology-related trust issues, which can be addressed through effective deployment and implementation of relevant technology tools, and attempts to relate them with the levels of trust in various Indian companies involved in inter-organizational business relationships.

LITERATURE REVIEW

Trust is the basis of commerce and it is essential for the growth of commerce that the trading partners trust each other and also the trading environment in which they operate. In the context of electronic commerce, trust may be regarded as a judgment made by the user, based on general experience learned from being a customer/seller and from the perception of a particular merchant. It is a belief or expectation that the promise by the merchant can be relied upon and the other party will not take advantage of the one’s vulnerability. Literature on trust in inter-organizational e-commerce has shown it as a social element (Mayer et. al., 1995), as related to supplier performance (Zaheer et al, 1998), as related to favorable economic outcomes (Ba and Pavlou, 2001) and related to perceived benefits (Pauline Ratnasingam, 2003). Institutional trust has often been cited as fundamental in building and retaining inter-organizational relationships (Pavlou, 2002). Keen (1999) has explicitly pointed out the importance of trust for the potential growth of e-commerce. Various other studies have also shown that lack of trust as one of the biggest concerns in e-commerce transactions (Cox, 1999; Levin, 2000; Westin and Maurici, 1998). Without trust, development of e-commerce cannot reach its full potential (Cheskin/Sapient 1999).

Certain issues pertaining to technology have been cited to impact trust. Mahadevan and Venkatesh (2000) stated security, privacy and authentication as the key factors which need to be addressed by technology in inter-organizational systems. Marchany (2002) focused on lack of online security as one of the major factors for the absence of trust. The study emphasized that the eradication of trust may cause users to avoid use of Internet and revert back to traditional method of business. Marco et. al. (2002) addressed the trust and privacy problems related to admittance to negotiation within e-marketplaces. They proposed a model that included inclusion of a trusted third party for admittance in negotiation. The proposed model included trusted third party to act as an
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