Chapter 2
Impact of Technology-Related Environment Issues on Trust in B2B E-Commerce

Muneesh Kumar
University of Delhi, India and Groupe ESC-Pau, France

Mamta Sareen
University of Delhi, India

ABSTRACT

The virtual environment of B2B e-commerce interactions has been considered to be a barrier in building trust of trading partners. There is adequate empirical evidence that supports the relationship between various trust related technology issues such as security, privacy, authentication, etc. However, there is dearth of evidence confirming the causal relationship between environment related trust issues such as social-cultural characteristics, technology standards, and regulatory framework. Based on a survey of 106 Indian companies using inter-organizational systems, this paper makes an attempt to identify specific attributes of these three environment-related issues that have the potential to influence trust in B2B e-commerce.

INTRODUCTION

Research has shown that the virtual environment of B2B e-commerce interactions delays trust building and increases the risk perception of trading partners (Cheskin & Sapient, 1999; UNCTAD, 2002a; Olson & Olson, 2000). It is believed that technology has the potential to influence levels of trust in B2B e-commerce (Kumar & Sareen, 2009). There is an empirical evidence to support the relationship between various trust-related technology issues like security, privacy, non-repudiation, authentication, etc. and the levels of trust in B2B e-commerce. In addition to these company-specific technology issues, a number of

DOI: 10.4018/978-1-4666-1957-9.ch002

factors play an important role in creating a general environment of trust in e-commerce technologies among the members of user community and influence the general attitudes, perceptions, beliefs, etc. of users of e-commerce infrastructure, in general. This helps in appreciating the potential of the relevant technologies in building acceptable levels of assurance with regard to various technology-related trust issues. A number of such factors may be relevant in this context, however, the technology-related environment issues that have drawn the attention of researchers relate to social and cultural aspects, technology standards for e-commerce and the regulatory framework.

Though, the technology-related environment issues are influenced by initiatives from policy makers, professional associations and socio-culture background of the users, companies using B2B e-commerce can also take initiatives to influence the impact of these issues. In the absence of such initiatives, the levels of trust in B2B e-commerce may be lower. Though the impact of the social and regulatory issues on trust in B2B e-commerce has been suggested in the literature, there is dearth of evidence confirming the causal relationship between them. The present paper makes an attempt to identify some of specific attributes of these technology-related environment issues that have the potential to influence trust in B2B e-commerce.

Trust and E-Commerce: Theoretical Background

Trust has been posited as the one of the critical elements of successful e-commerce (Cheskin & Sapient, 1999; Corritore, Kracher, & Wiedenbeck, 2001). The importance of trust as a key facilitator of electronic commerce is increasingly being recognized by academic and practitioner communities (Bhattacherjee, 2002). The issue of trust is more relevant in e-commerce because of the higher degree of uncertainty of economic transactions in virtual environment as compared to the traditional settings (Grabner et al., 2003). Trust is considered as a valuable facilitator in e-commerce (Doney et al., 1998; Griffith et al., 2000; Marshall & Boush, 2001), especially in situations where control is lacking and future interactions are difficult to predict (Lane & Bachmann, 1996). Accordingly, trust is more relevant in e-commerce transactions because participants, at times, deal with greater ambiguity, uncertainty and risks outside their control. Previous research on trust and e-commerce has focused primarily on transaction specific investments and firm's performance (Doney & Cannon, 1997; Ganesan, 1994). Some scholars (Malone, 1994; lemons, 1993) have also focused on information technology as a means of reducing inter-organizational transaction costs (Kumar et al., 2009). The role of trust in economic perspective has been considered more profound due to interdependencies among trading partners (Ratnasingam, 2003). Rogio, A. (2010) predicted that at least 90 percent of e-commerce businesses would use some form of cloud computing in the next five years and at least nine in ten online retailers will be participating in a cloud by 2014. This move to cloud computing would imply that more and more e-commerce businesses would offload infrastructure, development, and software to the cloud. However, the issue of trust would be of great importance and as various issues like integrity, reliability, privacy, etc might create doubts in the mindset of the users.

Trust is often related with the user's disposition to trust. Disposition to trust is a measure of the extent to which an individual is willing to depend on others (Rotter, 1971) and is the result of general life experience and socialization (Mcknight et al., 2002). Developmental experiences, personality types, and cultural backgrounds of users have been believed to influence their inherent propensity to trust a vendor (Kim et al., 2000) It has been observed that trusting people are more likely to trust the virtual environment of Internet (Uslaner, 2000). Since trust makes people willing to take risks, trusting people are more willing to