Exploring Trust in E-B2B Relationships

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Abstract

The Internet's unbounded opportunity for inter-firm exchanges is limited by concerns about trust, however, little is known about the development and formation of trust in the area of electronic business-to-business relationships. Drawing on existing research the aim of paper is to explore differences arising between trust in the traditional and in the electronic business to business relationship. In addition, an overall research framework is developed which links trust formation to three dimensions: the type of interaction, the stage of the relationship lifecycle and the type of transacting organizations. These dimensions are further examined in different relationship scenarios. Finally, implications for the agri-food industry are examined.

Keywords: trust formation, electronic relationships, relationship lifecycle

Introduction

The role of interorganizational trust has been recognised as a central one in business relationships and a well explored area. The introduction of Internet and the development of e-business, more than a decade ago has changed, even transformed, much of the traditional way of doing business. Research on trust has been focusing so far in the business to customer (B2C) part of e-business, rather than business to business (B2B) part, despite the fact that the latest is the most important for companies (McGaughey, 2002; Saunders et al. 2004). Therefore, research on trust in the particular B2B setting is needed. In order to explore trust in the B2B it should be clear that a number of studies, predominantly conceptual, have identified various stages through which business to business relationships evolve. Under this prism, it is important to identify whether or not similar stages can be distinguished in electronic B2B relationships and moreover, to explore differences of trust formation in response to B2B relationship stages. In addition, another important issue related to trust is exploring whether or not any differences arise as a result of the type of organizations that are involved in the electronic transactions and the type of interactions that occur. Is trust in electronic transactions generated in the same way among electronic companies or among electronic and traditional ones?

Drawing on existing research important characteristics and dimensions of trust in traditional, as well as, electronic B2B relationships are initially identified. Then, the paper suggests an overall framework on trust formation. Based on the framework trust formation is explored in different relationship scenarios. Implications for the agri-food sector are finally presented, taking into consideration the particularities of the sector.

Trust in traditional and electronic B2B relationships

Conceptualizations and dimensions of trust in business relationships

Trust is a complex concept encompassing diverse constructs and spanning interdisciplinary fields including economy, organizational behaviour, psychology and many others. A number of definitions and conceptualizations have been proposed by many authors (Baier, 1986; Morgan and Hunt, 1994; Hosmer, 1995; Hakansson and Snehota, 1995). These definitions present some similarities but also differences, as a result of the different scientific prism upon which the concept of trust is examined. Different dimensions or morphs of trust have been also identified. For example, an overall distinction of trust is between trust in individual and trust in an organisation (Anderson and Narus, 1990; Doney and Cannon, 1997). Zucker (1986) distinguishes trust in process-based, characteristic-based and institutional-based trust, while Sako (1992) differentiates trust in contractual, competence and goodwill trust. Ring (1996), proposes two distinct forms of trust in economic exchanges: fragile (related to the concept of risk) and resilient (related to belief in the goodwill of others) trust. Another distinction is by Plank et al. (1999) categorising trust in sales-person trust, product trust and company trust. Scott (2000) classified trust into rational cognition-based (encompasses competence, ability, responsibility, integrity, credibility, reliability and dependability) and social affect-based (the social view of trust and has a more emotional connotation). Ratnasingam (2003) finally, suggested three types of trust in business relationships including competence trust (economic foundation), predictability trust (familiarity foundation or track record), and goodwill trust (empathy foundation).

Characteristics and critical aspects of trust in e-B2B relationships

Interorganizational trust in an electronic business environment constantly brings into question the old adage “trust needs touch” (Olson and Olson, 2002). In electronic business however, the transformation of business activity requires companies to consider alternative ways and approaches of trust formation. In addition, different dimensions of trust, than those recognized by authors in traditional business relationships, may apply due to the specific characteristics of the electronic way of doing business. The time factor of trust in e- B2B relationships is very important as electronic transactions are often subject to time pressures and restrictions, since in many cases e-B2B relationships are short-term and project oriented. As a result, in these cases initial rather than knowledge-based trust becomes more important (Jones and Bowie, 1998). Mahadevan and Venkatesh (2000) distinguish three dimensions of trust adequately: technology (assuring authentication and non-repudiations), market place (related to the credibility of the online market place), and market participant (related to the credibility of market participants). Agarwal and Shankar (2003) raise two major issues in on-line transactions, the issue of uncertainty (due to impersonal nature of the on-line environment) and of information asymmetry (due to the inability to judge product quality prior to purchase). Business partners often do not know each other, less control over the transfer of the data is available and partners are located in different parts of the world where different regulations and rules may apply (Furnell and Carweni, 1999).

Given the aforementioned characteristics of the electronic environment, institutional trust is fundamental in building and retaining online interorganizational relationships (Pavlou et al. 2003). In fact, Pavlou et al (2003) has very accurately distinguished two types of institutional trust: (a) third-party institution-based trust, which deals with intermediary driven structures, such as those in online B2B marketplaces, and (b) bilateral institutionalized trust, which deals with dyadic interorganizational processes, standards, and norms. The analysis of the trust concept in the e-B2B context revealed various distinct characteristics. Most of these characteristics are captured by Nachira (2002) who suggested three trust components: trust in services and in technological solutions (a measure of confidence expressed in terms of security and reliability, trust in business activities (a measure of confidence expressed in terms of the mutual recognition of accepted practices and procedures for specific sectors and local contexts) and trust in knowledge (a measure of confidence expressed in terms of symmetric access to information).

Approaching trust formation research in e-B2B relationships: an overall framework

Regarding trust in e-B2B relationships a limited number of frameworks have been proposed, since most of the research related to trust focuses on the role of trust for the adoption of e-commerce and does not offer insights as to how trust is formed and what are the important dimensions of trust. Papadopoulou et al. (2001) in their framework described an agent-mediated virtual servicescape, showing how the features of agent and virtual reality technologies can be effectively applied in order to enable trust formation in an e-commerce environment. However, in their framework they refer to B2C relationships, not B2B and as Roy et al. (2001) argue trust for B2C applications is established very differently from B2B environments because the relationship is often very short term and more transaction focused. Agarwal and Shankar (2003) have defined trust and subsequently trust building factors in electronic transactions in terms of three characteristics reliability, predictability and fairness and have proposed three different stages of on-line trust development, namely calculus-based, information-based and transference-based. Based on existing relevant literature, an overall research framework (Fig. 1) for trust in e-B2B relationships is suggested with the aim of clarifying trust formation. In particular, the framework relates trust formation to the three dimensions which are analysed below:

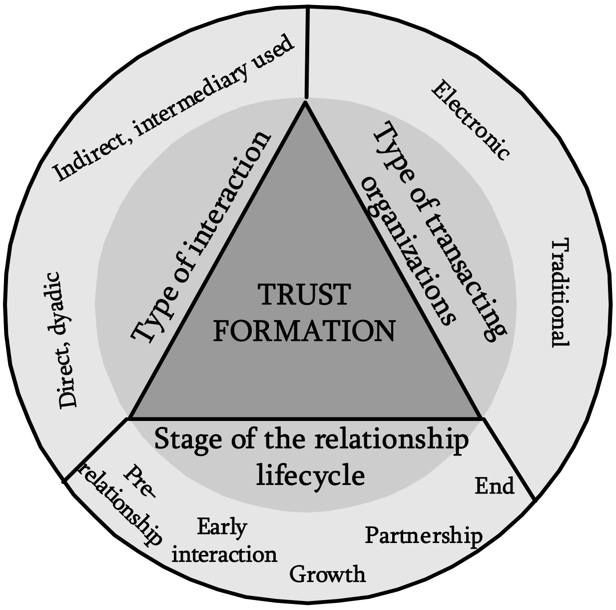

Figure 1. An overall framework for trust formation research in e-B2B

The first dimension in the framework is the type of organizations that are involved in transactions. In the literature, different trust scenarios have been used in the study of relationships between organisations. A very simple categorization of companies based on the balance of their physical and electronic activity is “traditional” and electronic. “Traditional” companies are totally independent to the use of electronic applications but they rather use electronic applications occasionally in order to simply facilitate some of their processes. It is assumed in this paper that traditional companies lack familiarity in using electronic applications. Electronic companies on the other hand rely on advanced information technology and characterised by high levels of e-business readiness (Davidow and Malone, 1992; Jarvenpaa and Ives, 1994; Lipnack and Stamps, 1997). However, as Ramo (2004) suggests there are (at least) three forms of electronic organizational environment: virtual organizations working outside traditional organizational boundaries (e.g., joint ventures, cooperative projects, strategic alliances); electronic operations in which segments of work are handled remotely (e.g., call centres); and electronic teams and networks of individuals brought together for their skills, not their location or rank in the organization. In this paper, by electronic company we refer to any type of business activities that are coordinated through electronic communication, rather than face-to-face communication. This particular type of activity requires trustworthiness among the participants.

The second dimension in the framework is the stage of the relationship lifecycle. Formation of trust in traditional business relationships has been also associated with the business to business relationship lifecycle. There is no strict agreement as to the stages of a business to business relationship. Trust creation for example, is seen as most critical to develop at the initial stages (Wilson, 1995). Jap and Ganesan (1999) have proposed two major phases of relationship building: exploration and maturity distinguishing between the initial phase of the relationship where no familiarity exists and the stage where there are multiple shared experiences. A very useful categorization is the one by Heffernan (2004). His extensive analysis of the literature suggested five stages: pre-relationship stage, early interaction stage; relationship growth stage; partnership stage; relationship end stage. Heffernan (2004) showed in his research that trust was seen to develop in different forms dependent on the stage in the lifecycle of the business to business relationship.

The third dimension in the framework is related to the type of interaction among companies and whether interactions take place on a dyadic, direct level or they are driven by intermediary structures. Direct transactions at the dyadic level are found to be particularly difficult at the early phases of a relationship (Pavlou et al. 2003). Intermediary driven structures by definition are supposed to act as trust generators or risk buffers. To these entities fair behaviour and technological excellence while performing its duty is assumed. This type of structure is particularly important in the early stages of a relationship, rather than the mature phases.

Trust scenarios

Based on the overall research framework in the previous section an exploration of the characteristics of trust is attempted. Three scenarios are considered: interaction among traditional companies, among electronic companies and finally interaction relationships among traditional and electronic companies. In each scenario the important aspects of trust are examined in relation to the stage of the relationship lifecycle and the type of interaction.

Traditional to traditional companies

In this type of relationship, traditional companies will have to use non-personal electronic applications in order to support or facilitate some of their business activities. Positive interaction history and a result good reputation will reduce any trust dilemmas in the pre-relationship stage at least in a dyadic level (Heffernan, 2004). However, good reputation is not enough, since much of the mistrust in this particular relationship is originated by doubts regarding the technology component and the human component (users of electronic applications) (Kasper-Fuehrer and Ashkanasy, 2001). In cases where interactions will take place between more than two participants trust generation becomes even more complex, requiring the use of third-parties in order to establish trust in services and in technological solutions (technology component), and trust in business activities (human component of the traditional company).

Electronic to electronic companies

This type of relationship is characterized by extensive use of electronic applications. Electronic companies are sometimes claimed to operate independently of space, time and trust in creating worldwide sources of information-based products and processes but this is partially true (Ramo, 2004). Jarvenpaa and Leidner (1999) have showed that a somewhat depersonalized, fragile, and temporal form of “swift” trust can exist in teams and companies built purely on electronic network. Indeed, electronic-to-electronic business relationships do not have time to create an extended history, since are often characterized by project-oriented relationships (Vlachopoulou and Manthou, 2003). Consequently, the focus in these relationships is on initial, rather than knowledge- based trust at the early stages of the relationship lifecycle (Saunders et al. 2004). As a result, the use of trusted third parties and agents will be useful. In this case, emphasis on the trust between agents and the company, or between the agents in each of the trading organizations is needed (Jones and Bowie, 1998; Kasper-Fuehrer and Ashkanasy, 2001).

Traditional to electronic companies

This type of relationship is particularly difficult because of the gap that exists among companies regarding technology adoption. Differences in the level of use and adoption of electronic applications may generate lack of trust. For example, the traditional company may face lack of trust in services and in technological solutions, while the electronic company may face lack of trust in business activities. An additional problem in this interaction is the asymmetric access to information. For this type of relationship third-party institution-based trust, which deals with intermediary driven structures, such as those in online B2B marketplaces, is needed. Bilateral institutionalized trust, which deals with dyadic interorganizational processes, standards, and norms, would be difficult to achieve due to the intrinsic characteristics of these companies. An important aspect of third-party institution-based trust is that while these institutions can help decrease the opportunism of a company, they also require that the company has at least some level of trust in them.

Implications for the agri-food sector

In this section the specific characteristics of the agri-food industry are presented with the aim of understanding the particularities of the sector in terms of trust formation (Canavari et al. 2005). In general, trust is recognised as an important component for B2B e-commerce success and consolidation among the agribusiness operators. An important characteristic of the sector is related to its current state of e-business adoption. Indeed, transacting organizations in the agri-food industry, particularly in Europe, could be considered as traditional, rather than as electronic. E-business adoption rates are low due to the fact that small-medium size enterprises (SME's), which are the dominant entities in the sector, lag behind in terms of human and financial capital, as well as positive attitude (European Commission, 2004). These SME's have specific requirements regarding trust formation as they often do not trust the medium it self. This could be particularly the case in electronic marketplaces and electronic auctions for agricultural commodities, which are sold by farmers to other companies. Given, that the aforementioned types of electronic transactions for commodities are not based on long-term relationships (in order to become more cost efficient and to control quality), but mostly on the price criterion, some kind of accreditation (third-party institution-based trust) is needed for all participating entities in order to assure the quality of the products offered.

The very nature of agricultural products is an important element which needs to be taken into consideration when examining trust formation in e-B2B relationships in the sector. Preliminary empirical evidence from a research that is currently being conducted by the authors (regarding the use of e-business applications in the Greek agri-food industry) demonstrates the difficulties in trust formation in e-B2B relationships due to the nature of the product. The case study explored the long term relationship (ten years) of a Greek canned fruit cooperative with English retailers and showed that despite the fact that the cooperative developed an electronic platform to assist its major customers ordering on line, retailers did not order on-line. Instead, they preferred to visit the cooperative in Greece prior each order and to interact physically with the cooperative. This shows that in the agri-food industry the nature of the products puts unexcelled difficulties regarding trust in products.

Conclusions

The Internet is now being used for business-related interactions (other than communication), which previously relied on direct personal contact in order to establish trust relationships. Thus, there is a need to be able to understand trust relationships relying only on electronic interactions over the Internet. In this paper, important aspects and characteristics regarding the concept of trust have been identified in the context of e-B2B relationships. The paper suggested that in order to understand trust formation in e-B2B relationships a less holistic approach is needed. Emphasis should be given on three major aspects: the type of organizations that are involved in transactions (traditional or electronic in respect to their e-readiness), the stage of the relationship lifecycle (pre-relationship or mature) and the type of interaction among companies (dyadic or multiple). These three elements interact dynamically which results in different scenarios and requirements regarding trust formation. For example, different trust requirements have been recognised in the relationship among traditional companies and among electronic ones. Moreover, different trust requirements have been identified in dyadic relationships in comparison to multiple ones.

B2B relationships, traditional or electronic, are very important in the agri- food sector with slim profit margins and a dynamic business environment that is continuously shaken by rapid changes in consumer wishes, technology and international trades (Claro and Claro, 2004). However, the agri-food sector is one where different and specific trust scenarios should be considered in e-B2B relationships (Fritz et al., 2005). A number of organizations constituting the agri-food sector such as farmers, groups of farmers, input suppliers, cooperatives, chain service providers, manufacturers, retailers. The diverse nature of these organizations in terms of size, human capital, level of technology adoption, as well as the specific characteristics of products and processes adds complexity in trust research. Future research should focus on dealing with the issue of trust formation in different business interaction environments. Will trust between farmers participating in an e-marketplace be generated in the same way as trust in the e-B2B relationship of a cooperative with an on-line manufacturer or retailer? Research is also needed regarding the way trust grows in e-B2B relationships and whether the time factor is important in e- B2B relationships, as in traditional B2B relationships.

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