Trust in Electronic Commerce: A New Model for Building Online Trust in B2C

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Abstract

The rapid growth in the electronic commerce over the internet has fuelled predictions and speculations about what makes a business to consumer (B2C) web site effective. Increasing use of the World Wide Web as a B2C commercial tool raises interest in understanding the key issues in building relationships with customers on the internet. Trust is believed to be the key to these relationships. In this paper, an overall model has presented for building online trust in this context. This model outlines some of the key factors that are related in this area and suggests a framework based on these factors. With respect to the position and importance of the trust in online commerce, this model helps businesses in order to capture, sustain and construct long-term relationships with their consumers.

Keywords: E-Trust, Reverse engineering, Business-consumer web sites, online shopping, Web design

1. Introduction

Since the commercialization of the internet in the early 1990 there has been a phenomenal growth in business-to-consumer (B2C) electronic commerce. The global nature of the internet, its vast scope and different interactive capabilities have made it an important marketing and trading medium for many firms; consequently, there has been a drastic increase in the number of organizations that are using the web for marketing, promoting, and transacting products and services with consumers (Ranganathan & Ganapathy 2002).

The process of globalization creates new challenges and opportunities for companies by offering an access to new markets that were previously closed due to cost, regulations, etc. The adoption of the Internet, in particular Internet-enabled B2C E-business solutions, allows many Small and Medium Enterprises (SMEs) to respond to these challenges and opportunities by extending the geographic reach of their operations. Very often, however, websites created for sales purposes are simple in design and functionality; hence, they, do not arouse trust at first glance (Gutowska et al 2009). Apart from organizations, there seems to be a rapid adoption of the internet by consumers for various purposes, including information search and online shopping. Recent studies had been shown that the rise in online shopping is affecting the traditional retail sales in that the growth in offline sales has reduced in current decades. In the other words, online shopping negatively is associated offline shopping. The increase in B2C commerce has made several firms looks for new ways to understand online shopping behavior so as to attract and retain consumers (Ranganathan & Ganapathy 2002).

Unlike the traditional shopping, where the intended purchase may be from a supplier operating in a different country, time zone, currency and legal system, in the context of B2C e-commerce transactions, transactions do not involve simultaneous exchange of goods and money regularly where the intended purchase may be from a supplier that is operating in a different country, time zone, currency and legal system. Moreover, consumers are required to share sensitive personal information (such as mailing address, telephone number) and financial information (such as credit card numbers) (Shan & Chen 2007). Internet shopping is different from traditional shopping. Consider shopping in the real world: When a customer enters a shop for the first time, she sees the interior, goods and staff. Visual cues allow her to evaluate the shop's professionalism and competence. Interaction with staff will have further impact on the customer’s trust (Riegelsberger 2003). As online transactions are stretched over space and time, they are dis-embedded. Dis-embedding is a common phenomenon in modern societies. It makes decisions more complex and increases the need for trust. Hence, designers of e-commerce systems need to design these systems in a way that allows users to build trust in B2C e-commerce (Riegelsberger 2003; Gutowska et al 2009).

With respect to attributes of B2C e-commerce and the role of trust in e-commerce, that has been mentioned above, in this paper, has been recognized effective factors in building online trust and interaction between them and ultimatly, has been presented an overall and efficient model for building online trust in users. Represented frame work in this model, due to build online trust and consequently, online purchasing behavior. This paper has organized as follows:

In section 2, the importance of trust in social communication, off / on line commerce has presented. Due to the key role of trust in e-commerce, it has been noticed by many researches so; in section 3 some of the important
related models have been investigated. In section 4, the proposed model for constructing online trust in b2c e-commerce and its elements, will be explained, respectively. In last section, 5, conclusion has been presented.

2. Trust Background

Trust is a fundamental quality in human relationships in a society. It plays a key role in defining friendship, love, families and organizations. It starts with a certain value between two entities. Regardless of how the initial trust comes about, it can grow or reduce depending on the mutual interactions and experience (Patnaik et al 2006). Trust has different degrees that basic trust is an underlying, background form of trust that is a precondition of social life (Corritore et al 2003). Trust is an important issue in personal relationships and in offline commerce (Lanford 2006). In business world, trust is a key for doing successful interactions and also for building long term relationships. Trust can also be viewed as a kind of social capital that makes coordination and cooperation between people possible. Trust enables people to lives in risky and uncertain situations.

Therefore trust and trust relationships in the offline world have been a topic of research in many disciplines since the 1950s. Streams of research on trust can be found in the fields of philosophy, sociology, psychology, management, marketing, ergonomics, human–computer interaction (HCI), industrial psychology and electronic commerce (Corritore et al 2003). With the emergence of the internet, for many years computer users have used the Internet to share data, collaborate on their work, and exchange messages.

Moreover, many virtual communities had been emerged and a variety of people have joined one or more of the virtual communities that have grown up to serve consumer needs for communication, information, and entertainment. The rapid growth of virtual communities on the Internet raises the question of what encourages members of a community to interact and make virtual communities more dynamic (Lee et al 2006).

In these virtual communities where people exchange information an ideas, trust between members is an important issue for going on the relationships (Lanford 2006). In the short period, lots of virtual communities have been created and consequently, computer users worldwide have been increased (Pourshahid 2006). The phenomenal growth in the number of internet users and the enormous potential of electronic commerce via the internet attracted merchants to conduct their businesses online (Wang & Emurian 2004). E-commerce lets businesses reduce costs, attain greater market reach, and develop closer partner relationships. Numerous e-commerce companies have created very profitable businesses since pioneering e-commerce traders (such as Amazon.com) emerged (Wu 2010). Industry analysts see both trust and security are important barriers to preventing in the growth of e-commerce (Radwan & Mumtaz 2009).

E-commerce is many diversified and B2B, B2C, C2C models are common. Among of these models, B2C has more contribution in e-commerce, in fact, it means retailing. It has been developed with to extent the web, and nowadays, many different goods and services are shopped through the web easily (Corbit et al 2003). The nature of e-Commerce imposes a physical distance between consumers and the merchant (Hussin et al 2006). Hence, trust plays a key role in many such transactions that occur over the Internet (Lanford 2006) because of the less verifiable and less controllable business environment (Hussin et al 2006). Moreover the uncertainty about the quality of products or services and the ability of sellers to stay anonymous has lead to a high level of risk. Consequently, trust management has been measured as one of the most important components in any electronic environment (Pourshahid 2006; Lu 2009).

Figure 1. Trust Chart

3. Related Works

A number of comparative studies, each having different models of trust in B2C, have been carried out in the field of EC with regard to these three paradigms. Some are presented below:

4. Proposed Model

In this section, the proposed model for building online trust in B2C e-commerce will be explained. The model consists of four sections: professionalism, reputation, trustworthiness, technologic incentives in which, these sections involve another effective elements. In this section, influential elements and factors in the model has been explained individual and comprehensive.

4.1 Professionalism

Professionalism is usually defined as character to represent good standing. In the physical word physical visual information, which represents the character of the organization, is one of the decisive factors to determine user’s
trust on a business. However in the electronic environment where the physical attributes are missing, the business is represented by the web site. The in-depth analysis of online consumer behavior clearly has been suggested that the web interface factors help the online organization to portray professionalism (Mahmood 2006). While a salesperson is generally absent or peripheral to the settings of the e-commerce web site, the primary objective of trust becomes the organization itself. The organization’s image reflected by its site (Corbit et al 2003). Consumers make intuitive, emotional decisions based on their perceptions of an online merchant’s website. The look and feel of a website serves as a basic for consumers to form a first impression of the merchant, to develop an opinion of its trustworthiness, and to ultimately form their behavioral intent (Karyonen 2000). Professionalism consists of the following items:

4.1.1 Professional Graphics (Web Design)

Web site quality is important for web sites to gain competitive advantages over other web sites and attract more customers (Barnes & Vidgen 2000). Professionalism in design has been recognized as a positive attribute in merit of an online seller. Visual design matters because of two main reasons: (1) a good-looking websites (one with no textual mistakes, right colors, good balance between animation and usability) makes users think they are browsing in a professional environment and helps foster trustworthiness of the company behind the site; and (2) browsing in a good-looking and user-friendly website encourages users to spend more time on the website, and, the longer they stay, the higher the probability of the site gaining the consumers’ trust (Urban et al 2009).

However, it is difficult to provide an absolute definition for professionalism in terms of web site design, because professional design carries too broad and too vague a meaning and can be interpreted differently by different people (Wang & Emurian 2004). One implementation method for professional design, use of eye-catching graphics, that not only could attract a user’s attention but also convey competence or professionalism (Basso et al 2001). Use of online sales chat, three- dimensional flash images, and clear and thorough presentations merchandise images, the blue and white color scheme has a technical feel, and also, to present the product in three dimensions and a rotatable format enabled the customer to check each feature in the product. If, there be these features in a website, professional feel would be conveyed and thus increased trust in that web site (Wang & Emurian 2004).

4.1.2 Usability

Design and capabilities of an e-commerce website are important to online shoppers (Mithas 2003; Flian et al 2005; Rosen & Purinton 2004). Definition of ease of use focuses on how easily users can achieve their goals using a computer (Corritore et al 2003). This dimension defines the overall organization and accessibility of displayed information on the web site (Wang & Emurian 2004). Perceived web site usability includes characteristics of the web site such as:

- Easy of understanding the structure of a system (including its functions, interface, contents).
- Simplicity of use.
- Speed and ease with which users can navigate the web site to find an item or service.
- User control over the process (Flian et al 2005).

Ease of navigation was frequently mentioned as a key to promote online trust. In other words, users can easily locate the information they seek on the web site (Wang & Emurian 2004). Studies have indicated that ease of use impacts on-line trust. For example, ease of searching, transaction interaction, broken links and navigation have all been associated with changes in on-line trust (Lederer et al 2000).

4.1.3 Proper Branding

A brand is a name, term, sign, symbol, design, or combination of these which is used to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors (Rowley 2004). Online businesses must use of well known brands (Mahmood 2006). Brand is an important conveyor of trust. Branded products with strong brand equity enjoy an immediate trust gain when in an online environment (Yakov et al 2005). With the rise of B2C e-commerce, online brand trust has often been identified as a critical component and has increased in importance among the internet users. A number of researchers have suggested that brand trust is a critical factor in stimulating purchases over the internet (Alam & Yasin 2010). Also displaying a prominent logo and slogan to facilitate the easy identification of the company has been suggested (Wang & Emurian 2004).

4.2 Trustworthiness of Company

“Trust can only exist if the consumer believes that the seller has both the ability and the motivation to deliver goods and services of the quality expected by the consumer” (Jarvenpaa & Tractinsky 1999). Attributes which build the basic elements of trustworthiness are different. In one view point, Attributes that constitute the main elements of trustworthiness are: ability, benevolence, and integrity (Lee & Turban 2001; Salam et al 2005).
Ability comprises the skills and competencies enabling a party to have influence within some specific domain.

Benevolence is the extent to which the trusting party believes that the trusted party wants to do good things rather than just maximize profit. Integrity is the trusting party’s perception that the trusted party will be honest and adhere to an acceptable set of principles (Mayer & Davis 1999). online vendor’s trustworthiness includes the following elements:

4.2.1 Real-World Presence

In internet researches, there is a question in the mind of user ‘whether a web site is an extension of a familiar off-line company, or whether it is the only touch point with an unknown company (Egger 2001)?’ It is difficult to trust a stranger or to believe something that exists only in cyberspace. Therefore, making connections to a physical reality is an essential and effective way for online merchants to enhance the perceived trustworthiness of their web sites. Trust of well-established merchants with physical stores could be transferred directly from the real world to the online world (Ye & Henry 2005). Cues and hints from the real-world presence consist of company address, chat online, company email and company telephone number that they increase trustworthiness (Hussin et al 2006).

4.2.2 Size

A company’s size is often expressed by means of investing in Web-page banners boasting of its size (Jarvenpaa & Tractinsky 1999). For instance, eBay’s banner says that it is “The World’s Online Marketplace”. Size of a store is one of the bases used by Consumers to form their impressions regarding the store’s trustworthiness (Koufaris 2004; Jarvenpaa & Tractinsky 2000). A perception of a large organization size implies that the merchant has significant. The more resource is spent, the more the customer can trust. Hence, the larger the firm, the more it is perceived by customers that it is in the firm’s best interest to fulfill its promises to the consumer (Dolatabadi & Ebrahimi 2010). In the same note) consumers’ trust is increased when the size of the company is perceived to be large (Koufaris 2004). Consumers apparently assume that a large company will provide the services and support that customer’s need and that the company will be able to compensate them in case of product failure (Dolatabadi & Ebrahimi 2010).

4.2.3 Market (Customer) Orientation

Market orientation is essentially a managerial philosophy, which takes the customer as a focal point for business activities and considers profit as a consequence of customer orientation (Corbit et al 2003). Information collection and usage started to be considered as governing determinants to the organizations ‘market orientation in the 1980s (Shapiro 1988). Using this definition in the B2C e-commerce context, market orientation is likely to increase the level of trust since the e-commerce web sites will: (1) collect the customers’ information dynamically to follow customers’ preference from time to time; (2) use the information to customize product/services to cater to the individual customer’s taste on a one-to-one basis rather than mass marketing; (3) maintain close contact with customers and respond to customer’s problems in real time; (4) allow customers to contribute to the site development (Corbit et al 2003). Open communications and the opportunity to participate are necessary conditions for a market orientation (Carnevale & Wechsler 1992).

In this view, consumers are involved in product development, production, distribution or marketing of the product and introduced the concept of co-creation. In the other words, meaningful collaboration between consumers and firms to create unique experiences that will develop new products and subsequently new sources of competitive advantage. This is a win-win approach, as it promotes dialogue interaction, access to information, transparency, and understanding of risk-benefits that ultimately engender trust in the buyer-seller relationship. When taken to the online site, it becomes even more powerful. Such a co-creating and collaborative process is built on a foundation of a trust between the firm and the consumer (Urban et al 2009). Therefore, a positive relation between customer orientation and trust has been recognized (Corbit et al 2003).

4.3 Reputation

Reputation of a company is also crucial in online business, as after analyzing reputation a client can predict how the company could behave. On the other hand, the client may not have any prior interaction with a company. Therefore, there is no way to know about the company except other client’s opinion (feedback) about that company (Dolatabadi & Ebrahimi 2010). Online reputation regarding an e-business is built by collating the past experiences of the agents who have previously interacted (Mahmood 2006). Having a trustworthy reputation means a lot to online merchants in attracting potential customers and developing their trust. Company reputation will be built two ways; (1) self-reputation which in this way, company can makes reputation for itself by
advertising in web portals, announcement in valid and known sites and also to represent about online users of website, (2) other-reputation, that involves the confirmations of trustee websites and reputation systems.

While most online merchants strive to establish a strong reputation via various marketing and advertising strategies alone, the power of third-party referral and second opinions in this building process can be neglected easily. It is significant that self-promoted reputation was less believable than one generated by other sources of accreditation (Wang & Emurian 2004). When the company’s reputation is perceived positively, consumers exhibit greater trust in that company (Dolatabadi & Ebrahimi 2010).

4.4 Technologic Incentives (Drivers)

E-marketing services (advertisements, banners and promotional popup) increase network traffic. These promotional activities do not really make any positive contribution to the business even if the seller is offering a valuable service along with the best quality and price of their products. In E-commerce it is very important to secure customers’ personal information and provide them with privacy in transactions using a proper transaction management system. E-business services aim at attracting new customers as well as maintaining and satisfying the needs of existing customers by providing them best quality services (Ali 2005). With regards to technological and technical developments, and their aids in building online trust and the role of these developments to incentive customers for contributing in e-commerce, it can be hoped that internet business also goes on to growth.

The following factors play important roles in creating online trust:

4.4.1 Security

Security and privacy problems have existed on the Internet since its inception, but have gotten much worse in recent years, largely due to the growth of the Internet. When a consumer shopped on the internet, there were many threats to personal security (Salisbury et al 2001). These threats have major impacts on end users, websites, businesses, and even Internet service providers (Dolatabadi & Ebrahimi 2010). E-commerce security deals mainly with two types of issues; protect the business network and provide transaction security between the customer and business. In B2C, transaction is one of the critical issues, which requires being managed properly (Ali 2005). A high level of security in the online shopping experience has a positive effect on consumer trust because the perceived risk in transaction will be decreased.

4.4.2 User’s Information Privacy

Privacy is often cited as a top concern among Internet users (Dolatabadi & Ebrahimi 2010). B2C web sites use a number of mechanisms to gather information about their visitors. Explicit modes of gathering, such as registration forms, web surveys, and implicit means, like the use of cookie files, are commonly used. Information about consumers provides crucial inputs to marketing, advertising, and product related decisions made by merchandisers. But, a growing number of internet users have expressed their concerns over potential misuse of personal information. To address this issue, a number of web sites have developed and displayed consumer privacy policies (Ranganathan & Ganapathy 2002).

Privacy and security concerns of online transactions affect consumers’ purchasing behavior.

A high level of security and privacy in the online shopping experience has a positive effect on consumer trust, owing to the lowered risk involved with exchanging information (Dolatabadi & Ebrahimi 2010).

4.4.3 Payment Systems

A payment intermediary is often the only party in an e-commerce transaction that is able to verify the merchant’s identity and location. Payment intermediaries can assist consumers by alleviating the ‘risk of prior performance’, which typically leaves the consumer in a vulnerable position in online transactions. Payment intermediaries can also help new merchants overcome the problem of establishing initial trust. Escrow services are one form of payment intermediary currently used in B2C, C2C, and B2B e-commerce. They hold payments from the buyer until the buyer has received and accepted the goods, at which point payment is made to the seller. Credit card companies are in an influential position because of this. Because merchants rely on them for payment, they are in a position to sever services to fraudulent merchants (Patton & Yosang 2004). Therefore, Payment intermediaries can decrease the risk of online transaction.

Risk perception is negatively associated with trust perception (Corbit et al 2003). Thus, high level and acceptable from technologic drivers in the B2C e-commerce web sites reduce risk, and in the other wise, customer’s trust to e-commerce web sites will be increased.

Figure 2. A proposed model for building trust in B2C E-commerce
5. Conclusion

Trust is an essential element in social relationship and offline commerce. The emergence of online businesses along with the use of the internet as its basic network has brought new concerns and risks in B2C business environment; consequently, trust is a fundamental factor in every e-commerce activity. With respect to the importance and the position of B2C business in e-commerce, researchers have paid more attention to this area and have strived to overcome challenges to build online trust.

Studies on online merchant revealed that a great deal of money is invested to attract a new customer. If online merchants have to attract and retain customers while releasing a good return on their investment, they must focus on the consumer’s expectations. The above-mentioned parameters and dimensions are presented in a model based on what online consumers perceive as important and effective in B2C web sites. Online merchants can assess their web sites in terms of a set of variables and identify the areas which need improvement.

The importance of business-to-consumer to the future global economy is well known. Determining how to create business-to-consumer web sites capable of attracting and retaining consumers so that key objectives, such as online purchase, web visitor satisfaction, repeat visits, and online customer loyalty are attained is an important step in developing an overall e-business strategy of an organization.

Acknowledgement

The authors would like to thank Farshid Namamian (faculty of Islamic Azad University, Kermanshah branch) for his helpful comments and suggestions that substantially improved the paper.

The first author is grateful to the

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![Figure 3. Trust Chart]

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