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Abstract

With the open system environment of the Internet and the intensive communication requirement of being a remote shopping channel, consumer-based electronic commerce becomes more complex and dependent on trust development in a business relationship. This paper examines the concept of trust and proposes a trust development life-cycle for EC adoption. Besides, it suggests and analyses a number of antecedent factors toward initial trust formation. These factors include information quality, web interface design and company reputation. This paper contributes to a better understanding of the EC trust concept, which is important for the successful implementation of consumer-based electronic commerce.

1. Introduction

Since the development of the World Wide Web (WWW) on the Internet in the early 1990's, there has been a critical improvement on the graphical interface of Internet applications. Increasing numbers of companies are now trying to carry out commercial activities through using this Information Superhighway and the Internet is no longer restricted for academic and research purposes. With the interactive and multimedia features of the WWW, enterprises can deliver products or services information to potential buyers, perform real-time money settlement with their customers and distribute digital products on the Internet simultaneously. By doing so, a closer customer relationship could be formed, and much of the operating overheads, such as time and cost, can be saved. There have been numerous trade articles published identifying the benefits of the electronic marketplaces. In a fall 1998 study, ZD Market Intelligence reported that over 23 million U.S. households were connecting to the Internet and almost 16 million of those were participating in electronic commerce – making purchases on the Internet. Comparing to the statistics in 1997, the number of online shoppers has almost doubled.

Despite the recent growth of the online retailing industry, there is however still not a critical mass on the adoption of the customer-based electronic commerce. Many Internet users still hesitate to purchase online simply because they do not trust the online media or the company behind. Also, some of the households are still facing the hardware or software limitations of online shopping. In fact, more than half of the households in the U.S. does not have PCs or Internet access at home. All these factors contribute to the slow adoption pattern of the electronic marketplaces. To improve this adoption rate, it is vital for us to study the adoption of the electronic marketplace more rigorously so as to identify and better understand the significant factors that affect the consumer adoption of the Internet based electronic commerce.

2. Trust In Electronic Commerce (EC-Trust)

Electronic Commerce refers to commercial activities carried out over the Internet communications networks. The introduction of the WWW provided a more user-friendly interface for the development of commercial application on the Internet, which is an open network connected by millions personal computers. In this open system environment, people can perform business transaction anytime, anywhere, without setting up standards and rules beforehand. Buyer and seller relationship is established at the time of transactions.

Similar to other remote shopping innovations, such as tele-shopping and catalog shopping, Internet shopping (or the electronic marketplaces) differs from traditional in-store shopping channels in terms of the quantity and quality of information it offers to customers. Intensive, two-way communications have to be provided in order to produce a successful transaction. Within the process of communications, the development of customer loyalty and trust becomes the most important / critical issue.

Combining the open system environment of the Internet and the intensive communications requirement of being a remote shopping innovation, the adoption of Internet shopping becomes more complex and difficult to expect. Technological advance (eg. Usefulness and ease of use) is no longer the only enabling factor for an individual to adopt the innovation. Being one of the alternatives of a number of retail shopping channels, customers will adopt only when they have developed a certain level of trust in the company and, especially, the shopping channel.

The concept of trust has been examined in various disciplines such as sociology, psychology and marketing. Psychologists claimed that trust is one of the most desired qualities in any close relationship (Rempel et. al., 1985) and marketing researchers agreed that trust brings significant benefits (e.g. the lowering of transaction costs) in business relationships (Shapiro et al., 1992). In fact, the concept of trust has been incorporated under the topic of customer relationship in the marketing field. Being a kind of relationship development, the development of trust is a dynamic process throughout a period of time. People do not trust or do not need to trust in the innovation at the beginning as they have not yet adopted and have little knowledge of it. They may have their first trail after they think that they have enough knowledge learned from other media and under an agreed reward and penalty system. Through repeated trails and experiencing a certain level of satisfaction in these trails, consumers increase their level of trust. The trust development life-cycle continues until either a firm loyalty formed or people drop out due to distrust.

3. Contributing Factors of EC-Trust

Fukuyama (1995) defined trust as the belief, or willingness to believe that one can rely on the fairness, goodness, strength, and ability of somebody (e.g. an Internet seller). Trust is particularly important in the electronic marketplace where the potential for opportunitistic behaviours is high due to the highly dynamic demongraphic profile of stakeholders, thus rendering it difficult to sanction such behaviours. Sanner (1997) identified three bases upon which trust can be built. The first base is personal, which is tied to the characteristics of the person to be trusted. The second base is on an enterprise level, where trsut is linked to an enterprise as an entity. The third base is institutional, where trust is based on well-established formal rules and mechanisms regulating the relationships of parties involved in a transaction. In a typical new electronic marketplace transaction where the parties involved do not know each other and there is no widely accepted institutionalised mechanism for regulating relationships, trust will be formed mainly on the enterprise level. Thus, the general reputation of the company (or the brand name) is clearly important in affecting initial trust formation. Typically, the trust development life-cycle (depicted above) in the electronic marketplaces starts with the potential customers using the Internet for information gathering. After they are satisfied in visiting the particular web sites and an attractive reward (e.g. free gift for purchasers) presents itself, they will attempt to perform their first transaction on it. Therefore, the quality and quantity of information delivered on the company web site becomes the initial point to the customer in the EC-trust development life cycle. If the information is not accurate or difficult to access, potential customers will be turned away. Hence information quality, Web-interface
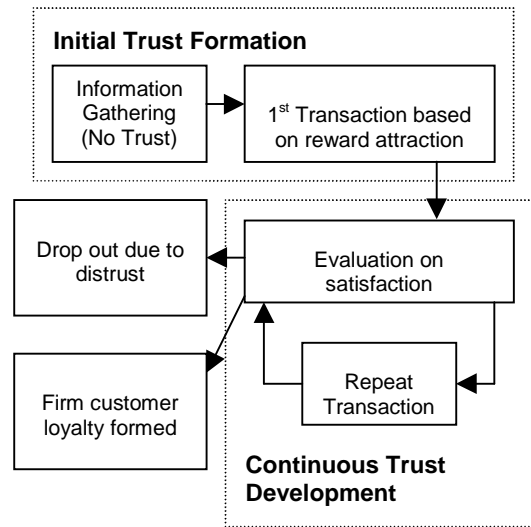
The EC-Trust Development Life-cycle

design, and company reputation are likely to have a bearing on initial trust formation.

3.1 Information Quality

As potential customers start visiting the company web site due to the need of gathering company or products information, the quality of information published on the Internet will directly affect the individual perception of the company. Constructs developed from the measurement of user information satisfaction provided a very good initial point to determine the quality of information (Ives B. et. al., 1983). Focusing on the information delivered on the Internet, we summerize the constructs into the following four attributes. They are *accuacy, correctness, timeliness,* and *usefulness*.

Accuacy means that the information is acurrate and compatiable to the user knowledge. Any misleading information will build up a high level of distrust to the user.

Correctness means that proper spelling and grammar should be used. Any typo will distract the people in reading the information.

Timeliness means that the information should be up-to-date and timely to the user request. As suggested by Janal (1997), date of last update should be provided in a web site.

Usefulness means that the business content of the information should be able to give visitors a brief understanding on the company and the product and / or services provided. Janal (1997) suggested that a useful business content should include the following items: name of company, logo, mission statement, headlines of the products and / or services, notice of special events, hot buys of the week, what's new, message from the

president, testimonials, employment notices, fun stuff and date of last update.

3.2 Web Interface Design

Similar to information quality, web interface design is also the initial point to EC-trust development. A more attractive and user-friendly web interface may make people feel pleasant and easier to trust in. Similar to interpersonal attraction, people usually put relatively higher level of trust to someone who has an attractive outlook at the initial stage. Any broken link or messy interface will directly lower the individual intention to surf the web site. For those small and medium sized (virtual) enterprises, potential customers know them simply when they visit the web sites. First impression will be formed easily.

A number of studies have been published under the topic of a good web site design (Gehrke and Turban, 1998). To consolidate the findings, a good or impressive web interface design should be *easy to navigate, quickly to download*, and *reliable*.

Easy to navigate is concerned with the organisation of web pages within a particular web site. The information content should be able to be found out easily. Usually, a site map is suggested for a commercial web site with a number of products provided. Instruction pages and internal search engine will also be useful to help visitors to search or locate required information.

Quickly to download is concerned with the page-loading speed and the web design sophistication. Potential customers will not wait too much time before they switch to another web site because the reason they make purchase on the Internet is to save time. Although the page-loading speed cannot be fully control by the company, however, sophisticated web design is not suggested.

Reliability is concerned with the consistence of the web site. Customers usually repeat their visits to the same web site by clicking on the bookmark. Also, they exchange information by referencing the URL. If the web site is not reliable and broken link is detected, the user satisfaction and trust level will be lowered.

3.3 Company Reputation

Similar to other remote shopping channels, company reputation remains to be one of the major elements in developing trust. For the company on the Internet, reputation is dependent on at least two sources: *existing brand name* and *seals of approval*.

Existing brand name helps company building up trust relationship with customers simply because customers know what they are and there is existing company asset visible to them. Usually, customers do not trust because they do not know whether the virtual company exists or not. If it is backed up by an existing brand name with a reasonable reputation, trust will be much more easily formed.

Seals of approval is defined as "information about other companies that specialise in assuring the safety of web sites" (Cheskin Research et al., 1999). Research found that if the company web site contains symbols, such as Visa and Microsoft, customers tend to feel that the security of the web site is assured, therby helping to develop trust.

4. Conclusions and Discussions

This paper explores the concept of EC-trust and three major antecedent factors are identified and analysed. These factors are: information quality, web interface design, and company reputation. A graphical framework is shown in below.
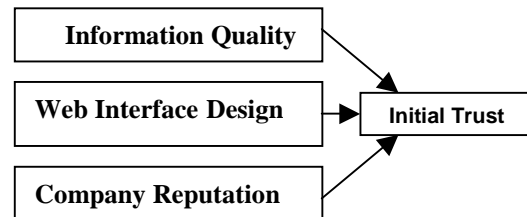
With the knowledge on the process of EC-trust development and the antecedent factors toward EC-trust formation, companies involved in consumer-based electronic commerce can impose their adoption / implementation plan strategically and a better customer-to-business relationship will be resulted.

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