

# Determining the Factors which Engender Customer Trust in Business-to-Consumer (B2C) Electronic Commerce

Fahim Akhter  
Zayed University,  
UAE  
fahim.akhter@zu.ac.ae

Dave Hobbs  
University of Bradford,  
UK  
d.hobbs@bradford.ac.uk

Zakaria Maamar  
Zayed University,  
UAE  
zakaria.maamar@zu.ac.ae

## Abstract

*This paper presents a study that focuses on the initial trust that is developed even before the occurrence of the first transaction between a consumer and an online company. The study reveals how initial trust is formed without any previous experience by interacting with the Web site interface. This study analyzes how important it is for the Web site to have a trusted interface to keep the customer interested in their business. The study tests the premise that “consumer initial trust is positively related to a trust inducing user interface” and investigates what other features are important in assessing whether or not purchase.*

## 1. Introduction & Motivation

Many industry experts believe that trust is a critical non-technological factor for Business-to-Consumer (B2C) electronic commerce (e-commerce) success [1]. Customers are realizing the importance and benefits of shopping online such as convenience, comparison, product research, larger selection, and lower prices. However, online trust may be influenced by many factors such as security, privacy, lack of live interactions, and conducting business with unknown parties. Lack of online trust is one of the major reasons for consumers not shopping from online vendors [1].

In this study, the experiment adopted a structured technique in the mode of a survey to quantify data. This study adopted the qualitative method of existential phenomenology [2]. The rationale of using existential phenomenology was to describe experiences as they are lived, and thus the interview was considered an appropriate tool for understanding of user’s experience [2]. The outcome of interview-derived information is accepted as valid because respondents’ own words are used for analyzing and expressing their experiences [3]. The experiment was tightly controlled and run on an individual basis in order to collect as much data as

possible through observation and interview. Fourteen senior undergraduates and four member of faculty who had experienced online shopping were interviewed using open-ended questions. Transcriptions of the recorded interviews were later used for analysis using the hermeneutic circle [2]. In this technique, the researcher tries to understand the respondent’s view and put aside his own preconceptions of a situation.

This paper is organized as follows. Section 2 discusses research methodology that demonstrates the value of qualitative technique for inquiry and analysis of data. The research objective and hypotheses are explained in Section 3. The results and summary of hypotheses testing follow in section 4, and section 5 provides the conclusions from the research.

## 2. Methodology

All of the respondents were college graduates and professionals, comfortable with computer use, and had some experience of on-line shopping. The study was conducted with 18 subjects of whom 12 were female and 6 were male with an average age of 30. Although this sample is clearly not representative of the population at large, the sample profile does correspond with currently identified typical on-line shoppers [4]. Thus, the experiences relayed by these respondents are considered a reasonable representation of a random sampling of regular Internet shoppers. A valid sample of known Internet shoppers ensures that the respondent’s reports are based on their familiarity with the use of the medium rather than being influenced by a one-time occurrence that may not be representative of on-line shopping. As a result, their reports are expected to have greater likelihood of generalization.

In order to test the methodology, face-to-face interviews were conducted to collect data. Subjects shared their online experience and future expectations about online shopping with the researchers. Participation was voluntary and no compensation was offered for participating in interview, which lasted 45-

50 minutes. Each interview began with open-ended questions in English posed in a way to encourage the respondent to develop dialogue resembling a conversation, providing the context and basis from which the respondent's descriptions of a shopping experience could flow freely and in detail.

### 3. Formulation of Hypotheses

*H1: Consumer initial trust is positively related to a trust inducing user interface.*

Consumer trust level receives positive or negative reinforcement depending on the look and structure of the Web site interface. Given the importance of these aspects of a Web interface in persuading consumers to remain with the particular site, it is surprising that little research has focused on effective interface design features. Empirical studies are therefore needed to assess interface features that contribute to the formation of initial trust. Most of the theoretical research to date has been on how trust may be engendered in consumers' actions, rather than on the importance of the interface features that might lead to the fostering of trust [1, 2].

The study focuses on the initial trust that is developed even before the consumer conducts a first transaction with a company. This initial level of trust may change over time and with repeated interactions, depending on the extent to which such interactions take place. Therefore, the online vendor must develop trust through their Web site interface and demonstrate that they are trustworthy. Another reason for the importance of initial trust is the possibility of low switching cost for new customers due to the large alternatives of companies and products; it may be much easier for consumers to switch to a different vendor or product after their first experience. It is very important for the Web site to have a trusted interface in order to keep the new customer interested in their business. Thus, it is believed that a trusted interface is directly proportional to consumer initial trust.

*H2: The presence of security indicators in an online medium increases the consumer's willingness to conduct an electronic transaction as compared to design features (convenience, ease of use, navigation).*

This study therefore investigated the elements that influence online trust and provides a framework that allows identification of the issues of trust in online shopping. Consumers perceive security threats from different perspectives, for example whether the Web

server is owned and operated by a legitimate company, how one can verify that the Web pages do not contain malicious code, or how one can ensure that the Web server will not distribute the information to a third party. Similarly it is important to be able to confirm that the information sent back and forth between the server and the user's browser has not been altered. These concerns illustrate the types of security issue that can arise in e-commerce transactions. The importance of security implementation is reflected in the policies and actions of the company. Consumers analyze the security policies of vendors mainly through the company's statements on their homepage. These statements normally describe the terms and conditions of the vendor's security policies. For example, through introduction of security features such as the presence of a secure socket layer, encryption, password and third party security seals. Some companies explain these security policies to alleviate consumers concern while some make these issues hard to find and difficult to understand.

The effectiveness of communicating a commitment to consumers by the use of the latest technology such as third party verification programs, encryption methods, and data protection is important for online companies to appreciate. Previous studies [5] have found no negative correlation between the presence of security statements and the perceived risk of a site. Research also revealed that security statements of Web based companies do show a positive correlation with an increased likelihood that consumers' will purchase from those companies. However, it is not clear under what conditions the consumer considers security features more important than 'pleasure' features (such as convenience, ease of use, and ease of navigation) when assessing an whether to purchase. No studies to date have yet tested this empirically. Security features are complex to understand by consumers but, providing they are properly handled, consumers will confidently conduct their purchase online. Thus, the second hypothesis suggests that the security indicators are the leading factors in the customer's decision to purchase online when compared to design features.

### 4. Findings of the Research

In this qualitative approach, researchers were able to understand respondents' detailed accounts of on-line shopping experiences in a way that would not been revealed in quantitative research. In the following section, the themes that surfaced from the 18 interviews, which include trust inducing user interface and presence of security indicators in an online

medium were analyzed. Respondents whose experiences are described are referred to by codes to preserve anonymity.

## H1. Initial Trust and User Interface

IK explained that, “if the Web site interface does not give the impression that the vendor is trustworthy, I move on to another Web site. The vendors should adopt friendly user interfaces to enhance their apparent trustworthiness to initial customers.” Online vendors should therefore adopt user-friendly measures in their interfaces to build and enhance vendor-consumer relationships, which can increase consumers’ trust. Online vendors should find ways to convey their trustworthiness to first time consumers in order to have a long-term relationship. According to MA, “the customers pay attention to the clipart and color layout which affects the trustworthiness of the site. The appearance of the interface should be fresh, and its main color should be a moderate light color.” FS indicates, “I feel comfortable with a site which uses photographs instead of cartoons. However, overuse of clipart will not help, but may damage the trustworthiness of the site.” She thinks that a good product supplemented by a picture reflects the credibility of the online vendor. She recommends that interfaces should have images of a higher level of clarity [photo-realistic images] to attract instant customer attention rather than lower visual fidelity images. On the same subject, MA said that he prefers to see a product in motion rather than in a static mode. He believes that interface design, which uses motion as the sales pitch, keeps the customer engaged at the Web site and may lead to a purchase decision. He explained how crucial is the size of the image in remembering the product; “I remember products for a longer period of time when they are represented by larger images as compared to smaller images.”

As for simplicity, IK thinks that customers prefer a clear design of a Web site because simplicity reduces the wastage of time, deception and frustration. He thinks that the goal of a trust inducing interface is to streamline the shopping experience and eliminate shoppers’ confusion. The company’s home page is not just a virtual catalog alone but also actually a multimedia tool that allows interaction between vendor and customers.

The results show that the effects of a trust-reflecting interface may be stronger since new customers have no cues from previous experience to analyze the company. Therefore, they tend to compare the interface of the new company with what they have experienced

previously with other companies. It is believed from the responses that new customers who perceive a company to have a trusted interface will be more likely to trust their product and services after their first visit to its Web site. In fact, 85 percent of respondents were found to agree that a trust-inducing interface is significantly related to encouraging a consumer’s initial trust, supporting H1. Similarly, 68 percent respondents believed that a trusted interface of the company could also be seen as proof of the company’s ability to provide high quality products and services. In consequence, they tend to believe that such a company must also have the resources and capabilities to offer better products and services. In contrast, based on the respondent’s experiences, customers who visit an online company with a badly laid out interface will be likely to expect that the company will be unable to provide quality products and services to them, which in turn decreases their trust in that company.

## H2. Presence of Security in an Online Medium

AG’s response recognized the importance that companies must be able to give assurance that the customer information will pass through their network uncorrupted and unaltered. In addition, customers should be able to verify the identity of the parties they are doing business with. However, the problem still remains about whether they and their products and their services can be trusted. She further added that Web design issues such as convenience, personalization capabilities, and ease of use are more important features than displaying securities, which were unintelligible to her. MA reported, “I go to the Internet to purchase because of the convenience of buying online, not for experiencing a secure system.” Other respondents such as VC primarily purchased items from the Internet because of ease of use and ease of navigation factors rather than security and privacy features. As AS explained, “she perceives more trustworthiness from uamall.com even though overall security and privacy features may be weak, I would not be concerned by not seeing lots of seals and logos on the site as long as I can navigate smoothly and easily find what I am looking.”

In a similar vein, FH expressed displeasure with one vendor from whom she had made an online purchase even though the site claimed to be highly secure: she expected the vendor to be easily contactable and easy to correspond with. Another respondent, KD, reported, “the site was difficult to navigate and contact despite displaying security seals and logos.” Most non-technical users have no knowledge about access

control, transparency of identity, surveillance, seals, trust mark, third part verification, secure socket layers and encryption. Non-technical online shoppers appear to prefer convenience, ease of use, and navigation features to security and privacy. PD reported that, "I like a clean, simple web site; I do not understand security logos and languages." He explained that he would not purchase from a site if it were "too complicated to understand and where it was necessary to fill so many forms for security perspective. I want minimum clicks to finalize purchase."

Researchers noticed that consumer's perception of security while online depends on the simplicity of the site and on the availability of support from the vendor. PD reported, "I feel secure about giving my credit card number because I can follow the provided instruction easily. I trust it because everything is easy to understand. There is nothing hidden or obscure." In contrast, responses from SK and LJ who have sound knowledge of e-commerce infrastructure prefer more security presence to social or personal perspectives. They believe that to achieve the highest degree of trust could only be possible in the form of security. They prefer to shop with companies who present certifications from third parties, Seals of approval from professional groups.

Online companies depend primarily on their electronic interface to attract potential customers and to communicate with them. Therefore, applying trust-inducing features with the supplement of security is the most effective method of enhancing online trust. Customers who understand and follow the layout of the interface are more likely to perceive the site as secure and useful. Customers could have a doubt about the vendor's product and service if complex security features control the Web site and presented with clutter, unfriendly, and unprofessional user interface.

The non-technical responses (from 70% of the population of respondents) revealed that security features are less important than convenience, ease of use, and navigation attributes to their intention to purchase. Technical respondents (from 30% of the population of respondents) do understand and pay attention to security seals, logs and third party trust marks during online shopping process. People tend to rate as important what they understand. If respondents have lack of familiarity with or understanding of security features as compared to social and personal features, this lack of understanding might influence their choice. It is probable that a user's technical background and education level may influence the perception of a trusted Web site in addition to features

related to security and design layout. Hence, this hypothesis warrants further investigation to determine underlying relationships between social versus technical subjects and their perception of credibility of online transactions.

## 5. Summary

This study has found strong support for the first hypothesis that consumer initial trust is directly related to a company's Web site interface. When customers have no prior business experience with the company they depend on antecedents to judge the company's trustworthiness. Consumers perceive that if the company's interface makes them believe that the company is reliable and trustworthy, it can boost their trust in it despite no prior shopping experience with the company. The second hypothesis analyzed the relationship between security indicators in an online medium in comparison with social features (convenience, ease of use, navigation). The analysis did not support the hypothesis due to the subjects' technical and social background, as more technically inclined subject generally prefer security features over design, whereas non-technical subjects tend to examine the overall design features when deciding whether to pursue a purchase. While security features appear to be important to consumers, the responses suggest that the social and personal features may actually drive conclusions about the buying decision.

## 6. References

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