

Trust in E-Business Based on Website Quality, Brand Name, and Security and Privacy

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Abstract - *The second half of the twentieth century witnessed a revolution in Information Technology. The Internet has become an effective and essential means of conducting numerous businesses' transactions because of its speed, flexibility and reliability. As a result, it has transformed the nature of business from traditional to open space, making companies global just by clicking. E-Business is an approach to conducting buying and selling as well as providing services and working in partnership. Trust is a crucial concept used by everybody in social and business environments depending on different levels and situations; it is the key expectation of customers from sellers during online interaction. Trust building in online communities is an effective requirement for attracting customers and increasing online sales. Moreover, trust has a great effect on the relationship between customers and sellers; it plays an important role in the success or failure of online industries.*

Key Words: e-Business, website security, privacy, trust, brand name, website quality, virtual store, website experience, e-Commerce.

1.INTRODUCTION

The second half of the twentieth century witnessed a revolution in Information Technology. The Internet has become an effective and essential means of conducting numerous businesses' transactions because of its speed, flexibility and reliability. As a result, it has transformed the nature of business from traditional to open space, making companies global just by clicking [1]. E-Business is an approach to conducting buying and selling as well as providing services and working in partnership. According to Baltzan and Phillips [2], all E-Business activities happen within two types of relationships: first, the process of selling, buying and providing services and products between businesses (Business-to-Business); second, the process of buying, selling and providing services and products to consumers (Business-to-Consumer). However, all these activities took place in a virtual environment using a website as a physical store. Online shopping has offered an alternative environment to traditional (brick-and-mortar) shopping with electronically transactions. Many organizations have launched their businesses through the Internet and this has resulted in a variety of extensive sales of products and services in the online

business. Online business grows at an amazing rate; therefore, companies that carry out Internet-based business have great opportunities to succeed [3]. According to the US Census Bureau, 147.6 billion dollars was spent in online retailing in 2008.

According to Mayer, Davis & Schoorman, trust may be defined as "... the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (as cited in [4] p.346). This definition provides three characteristics of trust. First, a trust relationship based on mutual benefits between two parties: the consumer and the vendor. Second, trust relationship entails risk and insecurity in that no guaranteed action will exist. Third, the consumer has belief and confidence in the vendor's benevolence [5]. Trust is a crucial concept used by everybody in social and business environments depending on different levels and situations; it is the key expectation of customers from sellers during online interaction [6]. Some people have different measures to evaluate the trust of a person or an organization [7]. Some researchers have shown three primary dimensions for trust:

"... ability, benevolence, and integrity. Ability refers to skills or competencies that enable an individual to have influence in a certain area. Benevolence is the expectation that others will have a positive orientation or a desire to do good to the trustee. Integrity is the expectation that another will act in accordance with socially accepted standards of honesty or a set of principles that the trustor accepts, such as not telling a lie and providing reasonably verified information". ([8], p.3)

However, Mc Knight et al. claimed that trust building in online communities is an effective requirement for attracting customers and increasing online sales (as cited in [9]). Moreover, trust has a great effect on the relationship between customers and sellers; it plays an important role in the success or failure of online industries [10]. Additionally, lack of trust is one of the greatest obstacles that prevents establishing business relationships between buyers and sellers who are unknown to each other [11]. Promoting customer's trust by providing relevant content and upgrading customers' service will strengthen companies' long-term success [12].

2. METHOD OF INQUIRY

The study was non-experimental and ex post facto in nature. A survey questionnaire was put up to collect information via the Internet using a social networking website, such as Facebook. The participants were global Internet users within Facebook groups.

2.1. Measurement and Instrumentation

A web questionnaire that employed in this study was designed for the participants to provide answers to questions concerning the factors that affected consumers' trust in online shopping. The survey gathered data on the independent variables of website quality and security, brand name and image of an online organization, as well as privacy and security of consumers during online transactions that affected the dependent variable of consumers' trust in online shopping. Website factors included website quality, website technological policies, and customization and personalization. Brand name factors covered familiarity and brand equity, experience, and vendor trustworthiness. Privacy and security factors comprised information security, acceptance of virtual store, and regulations and policies.

The questionnaire was designed in three main sections. The first section gathered demographic information about the participants that helped in categorizing the respondents into meaningful groups for statistical analysis. The second section gathered information about the participants' experience with the Internet and online shopping, the kind of products, and the approximate amount that they had spent for the last six months. Section three was divided into eight parts, which included different questions about the participants' opinions and experience with online shopping concerning website quality, brand name, and privacy, as well as their beliefs about online shopping.

2.2. Data Collection Procedures

As it was a web-based survey, the questionnaire was sent through invitations to Internet users, encompassed in various groups within the Facebook network, with the survey website address. The selected six groups were: (1) Fulbright, a non-profit group; (2) Upsilon Pi Epsilon, an academic group; (3) ACM, a non-profit group; (4) Fulbrighters IRAQ, an academic group; (5) BookOlogical, a business group; and (6) International Fulbright Academic Orientation 2008, an academic group. The web survey was available for about six weeks before the data were collected. To improve the rate of responses, a follow-up message was sent to participants after two weeks of distributing the web questionnaire. There would be no personal information collected to give participants the comfort of not being traceable in future.

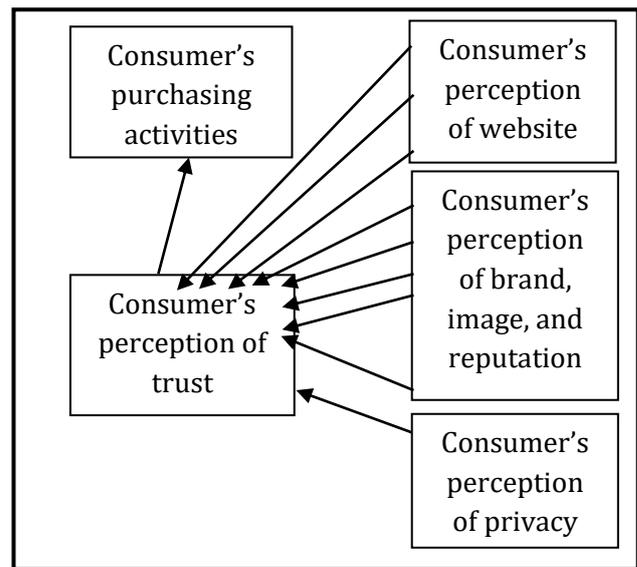


Figure - 1: Research Conceptual Model

3. ANALYSIS

3.1. Preliminary Analysis

The preliminary statistical procedures were performed in two stages. First, the descriptive statistics and the frequency data were computed from the sample data. Second, the reliability of the measure used to collect the data was computed and examined.

Invitations were posted on five groups' wall on Facebook with the link to the online questionnaire. These groups were: (1) Upsilon Pi Epsilon with 162 members; (2) ACM with 2809 members; (3) Fulbrighters IRAQI with 52 members; (4) BookOlogical with 23 members; and (5) International Fulbright Academic Orientation 2008 with 46 members. The size of the target population included in these five groups was 3092 at the time of conducting this study and the purposive sample was 341. Out of 99 responses, 3 responses were ignored due to incompleteness of the survey. The response rate was 28% based on the 96 eligible responses received from the participants.

3.2. Reliability

The reliability of the instrument developed for this study was assessed. The Chronbach's Coefficient alpha was computed to test the continuous data from the survey instrument for internal consistency. The Coefficient alpha for the continuous variables is .811 which means that the data showed relatively moderate internal consistency.

3.3. Hypotheses Analysis

3.3.1. Research Question 1

The first question posed by this study was, does protecting consumers' privacy positively affect the consumers' trust in online shopping? The hypothesis was that protecting consumers' privacy positively affects the consumers' trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is no relationship between protecting consumers' privacy ($P > 0.05$) and consumers' trust in online shopping. Therefore, the hypothesis that protecting consumers' privacy positively affects the consumers' trust in online shopping is not supported.

3.3.2. Research Question 2

The second question posed by this study was, does consumers' belief in the vendor positively affect the consumers' trust in the virtual community? The hypothesis was that consumers' belief in the vendor positively affects the consumers' trust in the virtual community. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is a relationship between consumers' belief in online vendor ($P = .006$, $R^2 = .126$) and the consumers' trust in the virtual community and online shopping. The very low R^2 indicates that about 13 percent of consumer's trust can be affected by consumer's belief in the vendor. Therefore, the hypothesis that consumers' belief in the vendor positively affects the consumers' trust in the virtual community is supported.

3.3.3. Research Question 3

The third question posed in this study was, does issuing security and privacy regulations for online business increase consumers' trust in online shopping? The hypothesis was that issuing security and privacy regulations for online business increases consumers' trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is a relationship between issuing security and privacy regulations ($P = .028$, $R^2 = .093$) and the consumers' trust in online shopping. The very low R^2 indicates that consumer's trust in online shopping is increased by 9 percent of issuing security and privacy regulations for online business. Therefore, the hypothesis that issuing security and privacy regulations

for online business increases consumers' trust in online shopping is supported.

3.3.4. Research Question 4

The fourth question posed in the study was, does exposure to a brand of which a consumer has high brand awareness increase the consumer's trust in online shopping? The hypothesis was that exposure to a brand of which a consumer has high brand awareness increases the consumer's trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is no relationship between exposure to a brand of which a consumer has high awareness ($P > 0.05$) and the consumer's trust in online shopping. Therefore, the hypothesis that exposure to a brand of which a consumer has high brand awareness increases the consumer's trust in online shopping is not supported.

3.3.5. Research Question 5

The fifth question posed in the study was, is consumers' web experience positively related to the degree of perceived trust in online shopping? The hypothesis was that consumers' web experience is positively related to the degree of perceived trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is a relationship between the consumers' web experience ($P = .020$, $R^2 = .101$) and the degree of perceived trust in online shopping. The very low R^2 indicates that 10 percent of the degree of perceived trust in online shopping is related to the consumer's web experience. Therefore, the hypothesis that consumers' web experience is positively related to the degree of perceived trust in online shopping is supported.

3.3.6. Research Question 6

The sixth question posed in the study was, does easy interaction with vendors increase consumers' trust in online shopping? The hypothesis was that easy interaction with vendors increases consumers' trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is a relationship between easy interaction with vendors ($P = .039$, $R^2 = .086$) and consumers' trust in online shopping. The very low R^2 indicates that consumer's trust in online shopping is increased by about 9 percent of easy interaction with vendors. Therefore, the hypothesis that easy interaction

with vendors increases consumers' trust in online shopping is supported.

3.3.7. Research Question 7

The seventh question posed in the study was, is perceived website quality positively related to consumers' trust in online shopping? The hypothesis was that perceived website quality is positively related to consumers' trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is no relationship between perceived website quality ($P > 0.05$) and consumers' trust in online shopping. Therefore, the hypothesis that perceived website quality is positively related to consumers' trust in online shopping is not supported.

3.3.8. Research Question 8

The eighth question posed in the study was, does a website of unknown brand displaying an associated third party's trust certification elicit consumers' initial trust in online shopping? The hypothesis was that a website of unknown brand displaying an associated third party's trust certification elicits consumers' initial trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is a relationship between a website of unknown brand displaying an associated third party trust certificate ($P = .001$, $R^2 = .104$) and consumers' initial trust in online shopping. The very low R^2 indicates that consumer's initial trust in online shopping is elicited by 10 percent of unknown brand website displaying an associated third party's trust certification. Therefore, the hypothesis that a website of unknown brand displaying an associated third party's trust certification elicits consumers' initial trust in online shopping is supported.

3.3.9. Research Question 9

The ninth question posed in the study was, does customizing information and products for consumers affect the consumers' trust in online shopping? The hypothesis was that customizing information and products for consumers affects the consumers' trust in online shopping. The hypothesis was tested by using linear regression at the 0.05 level of significance.

Results. The results indicate that there is no relationship between customizing information and products for consumers ($P > 0.05$) and consumers' trust in online

shopping. Therefore, the hypothesis that customizing information and products for consumers affects the consumers' trust in online shopping is not supported

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

4.1.1. Protecting Consumer Privacy

The hypothesis which stated that protecting consumers' privacy positively affects the consumers' trust in online shopping was not supported. Therefore, it can be concluded that protecting the consumer's privacy and security such as personal and financial information, the consumer's history of searching and purchasing goods and other websites that have been visited by the consumer does not affect the consumer's trust in online shopping. However, the relatively high mean scores for each of the consumer's privacy factors (personal information use 3.58, personal information hacking 3.85, personal information providing 4.13) indicates that online consumers agreed that the consumer's privacy factors do influence the consumer's trust in online shopping.

The findings conclude that no relationship is found between protecting the consumers' privacy and the consumers' trust in online shopping. However, protecting the consumers' privacy may increase the consumers' awareness of the importance of protecting their personal and financial information

4.1.2. Acceptance of Virtual Store

The hypothesis which stated that consumer's belief in the vendor positively affects the consumer's trust in the virtual community was supported. It can be concluded that the consumer's belief that an accurately organized, easy to navigate, and successful virtual environment is a favorable for purchasing can affect the consumer's trust in the virtual community. The findings indicate that there is a relationship between consumers' belief in online vendor and the consumers' trust in the virtual community and online shopping.

4.1.3. Issuing Security and Privacy Regulations

The hypothesis which stated that issuing security and privacy regulations for online business increases consumer's trust in online shopping was supported. It can be concluded that enforcing laws and regulations that protect consumer's privacy and security can increase consumer's trust in online shopping. The findings indicate that there is a relationship between issuing security and privacy regulations for online businesses and the consumers' trust in online shopping.

4.1.4. Familiarity to a Brand

The hypothesis which stated that exposure to a brand of which a consumer has high awareness increases the consumer's trust in online shopping was not supported. Therefore, it can be concluded that exposure to a brand of which the consumer has high awareness does not increase the consumer's trust in online shopping. The findings conclude that no relationship is found between exposure to a brand of which the consumer has a high awareness and the consumers' trust in online shopping.

4.1.5. Web Experience

The hypothesis which stated that consumers' web experience is positively related to the degree of perceived trust in online shopping was supported. It can be concluded that an impressive experience with a commercial website can be positively related to the degree of perceived trust in online shopping. The findings indicate that there is a relationship between the consumer's web experience and the degree of perceived trust in online shopping.

4.1.6. Easy Interaction with Vendors

The hypothesis which stated that easy interaction with vendors increases consumers' trust in online shopping was supported. It can be concluded that an easy interaction with vendors would strengthen the consumer's willingness to depend on that vendor in doing business which results in increasing the consumer trust in online shopping. The findings indicate that there is a relationship between easy interaction with vendors and the degree of perceived trust in online shopping.

4.1.7. Website Quality

The hypothesis which stated that perceived website quality is positively related to consumer's trust in online shopping was not supported. Therefore, it can be concluded that perceived website quality such as professional design, appearance, and functionality is not related to the consumer's trust in online shopping. The findings conclude that no relationship is found between perceived website quality and consumers' trust in online shopping.

4.1.8. Website Security

The hypothesis which stated that a website of unknown brand displaying an associated third party's trust certification elicits consumer's initial trust in online shopping was supported. It can be concluded that the presence of a third party certificate technology seal or icon

does elicit consumer trust in online shopping and affect his anticipation of positive behavior from the vendor. The findings indicate that there is a relationship between a website of unknown brand displaying an associated third party's trust certification and consumer's initial trust in online shopping.

4.1.9. Information and Products Customization

The hypothesis which stated that customizing information and products for consumer affects the consumer's trust in online shopping was not supported. Therefore, it can be concluded that customizing and personalizing information and products for consumers does not affect the consumer's trust in online shopping. The findings conclude that no relationship is found between customizing information and products and consumers' trust in online shopping.

4.2. Recommendations

Different recommendations emerge for future research on the same topic. First, the lack of responses (96) to the survey of this study may not have provided the necessary data to represent the target population accurately. Second, the sample frame that was used in this study (purposive sampling) does not serve the study to gain large sample size. In other words, the purposive sampling targets particular groups of people which in result limits the number of participants in the survey. Therefore, future studies should consider using another sampling frame such as snow ball sampling to get as many responses as possible. Third, a shorter survey could possibly gain more responses than a long one. The survey of three pages and 35 questions was a little long for a convenience survey. A more focused survey would attempt to shorten the length of the survey with more and few focused questions.

Fourth, future researches may consider focusing on other online activities such as serving customers and collaborating with other online business partners to measure out the customers' point of view towards such activities. Finally, future researches should consider other variables and factors that may affect the consumers' purchase decision and activities. Other factors such as price and availability of search tools are among many factors that may change the consumers' decision of conducting an online business.

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