Trust in E-Business Performance

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Abstract

This Research has done to investigating the effect of Trust Behaviour on Business to consumer (B2C) in E-Business and Electronic Banking. This paper presents a model to conduct a theoretical study in electronic banking in order to improve Electronic Banking performance. The Trust plays a fundamental role in determining the performance in electronic banking. In this research, a model has been developed that includes the factors of Trust and study for depicting how a consumer’s trust towards an e-banking service provider develops, enhances or loses? This theoretical model will show that how we have developed in order to better understanding of trust development in an electronic banking context. It is hoped that this paper can provide an academic source for both consumers and managers due to investigate the relationship between Trust Beliefs and Loyalty in a systematic manner to increase customer’s Loyalty in electronic Banking.

Keywords: Quality of Information, Website quality, Security, Privacy, Quality of doing e-transactions, Perceived Risk, Trust, Loyalty

Introduction:

Customer loyalty is considered important because of its positive effect on long term profitability. According to Reichheld and colleagues (2000), the high costs of acquiring new e-customers can lead to unprofitable customer relationships for up to three years. As a consequence, it is crucial for online companies to create a loyal customer base. However, few companies seem to succeed in creating e-loyalty, and little is known about the mechanisms involved in generating customer loyalty on the internet.
In traditional service research, as well as in emerging research on e-services, several antecedents of customer loyalty have been proposed. Among them, trust figures prominently and has been brought forward as a precondition for patronage behavior and the development of long-term customer relationships. The role of trust could be even more important in an e-commerce setting, since e-customers do not deal directly with the company, or its staff. Various relationships have been proposed between trust and loyalty in an online context. In one study, for example, Corbitt et al. (2003) suggest a strong positive effect of trust on loyalty to online firms (Ribbink et al., 2004).

In this paper, in addition to factors that have been mentioned in literature to have some influences on customers’ trust, we will investigate the relationships between trust and customers’ loyalty in an e-service context with a special focus on promise fulfillment concept as an important factor in shaping creating and sustaining trust in an e-service provider. In one study by Papadopoulou and colleagues (2001), they examine the relationship between fulfilling a promise made by a company and customers trust and conclude that promise fulfillment can have a considerable effect on customers’ trust towards the company.

An e-service is defined as “the provision of service over electronic networks such as the internet” and includes “the service product, service environment, and service delivery that comprise any business model, whether it belongs to a goods manufacturer or a pure service provider” (Rust and Kannan, 2002).

**Operation Definitions**

**Quality of Information:**
Relevance, timeliness, and accuracy of provided information (Deelman and Loos, 2002).

**Website quality:**
Use of advanced website technology design, seal of trusted third party certification, links to reputable sites/links from reputable sites (Wolfinbarger and Gilly, 2003; Zeithaml et al, 2000; Durkan & Durkin, 2003, Gillen 2003; Mc Knight et al, 2002.)

**Security:**
Customers’ protection against unauthorized access to their financial information (Kalakota and Whinston, 1997; Jones et al., 2000)

**Privacy:**
Customers’ protection against misusing their personal information without their informed consent (Grandison and Salmon, 2000; Yousafzai et al., 2003)

**Quality of doing e-transactions:**
Ease of navigation, ease of ordering, and responsiveness of the e-transaction processes (Ribbink et al., 2004)

**Perceived Risk:**
Customer’s perception of uncertainty about product/service quality, vulnerability to not receiving shipment/service, and occurring possible problems derived from their previous experiences (familiarity) and/or technical/educational knowledge (Chopra and Wallace, 2003; Winch and Joyce, 2006)

Trustworthiness:
Competence, benevolence, integrity, and predictability of the e-vendors actions and processes (Mayer et al., 1995; Mc Knight and Chervany, 2002)

Loyalty:
Preference of the website, mostly visiting the website, repurchase/reorder from the website (Flavia’n and Guinali’u, 2004)

The Research Problem
The last decade of the 20th century witnessed profound technological changes among which is the advent of electronic commerce, or the exchange of products and services and payments via telecommunication systems. The monetary value of products and services exchanged using electronic commerce is expected to reach US $7 trillion by 2004. Most industries have been influenced, in one way or another, by this promising new technology. However, nowhere has the presence of electronic commerce been more apparent than in the banking and financial services industry (eMarketer, 2000; Irish Times, 1999). Using telecommunication systems and technologies, a bank can reach out to customers and provide them with not only general information about its services but also the opportunity of performing interactive retail banking transactions. However, customers have not adopted B2C e-commerce and e-banking in the same degree, primarily because of risk concerns and trust-related issues (Yousafzai et al., 2003).

The focus on electronic financial services emanates from the fact that the appeal of such services appears to be incontestable. Retail banks and financial service providers’ use of technology in selling to and serving customers is growing at a fast pace. These businesses have invested in interactive information systems with the expectation that it will contribute to their overall profitability and market share. Likewise, customers are dealing with products and services that are becoming increasingly sophisticated from a technological stand point. However, there will be little return from these investments if customers fail to accept or fully utilize its capabilities (Yousafzai et al., 2003).

Although the Internet is revolutionizing the way companies provide their products and services to their customers, marketing studies that investigate consumer acceptance of this technology are limited. There has been a little scholarly research pertaining to financial services and banking customers’ readiness and barriers to use such systems. This research void is especially critical because the increasing evidence of customers having to serve themselves through technology-based systems is germane not only to banks and financial service providers but also to other businesses operating in the service sector. Thus, an understanding of different dimensions of customers’ acceptance and use of new technology and its impact on their performance are prerequisites for obtaining a return from the investments made by the
companies. This research seeks to fill this identified gap in the marketing and financial services literature by looking into the element of trust in electronic banking (Yousafzai et al., 2003).

Customers’ trust on electronic banking transactions as compared with face to face transactions have some unique dimensions, such as the extensive use of technology for transactions, the distant and impersonal nature of the online environment, and the implicit uncertainty of using an open technological infrastructure for transactions. The spatial and temporal separation of the bank branch and the customer, and that of the customer and the financial advisor increases fears of opportunism arising from product and identity uncertainty. Customers’ trust in an Internet environment thus, is very important as there is little guarantee that the online vendor will refrain from undesirables, unethical, opportunistic behavior, such as unfair pricing, presenting inaccurate information, distributing personal data and purchase activity without prior permission. To further complicate the situation there is a concern about the reliability of the underlying Internet and related infrastructure that banks and financial service providers employ to interface with customer. Overall, these unique differences reduce customer perceptions of control over their online transactions, increase their apprehension about adopting e-banking, and provide unique challenges to banks and financial service providers to find ways in which to initiate and foster electronic relationships with their customers (Yousafzai et al., 2003).

It is important to understand the factors that might influence consumers’ intentions to engage in banking and financial services provided over the Internet. An important factor that is recognized as a key for the continued growth of electronic banking is the concept of trust (Yousafzai et al., 2003). The preceding discussion is the motivation behind author’s interest in the following research problem: The role of trust in establishing and maintaining customers and financial service provider relationships in electronic banking. Based on an initial literature review the following research questions have been formulated:

**Research Questions**

1. The importance of trust and the extent to which trust affects consumer’s intention to engage in electronic banking and maintain their relationship.
2. What trust-building factors establish consumers’ trust in electronic banking?
3. What are the drivers and outcomes of consumers trust on electronic banking?
4. Proposing a model of e-trust for electronic banking.

**Research objectives:**

The research goal is to identify a set of independent dimensions of trust in B2C e-commerce, which in aggregation impact upon the decision-making processes of customers. Equally important are how these dimensions interrelate and what processes either weaken or strengthen customer trust. From an academic point of view, it is important to identify the most promising approaches to developing trust in the specific setting of electronic banking. Congruent with this, the aim of this research is to explore the nature, drivers and consequences of customer’s trust on the banking and financial services provided over the Internet.
Such understanding of customers’ trust will provide the practitioners, researchers, and managers with a set of manageable, strategic levers to build such trust, which will promote greater acceptance of electronic banking and financial services.

In this study, we have presented a model for the formation of trust in e-commerce and will modify it along the research process. Synthesizing and interrelating concepts from trust, relationship marketing, and loyalty the model has been conceptualized in the context of an e-service scape.

The theoretical framework to be employed was drawn from relationship marketing (Morgan and Hunt (1994), Papadopoulos et al. (2001)), loyalty, and trust literature (Flavia’n and Guinah’u (2006), Ribbink et al., (2004)). Relationship marketing postulates that buyer-seller relationships are best understood as an ongoing relational exchange process, not a short, discrete transaction with a distinct beginning and ending (Morgan and Hunt 1994). In light of this perspective, trust fulfils an important role (Kuttainen, 2005).

**Research on Trust in e-business**

The literature on trust crosses a wide variety of disciplines. While customer trust has been studied extensively by marketing and management researchers and psychologists, it has also become relevant to researchers and marketers who study web-based commerce. The open nature of the Internet as a transaction infrastructure and its global constitution has made trust a crucial element of e-commerce. Research on the concept of trust in the online environment, starting from the late 1990s has generated a compelling list of attributes that endanger consumers trust on e-commerce. The commonly cited study by Hoffman et al. (1999) focuses on security and privacy as the key drivers of online trust. They argue that environmental control or consumer’s ability to control the actions of a web vendor directly affects consumer perception of online security and privacy. They also discuss the effectiveness of third-party trust-certification bodies (e.g. TRUSTe or Verisign) and the public key encryption infrastructure for ensuring transactional security (including privacy protection) as central success factors for building consumer trust in Internet.

Some authors have studied trust in the light of time and experience. For example, Jarvenpaa et al. (2000) distinguished trust in the early and mature stages of e-commerce. They suggested that in the early stages, online trust might have more to do with the performance of the technology, whereas in the later stages, trust may be dependent more on differences in firms’ implementation of Internet technology. In the same line, Marcella (1999) discusses the deepening of online trust from building trust to confirming and maintaining trust over time. The quantity, quality and timeliness of information can also enhance trust.

Lee and Turban (2001) suggested that consumer trust in Internet shopping is driven by trustworthiness of Internet merchant, trustworthiness of Internet shopping medium and contextual factors and the individual trust propensity. To enhance consumer perceptions of the marketer’s trustworthiness, Cheskin (1999) identified six features of a website which included safeguard assurances, marketers’ reputation, ease of navigation, robust order fulfilment, the professionalism of the website, and the use of state-of-the-art web page design technology.
Research on trust in e-banking

The particular case of electronic banking that lacks the physical presence of bank branch and a physical interaction between the bank personnel and the customer, render a unique environment, in which trust is of paramount importance. Aladwani (2001) identified customers’ trust as an important future challenge of online banking. Retail banks can build mutually valuable relationships with customers through a trust-based collaboration process. However, the way in which trust may be gained and the impact it has on online banking outcomes are not yet well understood. Trust in electronic banking is a new and emerging area of interest in the field of marketing of financial services research. Extant literature on trust related to online banking is scarce and focused on more general issues of e-commerce (Yousafzai et al., 2003). Among them, we can refer to a study conducted by Yousafzai and colleagues (2003) in which, they extend an area of information systems research into a marketing of financial services context by looking into the element of trust and risk in e-banking. They propose a conceptual model of trust in e-banking with two main antecedents that influence customer’s trust: perceived security and perceived privacy. In this research, the antecedent variables are moderated by the perceived trustworthiness attributes of the bank, which includes benevolence, integrity and competence. Trust is being defined as a function of the degree of risk involved in the e-banking transaction, and the outcome of trust is proposed to be reduced perceived risk, leading to positive intentions towards adoption of e-banking.

In another study by Mukherjee and Nath (2003), they hypothesize shared value, communication and opportunistic behavior as antecedents of trust. They propose and empirically test five hypotheses and develop a structural equation model. In this research, they establish these hypotheses and conclude that higher perceived trust enhance significantly customers’ commitment in online banking. An important contribution in the research concerns how trust is developed and sustained over different levels of customer relationship in online banking. The future commitment of the customers to online banking depends on perceived trust.

Research Model

In this study the issue is approached from a different angle. Besides knowing the basic determinants of trust, it is critical to gain an appreciation of the dynamics of building and losing trust. We do not propose a model laying out the basic causes of trust, and we do not look at trust as a static concept, rather we try to show that trust is a dynamic concept and may be enhanced or lost overtime in terms of conditions. The theoretical model that we have developed in order to better understanding of trust development in an electronic banking context is shown in figure 1. This framework draws from the theoretical areas reviewed in this study, including marketing research in e-trust and e-banking and is primarily inspired by trust models developed by Graham Winch and Philip Joyce (2006), Papadopoulou et al. (2001), Carlos Flavia’n and Miguel Guinaliu (2006), and Ribbink et al. (2004). In a refined version the trust model will be adapted to e-banking. In short, the reviewed trust models have an underlying perspective that can be categorized as trust antecedents, trusting beliefs, and trusting behaviors. Our research model ties to this sequential relationship, excludes certain antecedents and includes behavioral outcomes of trust such as customer loyalty. Therefore, our research model contains three broad constructs: trust antecedents, trusting beliefs, and trusting behaviors. Each individual variable draws upon the reviewed literature for its
definition. The variables and sub-variables can be regarded as the most important dimensions of trust in the chosen context which our research questions address. The research framework can be viewed as a conceptual roadmap of how trust is created and can be influenced and maintained at an e-banking context. Our research model primarily also draws on the model by McKnight et al. (2002) and Papadopoulou et al. (2001) with its initial trust timeframe in an e-commerce setting. In our research, we assume that the primary trust issue in an electronic banking setting is to make new customers trust the e-vendor enough to conduct transactions. This objective requires forming trusting beliefs on behalf of the client with respect to Information-Based Antecedents and Transaction-Based Antecedents. After forming trusting beliefs, in the trusting behavior stage the customer decides to buy a product/service from e-seller considering the promises that have been made by that seller. Then the customer compares the received product/service with expected (promised) one, and if the promises are fulfilled, his/her trusting beliefs will be enforced and the customer will revisit that website again and probably will repurchase from that seller, which is referred as loyalty.

It should be mentioned that this research model might be modified and reconstructed in the process of the research after considering the results of the pilot studies. The choice of constructs and related variables in our model will be made after complementary theoretical considerations, and considering the results of the pilot studies. The objective is to enable a quantitative analysis of selected variables for the model.

**Research Hypothesis**

In this section of the proposal, we have stated 9 hypotheses based on our research framework and defined individual variables. These hypotheses should have been formulated after the pilot study in order to modifying the research framework, but they have been stated here in order to provide a wider perspective of the process of the research. So we hypothesize that when a customer visits the website of a bank in order to receive electronic banking services:

**Perception about the Company**

H 1: Perceived positive perception about an e-banking service provider is positively correlated to trusting beliefs in the bank.

**Quality of information:**

H 2: perceived quality of information provided during the e-transaction is positively correlated to trusting beliefs in the bank

**Website Characteristics:**

H 3: perceived website high-level characteristics is positively correlated to trusting beliefs in the bank

**Perceived Privacy:**

H 4: perceived privacy is positively correlated to trusting beliefs towards the bank
Perceived Security:
H 5: perceived security is positively correlated to trusting beliefs in the bank.

Perceived Risk:
H 6: perceived risk receiving services is negatively correlated to trusting beliefs in the bank.

Quality of Doing E-Transactions:
H 7: perceived quality of doing e-transactions is positively correlated to trusting beliefs in the bank.

Promise Fulfilment:
H 8: fulfilled promise by an e-banking service provider is positively correlated to trusting beliefs to the bank.

Loyalty:
H 9: forming trusting beliefs in an e-banking service provider is positively correlated to creating loyalty in the customer.

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Information-Based Antecedents of Trust:
- Perception about the Company
- Quality of Information
- Website Characteristics

Transaction-Based Antecedents of Trust:
- Perceived Security
- Perceived Privacy
- Perceived Risk
- Quality of Doing E-Transactions
- Promise Fulfilment

Trust Beliefs:
- Competence
- Benevolence
- Integrity
- Predictability

Trust Believing:
Loyalty
Figure 1: Research Model of the study depicting how a consumer’s trust towards an e-banking service provider develops, enhances or loses (adapted from Graham Winch and Philip Joyce (2006), Panagiota Papadopoulou et al. (2001), Carlos Flavia’n and Miguel Guinalí’u (2006), and Dina Ribbink et al. (2004))

Table 1: Definitions of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Reference</th>
</tr>
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<tbody>
<tr>
<td>Information-Based Trust Antecedent: Perception about the company</td>
<td>Recognized brand and perceived high reputation of the company</td>
<td>Gao, 2005</td>
</tr>
<tr>
<td>Information-Based Trust Antecedent: Quality of Information</td>
<td>Relevance, timeliness, and accuracy of provided information</td>
<td>Deelman and Loos, 2002</td>
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<tr>
<td>Information-Based Trust Antecedent: Website quality</td>
<td>Use of advanced website technology design, seal of trusted third party certification, links to reputable sites/links from reputable sites</td>
<td>Wolfinbarger and Gilly, 2003; Zeithaml et al, 2000; Durkan &amp; Durkin, 2003, Gillen 2003; Mc Knight et al, 2002.</td>
</tr>
<tr>
<td>Transaction-based Trust Antecedent: Security</td>
<td>Customers’ protection against unauthorized access to their financial information</td>
<td>Kalakota and Whinston, 1997; Jones et al., 2000</td>
</tr>
<tr>
<td>Transaction-based Trust Antecedent: Privacy</td>
<td>Customers’ protection against misusing their personal information without their informed consent</td>
<td>Grandison and Salmon, 2000; Yousafzai et al., 2003</td>
</tr>
<tr>
<td>Transaction-based Trust Antecedent: Quality of doing e-transactions</td>
<td>Ease of navigation, ease of ordering, and responsiveness of the e-transaction processes</td>
<td>Ribbink et al., 2004</td>
</tr>
<tr>
<td>Transaction-based Trust Antecedent: Perceived Risk</td>
<td>Customer’s perception of uncertainty about product/service quality, vulnerability to not receiving shipment/service, and occurring possible problems derived from their previous experiences(familiarity) and/or technical/educational knowledge</td>
<td>Chopra and Wallace, 2003; Winch and Joyce, 2006</td>
</tr>
<tr>
<td>Transaction-based Trust Antecedent: Promise Fulfilment</td>
<td>The degree to which the perceived products/services meet customers’ expectations(promised made by the company)</td>
<td>Papadopoulou et al., 2001</td>
</tr>
<tr>
<td>Trusting belief: Trustworthiness</td>
<td>Competence, benevolence, integrity, and predictability of the e-vendors actions and processes</td>
<td>Mayer et al., 1995; Mc Knight and Chervany, 2002</td>
</tr>
<tr>
<td>Trusting Behavior:</td>
<td>Preference of the website, mostly visiting the website,</td>
<td>Flavia’n and Guinalí’u, 2004</td>
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Loyalty: repurchase/reorder from the website

Research Methodology
Since we seek for the current research to be both exploratory and explanatory, we adopt the combined approach of both qualitative and quantitative methods. Keeping with this, the primary data collection will be preceded by a pilot study.

First, in the pilot study qualitative data from semi-structured interviews will be collected. We hope this data help to craft the research model and to partly answer the research questions. This qualitative approach is expected to give a comprehensive and holistic understanding of the research problems. We will try to probe respondents, ask follow-up questions, and thus get a relatively comprehensive picture of the phenomenon in question. The pilot study is exploratory and descriptive in nature. It explores and describes “what” trust dimensions are important in e-banking, and “what” trust-building processes are relevant for customers – thereby addressing research questions 1, 2 and 3. We hope to outcomes permit us to narrow down the trust dimensions in our research model to a manageable set, and suggest a testable research model for the following quantitative study.

Second, a quantitative approach will be utilized to empirically test the research model. This is the main study. With respect to this, factor analysis, bivariate (simple) regression techniques, and structural equation models will be employed for hypothesis testing. Thus, the main study mainly is explanatory in its aim to explain “how” the variables in the research model are causally related (research question 4). The model testing is both confirmatory and exploratory; that is, the aim of the factor analysis is to confirm the proposed structure, and to “discover” new factors (Hair et al., 1998).

Case study design
The cases will be a number of selected banks which offer their services electronically and some of the consumers who have already used the web sites of these banks to receive financial services via Internet.

Unit of analysis
The individual customers visiting the websites of selected banks are the primary unit of analysis in this study.

Data analysis Procedure
The research model presented in Figure 1 depicts relationships between several variables. In addition, a dependent variable such as trust is in turn an independent variable in another relationship. For this reason an appropriate statistical technique to perform hypotheses testing of the research model is Structural Equation Modelling (SEM). Since our model features 4 independent variables and one of them (trust) is also an independent variable, SEM can simultaneously calculate this set of regressions.

The original approach for data analysis in the main study is to specify a full structural model (SEM) and then test the propositions with SEM, using Lisrel or MiniTab software, according to consulting with supervisor instructors. By suggesting a second-order construct such as trusting beliefs, we essentially hypothesize that it is composed of its items and sub-constructs. Therefore a confirmatory factor analysis (CFA) will be performed with respect to the central constructs. A CFA essentially is a test of the
hypothesis that the construct in question is composed of the suggested underlying variables (Byrne 2001, p.57).

**Conclusion:**
The purpose of this study was to examine the effect of Trust Behavior on Business to consumer (B2C) E-Commerce and Electronic Banking. Model of the this study depicting how a consumer’s trust towards an e-banking service provider develops, enhances or loses (adapted from Graham Winch and Philip Joyce (2013), Panagiota Papadopoulou et al. (2001), Carlos Flavia’n and Miguel Guinalı’u (2014), and Dina Ribbink et al. (2004)). This paper presented a model to conduct an empirical study in electronic banking in order to improve their performance. The Trust plays a fundamental role in determining the performance in electronic banking. In this research, a model has been developed that includes the factors of Trust and study for depicting how a consumer’s trust towards an e-banking service provider develops, enhances or loses? This theoretical model will show that how we have developed in order to better understanding of trust development in an electronic banking context. It is hoped that this paper can provide an academic source for both consumers and managers due to investigate the relationship between Trust Beliefs and Loyalty in a systematic manner to increase customer’s Loyalty in electronic Banking. It is hoped that the findings would help the Iranian electronic banking to undergo transaction with electronic banking. in order to success in this industry, various factors proposed so that actions can be taken to overcome the gaps. The findings would provide important and useful guidelines to electronic banking on how to successfully deploy an electronic banking programme.

**References:**


