The Effects of Internet Shoppers’ Trust on Purchasing Intention in China

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Abstract

Recently, owing to the rapid development of Internet and information technology in China, the growth of consumers’ purchasing activities in the Internet Shopping Mall has been truly phenomenal. Thus, it is considered essential to understand what affects Chinese consumer’s intention to purchase in the Internet Shopping Mall. Based on prior studies, trust is thought as a key factor affecting on Chinese consumers’ purchasing intention. Hence, the purpose of the study is to investigate the effects of Chinese consumer’s trust on purchasing intention of Internet Shopping Mall. In order to accomplish the purpose of this study, a research model has been established and it suggests that there are significant relationships between trust and purchasing intention, e-commerce knowledge and trust, perceived reputation and trust, perceived risk and trust, perceived ease of use and purchasing intention. The results of the study show that the relationships between these variables are all significant. This research confirms the important effect of Chinese consumer’s trust on purchasing intention. Implications of these findings are discussed for researchers and practitioners.

Keywords:

Internet Shopping Mall, purchasing attention, trust, e-commerce knowledge, reputation, risk, PEOU

I. Introduction

Since 1997, China’s information industry has been developing very rapidly. According to 19th Statistical Survey Report on the Internet Development in China released in January 2007 by China Internet Network Information Center (CNNIC, 2007), the number of Internet users had reached 137million, 79.1% of who said that they would surely or possibly go Internet shopping in the first half of the year, and 23.6% of them are most frequently using Internet shopping service when going Internet. In 2006, there were over 30 million Internet users who had Internet shopping experience.

Despite the fact that Internet Shopping Malls are now winning more and more customers by providing them favorable price of the products, it may be not sufficient. Trust is still regarded as an order qualifier for consumers’ purchase decisions (Doney & Cannon, 1997). Consumers are unlikely to patronize Internet stores that fail to create a sense of trust (Jarvenpaa & Tractinsky, 1999). Trust can only exist if the consumer believes that the seller has the ability to provide and deliver goods of quality expected by the consumer. At this point in time, here comes another question: how can consumers obtain their trust in the Internet Shopping Mall? In traditional contexts, a consumer’s trust has been found to be affected by the seller’s investment in physical buildings, facilities, and personnel (Doney & Cannon, 1997). It may, however, be noted that since not any physical contacts between consumers and sellers happen in the Internet Shopping Mall, it is no less dubious to connect that a consumer’s trust is affected by the consumer’s characteristics, instead of the seller’s some actions.

Hence, in the present paper, we shall see how consumer trust and perceived ease of use affect purchasing intention, while what kinds of consumer’s characteristics have effects on consumer’s purchasing intention, through the mediation of consumer’s trust. The scope of investigation I hope to cover is the e-consumers all over the China mainland.

The next section provides prior studies as evidences to help discussing the definition of every variable. In the third section, the research model is developed to outline assumptive relationship among these variables. The forth section introduces the testing method and the results of hypothesis test is described in the fifth section. The final section gives the conclusions.

II. Conceptual Background

2.1 Internet Shopping Mall

Internet Shopping Mall is a new product-selling context, in which the customers can select the product they want to purchase as well as receive it at a location they wish through connection to the server which provide the product information (Cho & Young, 1998), it can be referred to as a
virtual shopping mall which makes customer able to search and purchase products through network and computer as well (Kwon & Kim 1999). As an epoch-making shopping procedure, it has a number of advantages such as cost-cutting, regional unlimitedness of transaction, 24-hour transaction available, efficiency of marketing activities, etc. (Cho & Young, 1998).

Internet Shopping Mall can be divided into B2B, B2C and C2C shopping mall. In this paper, due to fact that the subject of study we want to investigate is individual e-customer, the scope of Internet Shopping Mall is not limited to one type. It includes both B2C shopping mall and C2C shopping mall.

2.2 Trust

Trust has been conceptualized by various prior researchers. In this paper, we try to only discuss the concept of trust in Internet Shopping Mall (or e-commerce context) because the word “trust” is so broad. Here are several prior studies researched about conceptualization of trust in e-commerce context.

Jarvenpaa & Tractinsky (1999) define trust in the Internet Shopping Mall as a consumer’s willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to seller, same to Mayer, et al.,(1995)’s definition: willingness of 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.” while in Kim et al., 2004, trust is defined as the belief that the other party will behave in a dependable manner in an exchange relationship. In this study, trust is broken into 2 constructs according to different trust subjects. That is, potential consumer trust referred to as the initial trust that a potential customer has in an unfamiliar trustee and repeat consumer trust referred to as the trust that a repeat customer has in a familiar trustee after having transaction experience with it (Kim et al., 2004). McKnight et al.,(1998) also divided trust into two constructs: (1) trusting intention, meaning that one is willing to depend on the other person in a given situation, and (2) trusting beliefs, meaning that one believes the other person is benevolent, competent, honest, or predictable in a situation.

In David Gefen’s research, the authors made a table which provided a summary of prior conceptualizations of trust along with the trust object and measures used to operationalize the construct. As a result, the table shows that researchers’ view of trust can be separated into 4 divisions:

1. A set of specific beliefs dealing primarily with the integrity, benevolence, and ability of another party.
2. A general belief that another party can be trusted.
3. Affect reflected in “feelings’ of confidence and security in the caring response” of the other party.
4. A combination of these elements. (Gefen et al., 2003)

In e-commerce contexts where neither buyer nor seller can be face to face with the other party directly, uncertainty exists all the time because of both parties’ unpredictable action and opportunistic behavior (Jang et al., 2005). Hence, the key to remove this kind of uncertainty and make successful economic transactions is avoiding opportunistic behavior (Hosmer, 1995). In this case, any general belief or feeling without evidence cannot be regarded as equivalent to ‘trust’. Real trust, as has been mentioned in the Introduction part, can only exist if the consumer believes that the seller has the ability to provide and deliver goods of quality during consumer’s Internet shopping behavior. With such distinctions in mind, ‘a set of specific beliefs dealing primarily with the integrity, benevolence, and ability of another party’ is adopted by this paper to conceptualize the trust, same to the definition of consumer trust in Internet Shopping Mall made by a number of researchers in their researches (such as Gefen, 2003; Jarvenpaa & Tractinsky, 1999; Gefen & Silver 1999).

In Internet Shopping Mall, trust object is totally different from that in offline store. That is to say, due to no seller-related management during buying or selling in the Internet Shopping Mall, the subject of consumer trust becomes Internet Shopping Mall itself (Jong & Lee, 2000). Trust plays an important role during the transaction in uncertain and risky circumstance.

2.3 E-commerce Knowledge

E-commerce knowledge means a customer’s knowledge of e-commerce related technology and basic knowledge necessary for e-commerce using. This kind of knowledge includes the know-how and skill of accomplishing an e-transaction activity and using various kinds of technologies and methods used in e-transaction (Baek et al., 2006). E-commerce knowledge can be broken into 2 divisions: skill and control (familiarity). Skill refers to the Web consumer’s capacity for action during the online navigation process and control taps the consumer’s ability for action. Control (familiarity) comes from both the Web user’s perception of her ability to successfully navigate the Web environment and her perception of how the web responds to her inputs (Novak et al., 2000). It is considered to be a necessary external condition for customer’s Internet shopping as a kind of external equipment like a computer, when he/she is connecting to Internet. While engaged in an online pursuit, consumers must have their skills and familiarity above a critical threshold (Novak et al., 2000).

In this paper, e-commerce knowledge is defined as a kind of knowledge about product searching through Internet Shopping Mall, purchasing method, payment process and personal information protection policy, etc.

These variables of e-commerce knowledge will be included into my questionnaire items later.

2.4 Perceived Reputation

As “a customer’s perception of Internet Shopping Mall’s reputation” (Jong & Lee, 2000), perceived reputation of an Internet Shopping Mall provides assurances of the seller part’s ability, integrity, and goodwill (Jarvenpaa & Tractinsky, 1999). It is the extent to which buyers believe that the selling organization is honest and concerned about its customers (Doney & Cannon, 1997). It can be referred to as a customer’s recognition of seller based on indirectly
collected information from friends, relatives, colleagues, etc. (Lee & Lee, 2003). Consumers can use the calculative process to estimate that it costs an Internet Shopping Mall acting in an untrustworthy manner quite high for an e-vendor with good reputations (Doney & Cannon, 1997). In China C2C market, high-reputation Internet Shopping Malls have occupied almost the whole market. Taobao.com has already taken 67.3% of the online auction market share in China (www.chinatechnews.com). Hence, it is considered necessary to study more deeply about the relationship between perceived reputation and consumer trust.

2.5 Perceived Risk

Perceived risk was first introduced in the field of consumer activity (Yang & Baeg, 2003). Perceived risk can be defined as a consumer’s perceptions of the uncertainty and adverse consequences of engaging in an activity (Dowling & Staelin, 1994). It is a kind of subjective risk completely different from objective risk of probability. In other words, only if consumer perceives the problem by himself/herself (subjectively), there will come out the problem, even though the problem has been in the reality for a long time (Yang & Baeg, 2003).

Table 1. Previous conceptualizations of perceived risk

<table>
<thead>
<tr>
<th>Perceived Risk Conceptualization</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>A consumer’s perceptions of the uncertainty and adverse consequences of engaging in an activity.</td>
<td>Dowling &amp; Staelin, 1994</td>
</tr>
<tr>
<td>Uncertainty on the result after selection and expected loss resulted by selection.</td>
<td>Yang &amp; Baeg, 2003</td>
</tr>
<tr>
<td>Consumer’s uneasy with transaction on virtual space (risk-perceived object: e-commerce).</td>
<td>Park, 2005</td>
</tr>
<tr>
<td>Uncertainty of shopping on the Internet (risk-perceived object: e-commerce)</td>
<td>Jarvenpaa &amp; Tractinsky, 1999</td>
</tr>
<tr>
<td>Perceived threats for Internet security and transaction security</td>
<td>Ratnasingham, 1998</td>
</tr>
<tr>
<td>Functional, economically, and psychologically perceived risk (risk-perceived object: Internet Shopping Mall)</td>
<td>Ku &amp; Lee, 2002</td>
</tr>
</tbody>
</table>

As seen below, it summarizes variable types of perceived risk according to prior studies.

Table 2. Types of perceived risk in Internet Shopping Mall

<table>
<thead>
<tr>
<th>Type</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>probable difference from physical goods on quality perceived by consumer</td>
<td>Jarvenpaa &amp; Tractinsky, 1999</td>
</tr>
<tr>
<td>consumer’s perceived worry about leakage of credit card related information</td>
<td>Jarvenpaa &amp; Todd, 1997; Jeong et al., 2004</td>
</tr>
<tr>
<td>consumer’s perceived lack of personal information protection</td>
<td>Jarvenpaa &amp; Todd, 1997; Jeong et al., 2004</td>
</tr>
<tr>
<td>consumer’s perceived worry about the possibility of no-refund or no-return</td>
<td>Jeong et al., 2004</td>
</tr>
</tbody>
</table>

2.6 Perceived Ease of Use (PEOU)

In essence, a website is actually a kind of information technology. As a part of technology acceptance model (TAM) which has been examined IT acceptance, perceived ease of use (PEOU) is an indicator of the cognitive effort needed to learn and to utilize the new IT (Gefen et al., 2003). Internet shopping makes customers able to save their time and effort when purchasing desirable products (Park & Yoon, 2001).

III. Research Model and Hypotheses

3.1 Research Model

Based on the conceptual background of all the variables and their operational definition, Figure 1 illustrates my research model.

![Research Model Diagram]

Table 1. Research Model

Based on this model, relationships of all the variables can be hypothesized as below.

3.2 Trust and Purchasing Intention

In Jarvenpaa & Tractinsky (1999)’s research, trust is described to have an indirect influence on purchasing intention. As the researchers suggest, a consumer’s willingness to buy from an Internet seller is contingent on the consumer’s attitude towards the store, which, in turn, is affected by the seller’s ability to evoke consumer’s trust. Some other papers also suggest that there exists direct relationship between trust and purchasing intention (Jang et al., 2005; Yu & Choe, 2003; Yoon, 2000).

H1: Higher consumer trust on an Internet Shopping Mall will generate more purchasing intention on that Internet Shopping Mall.

3.3 E-commerce Knowledge and Trust

To put it the other way around, e-commerce knowledge can be equivalent to familiarity which corresponds to how well a consumer comprehends the Web site procedures, including when and how to enter credit and information in the e-commerce context (Gefen et al., 2000). Meanwhile, as we mentioned before, e-commerce knowledge is regarded as a kind of skill as well (Novak et al., 2000). Skill is similar to computer self-efficacy, which can be defined as an
individual judgment of one's capability to use an Internet Shopping Mall (Koufaris, 2002).

\[ H_2 : E-commerce \text{ knowledge will positively affect consumer trust in an Internet Shopping Mall.} \]

### 3.4 Perceived Reputation and Trust

Reputation requires a long-term investment of resources, effort, and attention to customer relationship. Since reputation represents third-party or public opinion of the vendor, it must be transferred from the 3rd party or the public to customers, influencing them to build trust in the Internet Shopping Mall owned by the vendor. It is also regarded as a kind of indirect information. Indirect information cannot provide consumers with as much belief as direct information collected during Internet shopping process do. However, to those consumers who are short of purchasing experience in the Internet Shopping Mall, it will work as a sort of key information to establish their trust (Lee & Lee, 2003).

\[ H_3 : \text{The Internet Shopping Mall's perceived reputation is positively associated with consumer trust.} \]

### 3.5 Perceived Risk and Trust

Compared to traditional offline marketing channel, e-customer can get less assurance of transaction safety and product quality. On the other hand, even if problems arise, sellers will probably shift responsibility onto technical problems or systems problems. All these reasons increase the uncertainty and provoke adverse consequences of engaging in transaction activity. In other words, perceived risk will be raised and increased. In consequence, consumer trust will be reduced when risk is present.

In Ratnasingham (1998)'s research, the author argues that if e-commerce is to become the dominate business platform of the next millennium, integrated system should be completed and transaction process should be standardized to ensure the whole transaction activity operated in a secure way.

\[ H_4 : \text{Perceived risk will reduce consumer trust.} \]

### 3.6 PEOU and Trust

As many researchers have referred, by treating an Internet Shopping Mall as a technology system and the consumer as a computer user, TAM (PEOU included) can be applied to the study about the influence on purchasing intention. When consumers believe that the Web site is easy to use (PEOU), their will be more likely to do shopping in that site (Koufaris, 2002).

Some other researchers also demonstrate that individuals attempt to minimize effort in their behaviors, this supporting a relationship between PEOU and usage behavior (Venkatesh & Viswanath, 2000). Hence, it can be hypothesized as below:

\[ H_5 : \text{Perceived ease of use will positively affect consumer trust.} \]

### IV. Data Analysis of questionnaire and Results

#### 4.1 Survey

To test our research model, a questionnaire was conducted. In this study, whether he (she) had Internet shopping experience before, all the participants of questionnaire were Chinese who live domestically. Respondents were not informed about the objective of this survey. This survey last for 4 months, from Dec. 2006 to Mar.2007. As a consequence, the questionnaire was completed by 187 respondents.

#### 4.2 Reliability and Validity Analysis

Before verifying the relationship between each hypothesis, reliability and validity of each item's scale were tested. As a result, all remain scales had acceptable Cronbach's alpha values (>0.6), meaning that all the scale items meet the reliability requirements suggested for exploratory hypothesis test.

### 4.3 Hypotheses Testing

The effects of ① trust antecedents (e-commerce knowledge, perceived reputation, perceived risk and PEOU) on trust; ② trust on purchasing intention ③ mediating effect of trust on the relationship between trust antecedents and purchasing intention were examined with multiple regression analysis, respectively.

#### 4.3.1 Test of H2-H5

First, Table3 shows the results of the multiple regression analysis about the trust and its antecedents.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta (β)</th>
<th>t value</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce Knowledge</td>
<td>.273</td>
<td>.301**</td>
<td>4.536</td>
<td>.730</td>
<td>1.371</td>
</tr>
<tr>
<td>Perceived Reputation</td>
<td>.107</td>
<td>.125</td>
<td>1.846</td>
<td>.701</td>
<td>1.427</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>-.230</td>
<td>-.248**</td>
<td>-4.042</td>
<td>.855</td>
<td>1.169</td>
</tr>
<tr>
<td>PEOU</td>
<td>.205</td>
<td>.203*</td>
<td>2.916</td>
<td>.663</td>
<td>1.509</td>
</tr>
</tbody>
</table>

A dependent variable: Trust *: p<0.01 **: p<0.001
R² = 0.415 Adjusted R² = 0.402
Durbin-Watson = 1.804 F value = 32.222

Table3. Result of multiple regression analysis about the relationship between independent variables and trust

It is especially worthy of note that the relationship between e-commerce knowledge and trust (β value = 0.301) is stronger than that between perceived risk and trust (β value = -0.248) as well as PEOU and trust (β value = 0.203), which means e-commerce knowledge has proved to be the factor which gives the strongest effects on trust. This finding is consistent with Baeg et al. (2006)'s arguments. More familiar e-commerce knowledge leads to more trust on the Internet Shopping Mall. In China, many people are lack of Internet access knowledge (about 36.6% of non-netizens chose "lack of Internet related knowledge" as the main factor for not going Internet, that was a biggest factor for non-netizens' not going Internet – source from:
CNNIC, 2006) due to variables of factors, let alone e-commerce knowledge. Shortage of e-commerce knowledge makes it difficult for Chinese people to trust on Internet shopping. Naturally, it also makes them put little trust on the Internet Shopping Mall. Internet shopping in China is still on the starting line which needs continuous education support from government as well as developing effort of e-vendors.

4.3.2 Test of H1
As a consequence, adjust $R^2$ is 0.367, indicating that as a result of regression analysis, it was a good fit and 36.7% of purchasing intention related variance could be well explained by consumer trust. Furthermore, consumer trust seems to be a strong effect ($\beta$ value = 0.608) on purchasing intention.

4.3.3 Test of Trust's Mediating Effect
In this study, mediator regression analysis (Baron & Kenny, 1986) was introduced to test mediating effect of trust which has been proved to be associated with 3 trust antecedents (perceived reputation has been dropped). That is, the effect of independent variables should be tested whether they were mediated by trust.

To establish mediation of trust as a result anticipated, first, the independent variable (3 trust antecedents) must affect the mediator (trust) in the first equation. This has been tested in the front paragraphs.

Second, the independent variable (3 trust antecedents) must be shown to affect the dependent variable (purchasing intention) in the second equation. The result of regression analysis is shown as below. E-commerce knowledge, perceived risk and PEOU were proved to have a significant influence on purchasing intention.

Third, the mediator (trust) must affect the dependent variable (purchasing intention) in the third equation, while the effect of the independent variable (3 trust antecedents) on the dependent variable (purchasing intention) must be less in the third equation than in the second. Hence, a third multiple regression analysis was conducted.

As a result, the influence of e-commerce knowledge, perceived risk and PEOU on purchasing intention were found weaker when these three independent variables and trust were all entered than in the second equation (e-commerce knowledge's $\beta$ value from .192 to .065; perceived risk's $\beta$ value from -.230 to -.128; PEOU's $\beta$ value from .368 to .269). Hence, as a consequence, these 3 variables were all found to be mediated.

Figure2. Results of all the hypothesis testing

V. Conclusion
This paper has studied the effect of Chinese consumers' trust on purchasing intention as well as 4 trust-building effects (e-commerce knowledge, perceived reputation, perceived risk and perceived ease of use) on trust, finding that consumer trust has a strongly significant effect on purchasing intention. Meanwhile, e-commerce knowledge was found to have a strongly significant effect on consumer trust. It is possible due to the fact that in China, unlike in Korea, there are only a part of Internet users who have a clear idea about e-shopping method and process to make them have strong trust on Internet Shopping Mall, while others probably doubt e-shopping Website due to lack of e-commerce knowledge. On the contrary, in some developed e-markets such as Korea, U.S.A. and Japan, almost every Internet user who knows about e-commerce knowledge more or less, so few studies treat e-commerce knowledge as a variable for research. It is a special result totally different from many prior studies, which can be seen as an important contribution toward the further development of e-commerce by providing suggestion on how Internet Shopping Mall operators should build consumer trust in China.

In addition, perceived reputation is found not having significant relationship with trust. It is probably because that several largest Internet Shopping Malls have occupied most of China's e-shopping market that a majority of e-consumers only purchase products through these monopolistic websites.

Below is some suggestions based on our conclusion.
1. Education of Internet and e-shopping as well as related support should be provided by China government and Internet Shopping Mall operators.
2. According to consumers' different perception of risk, different measures should be taken to relieve their wariness.
3. Systems in Internet Shopping Mall should be complemented continuously in order to meet consumer's requirements for an easy-to-use Website.
4. Due to trust's critical role in e-commerce context, it is necessary for China government and Internet shopping mall operators to set their goals on consumer trust building when taking some actions. That is, actions aimed at solving such problems as consumers' lack of e-commerce knowledge, worry about the various risk and perceived inconvenience of use during Internet shopping should be able to contribute for building and increasing consumer's trust. In fact, at ebay.com.cn, there are many trust-building education contents provided for consumers for free such as payment protection policy, assurance on refund, etc.

References


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