The Influence of Perceived Value and Trust on Online Buying Intention

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Abstract—This research focuses on the factors influencing online buying intention. The aim of this research is to find out perceived value and trust’s influence on online buying intention, which combined several pervious researches’ result. Perceived value is measured by perceived value and perceived product sacrifice, trust is measured by ability, benevolence and integrity. Based on survey to 238 college students, the author analyzes the questionnaire data with SPSS 15.0 and LISREL 8.8. The results show that perceived value and perceived product sacrifice have significantly influence on online shopper’s buying intention. On the other hand, ability and benevolence also have positive effect on online shopper’s buying intention. But integrity, as a part of trust, has no significantly influence on online shopper’s buying intention.

Index Terms—online shopping intention; perceived value; trust

I. INTRODUCTION

Being a new media able to provide an open, fair, cheap and efficient access for information, the Internet has played a more and more important role in people’s daily life. At present, it is very common to use the E-media to communicate with each other, which results in a wide spread of virtual communication.

Meanwhile, with the rapid development of information technology and Internet, e-commerce has come into the booming stage and Internet marketing has become the hot topic for common people. More and more consumers are trading on the Internet. In addition, the shopping sites are more and more mature in its adequate functions and services. Besides the rapid development, there are still some barriers which influence the online shoppers’ buying behavior, such as trust, perceived risk, technology acceptance, et al.

In this context, researchers pay a lot of attention on the research of online shopper’s behaviors and there a lot of research papers focus on the influence factors on online shoppers. But there are short of combined research which can describe the influencing factors in a combined view, which should be much useful to influence future study and the management application.

In this research, the author focuses on several influence factors which are significantly important to the online buying behaviors. The author pays attention to perceived value and trust.

II. LITERATURE REVIEW

A. Perceived value

In traditional consumer behavior research area, Zeithaml (1988) found that consumers typically choose to purchase an item because they perceive the benefits of obtaining the item to be greater than the cost, it is the Perceived Value. Zeithaml (1988) developed the means-ends model to research the Perceived Value. In this model, he researched the relation between perceived price, perceived quality, and perceived value [1]. Zeithaml supposed that there were intrinsic attributes (e.g. quality) and extrinsic cues (e.g., price, brand, serve as generalized quality indicators across brands, products, and categories). Consumers depend on intrinsic attributes more than extrinsic attributes to get Perceived Value at the point of consumption, and when the intrinsic attributes have high predictive value. At the same time, consumers depend on extrinsic more than intrinsic attributes to get Perceived Value in initial purchase situation, when evaluation of intrinsic cues are requires more effort and when quality is difficult to evaluate. From this research, Zeithaml suggested general strategies for increasing sales by increasing consumers’ perception of value and quality of a product.

After the Internet explosion, Zeithaml et al. (2002) continued to conduct research, which showed positive relationships between an online consumer’s perception of value and quality of product and the consumer’s intention to return and purchase again [2]. He also developed a new scale to measure a consumer’s perception of quality in an online environment. The scale contains four dimensions: efficiency, system availability, fulfillment, and privacy. The study by Parasuraman et al. (2005) found efficiency and fulfillment to be the most and equally important to a consumer’s perception of quality on the Internet [3]. System availability was found to be vital factors for online consumer’s perception of quality.

The definition of perceived value used in this study is:” the consumer’s overall assessment of the utility of a product based on perceptions of what is received” (Zeithaml, 1988) [1]. In this study, I use perceived value and perceived sacrifice to measure Perceived Value. Because price is not the only sacrifice perceived by consumers; time, effort, search, psychics’ sacrifices are salient to consumers. Perceived sacrifice for this study is
defined as the amount money, time and effort required purchasing an item (Ulaga & Eggert, 2002) [4].

B. Trust Model

Based on the traditional trust theories, there are three trust models: rational-emotional trust model, institutional-interpersonal trust model and faith-intention trust model.

Rational-emotional Trust Model analyzes trust from both the rational and emotional aspects. The consumer trust in the e-commercial transaction context is determined by two aspects: First, the buyer will analyze the competitive power, marketing ability, brand influence of the seller. Second, the buyer will analyze the honesty, credibility, benevolence and integrity of the seller and consider its customer care to determine whether this seller is reliable and credible. Mayer et al (1995) put forward a three-dimensional model in the traditional environment, i.e. ability, benevolence and integrity. Gefen (2000) applied this to the virtual environment. After surveying 310 MBA students in USA, he proved that the general consumer trust in Internet transaction was from the trust in ability, benevolence and integrity of the seller, and this would therefore determine the buying decision. Ability herein refers to the competitive power in the specific field; benevolence refers that one party (credit receiver) can give up its potential interest and treat the other party (credit sender) benevolently; integrity refers that the credit receiver sticks to the principles acceptable for the credit sender. Ability and Integrity arouses from the rational perspective and benevolence from the emotional perspective.

Institutional-interpersonal Trust Model is a trust in the whole Internet environment, and interpersonal trust is an appraisal for credibility of the seller on the Internet. The related literatures taking interpersonal trust into consideration believed that transaction itself is an interactive interpersonal process. Compared with the normal interpersonal relation, the buyer in the transaction process is in the inferior position. Only when knowing a lot about the seller’s competitive power and benevolence, combining with the satisfaction based on the previous transactions, the buyer can judge the seller’s credibility and determine his/her own buying behavior. With the further study, more and more scholars accept the psychology theories and bring the personal factor into the model. They believe the personal trust has significant correlation with the business trust in the e-commerce. The previous scholars discussed in the aspects of theory and demonstration, and they put forward an institutional-interpersonal-individual trust model.

Faith-intention trust model is combined Mayer et al’s opinions (1995), McKnight et al (1998) put forward the bilateral composition of trust in the organization: intention and faith. McKnight et al (1998) defines the intention of trust as: in the given environment, even if the bad results may happen, the object is still willing to trust others, and McKnight et al (1998) defines the faith of trust as: in the given environment, the object believes that others are benevolent, capable, honest and predictable. The faith of trust results in the intention of trust, and in turn, the intention of trust results in the behavior of trust. They used this theory to research and establish the formulation of trust. In the context of e-commerce, the faith of trust includes the faith and the expectation of online customers toward the online sellers which are related to the trust. For example, consumers hope the sellers are willing to trade honestly on the behalf of the customers’ interest in deed. (Meanwhile the sellers will protect the customers’ privacy and never reveal the customers’ private information to other sellers.) In addition, they will ensure the delivery of the supplied products. The intention of trust is the degree that the customer is willing or intended to trust the seller on the shopping site, even if they risk a deception. Disposition to trust is analyzed from the individual perspective, and institutional trust is analyzed from the institutional perspective. All the direct objects of trust faith and trust intention refer to the specific individual or organization (the online seller or the website party).

Nowadays, most of the researches on transaction trust of e-commerce are still based on the three mainstream trust models mentioned above. These three models all adopt two-dimensional structure. They can give some kind of powerful explanations to the issues on the transaction trust of e-commerce, especially after the supplement and improvement by many learners based on their theoretical research and empirical analysis. The literature review above can reveal that the previous literatures thought trust was a one-dimensional concept (Gefen, 2002). However, more and more scholars found that it was far from convincing to explain it in a one-dimensional angle. Most of the previous literatures were focused on the customers’ privacy and information safety. Having no clear definition of trust, there has always been a misunderstanding that trust was a simple concept determined by the characteristics of the seller. This kind of research is not able to explain the issues on trust clearly, so the research in this field is still far from enough. Trust is also the critical decisive factor for customer behavior and a key factor for the success of e-commerce. Cyber trust is a requirement for transaction on the Internet. Therefore, research on the impact mechanism of the shopping sites’ comments on consumer trust is also imperative.

In this research, the author mainly cares about the interpersonal trust, which is between the consumer and seller. In interpersonal dimension, basically the author use Gefen’s three-dimensional trust (2002), which are ability, benevolence and integrity [6].

C. Online Buying Intention

Online consumers are both consumers and active computer users. So IT considerations usually take a central role in online consumer behavior (Stewart and Pavlou 2002). Instead of viewing online shopping as a marketing issue which are influenced by IT usage, it will be even more accurate to view online shopping as an IS phenomenon where the consumer interacts with an information system (Koufaris 2002). “An IS view would not only help better understand B2C e-commerce, but it may also shed light on how marketing, economic, and other factors integrate with IS concepts to better explain
other complex IT phenomena” (Pavlou and Fygenson 2006).

The researches in online consumer’s behaviours can be categorized by two views, the consumer-oriented view and the technology-oriented view (Jarvenpaa and Todd 1997). The consumer-oriented view is focused on each consumer’s beliefs about online shopping (Zhou et al. 2007). According to Zhou et al. (2007), this view examines online consumer behavior from the perspectives of consumer demographics, cognitive and psychological characteristics, trust and perception of risks of online shopping, shopping motivation, and shopping orientation. Those factors can be described as internal factors. A technology-oriented view studies online consumer behavior by exploring the technical specifications of online stores, which include user interface features, web site content and design, and system usability, which can be defined as external factors.

When researchers explore the relationship between attitudes, belief, cognition and behaviours, the theory of Planned Behaviours (Ajzen 1991) is usually adopted. Theory of Planned Behaviours is a well-known theory of social psychology. It argues that specific beliefs influence behavioral perceptions and actual behavior. Behavioral intention is the most influential predictor of behavior. Sheppard et al. (1988) empirical study indicates that an average correlation of .53 was reported between intentions and behavior. In the e-commerce context, many studies have successfully used this theory to study online consumer behavior. Limayem et al. (2000) introduced perceived innovativeness and perceived consequences, both as antecedents to attitude and intention. The results of the longitudinal study showed that subjective norms, attitude, intention, and behavioral control had significant effects on online consumer behavior and that there were the positive effects of personal innovativeness on attitude and intentions to online shopping. The study performed by Hsua et al. (2006) provided the empirical evidence showing that this theory could be successfully used in perspectives. In my research, I also adopt this theory to explain my research hypothesis.

In previous researches, there are some factors which have been identified to influence online shopping behaviours by using a unified consumer-oriented research model. But, how would these factors influence continuance online shopping behaviours? What is the mechanism of the influence? In this study, three major antecedents to online consumer behavior are integrated, which are previous online shopping experience and trust.

“Customers are uncomfortable when they are physically separated from the sales persons and response is not rapid. These effects make e-commerce seem risky due to fear of monetary loss or privacy exposure” (Cho 2006). Therefore, Trust and risk are important determinants of consumer behavior in online environments. Jarvenpaa et al. (2000) argued that lack of trust prevented consumers from engaging in online transactions. Trust is crucial in e-commerce. Battacherjee (2002) argued that there were three key dimensions of trust: trustee’s ability, benevolence, and integrity. Heijden et al. (2001) extended the trust-oriented study by adding the website-oriented constructs. Their study revealed several important findings: online purchase intention was strongly determined by attitude towards online shopping at the website; perceived risk of shopping strongly influenced attitude towards shopping; trust in the company didn’t influence attitude directly, but indirectly through a significant impact on perceived risk; perceived reputation influenced trust. Heijden et al. (2001) finally concluded that trust-oriented models appeared to explain online purchase intention effectively.

A number of studies have investigated the impacts of trust and perceived risk on online consumer behavior. Gefen et al. (2003) also provided evidence that online trust was built through (1) a belief that the vendor has nothing to gain by cheating; (2) a belief that there are safety mechanisms built into the website; (3) a typical interface that is easy to use. Stewart (2003) studied the cognitive process when consumer transfers the trust to organization to online. The finding also finds that trust to the website had a significant positive effect on intention to buy from it.

The effect of trust on risk has been empirically supported in research on e-commerce and virtual communities (Jarvenpaa et al. 2000; Gefen 2002; Luo 2002; Pavlou 2003).

As beliefs, trust and perceived risks are also influence by some antecedent factors. Miyazaki and Fernandez (2001) investigated the relationship among online consumer behavior, perceived risk and levels of the Internet experience. Their findings indicated that the Internet experience may help consumers reduce risk perception and in turn, increase online purchase rate. Other studies reached the similar conclusion, that is, trust helps reduce perceived risk and social uncertainty among inexperienced online customers (Gefen 2000; Jarvenpaa and Tractinsky 1999; Jarvenpaa et al. 2000).

The research results of the Hsua et al. (2006) indicated that satisfaction with prior online shopping influence on the continuance intention in the online shopping process. The results suggested that using or doing behavior was different from continuance behavior and thus online shopping behavior should be separately studies from online continuing shopping behavior.

III. HYPOTHESIS AND MODELS

In traditional buying situation and online shopping situation, Zeithaml et al. (1988, 2002) found that Perceived Value affects the relationship between quality and purchase [1] [2]. That means Perceived Value influence the buying intention. So in this research, the author supposes that:

H1: perceived product value positively influences online shopper’s buying intention.

H2: perceived products sacrifice positively influences online shopper’s buying intention.

Research and literature about online consumer behavior frequently cite trust as critical factor in consumer being willing to buy online. Models have been
developed and tested in various relationships with other factors.

The model Jarvenpaa et al. (2000) tested used perceived size and perceived reputation of the online vendor as factors affecting trust in an online store [7]. Trust then was shown to have a positive influence on an online consumer’s attitude and negative relationship with perception of risk. Positive trust and negative perception of risks were shown to have a positive relationship with intention to buy.

Ability is the combination of technology, competency and characteristics. It enables the object to have an influence on some specific fields, i.e., the competitive power in the specific field. That is to say, Credit sender believes that the credit receiver has better ability than other rivals in his advantageous field after the training, practice or with the god-sent talents. Honest refers that credit receiver sticks to the principles acceptable for credit sender. The credit receiver will behave according to his promise, and this makes credit sender feel that credit receiver is creditable. Goodness refers that credit receiver will behave kindly to credit sender without self-interested profit motive. One party (credit receiver) may give up his potential interest and treat the other party (credit sender) benevolently. This is a positive perception of credit sender to credit receiver. The general trust is not a trust related to the specific attributes of credit receiver, but a trust in general. From the credit sender’s perspective, the general trust is a feeling of safety that credit sender relies on the credible credit receiver. From the credit receiver’s perspective, the general trust shows that the active result of behavior is reliable. The general trust is a trust in a higher level, which is formed on the basis of trust dimensions.

H4: Benevolence of the sellers positively influences a consumer’s intention to buy online.

H5: Integrity of the sellers positively influences a consumer’s intention to buy online.

IV. RESEARCH METHODOLOGY

A. Research Objectives

The study chose the college students as the sample for doing the questionnaire. The reasons for choosing the college students are: First, because of the fact that the objects of empirical research are online shoppers. According to report of February, 2009 provided by the iResearch Research Institute (i Research), the majority of internet active consumers are the college students; the proportion is up to 70%, among them, most are with bachelor degree. Therefore, it is representative of choosing college students as the sample. Moreover, the research aims at investigating the different perceptions of trust in the shopping websites’ comments among different personalities, so the focus of the survey sample is to cover different consumers of different personalities.

B. Research Materials

Survey is the research methodology used in this study. A questionnaire was developed with items from previously tested instruments; the items were modified as necessary to fit the context of this study. This questionnaire is composed of five parts.

The questionnaire of Perceived Value: The definition of perceived value in this work is: “perceived value is the consumer’s overall assessment of the utility of a product base on perceptions of what is received” (Zeithaml, 1998) [1]. Perceived sacrifice is defined here as: the amount of money, time and effort required purchasing an item (Srinivasan &Ratchford, 1991) [9]. The questionnaire of perceived value is adapted from Parasuraman et al (2005) [2]. Perceived products sacrifice is adapted from Davis and Eggert (2002). I use 5-point Likert scale to measure the degree of online consumer’s perceived value, (1) strongly disagree to (5) strongly agree for the indicators perceived sacrifice. The sample of the questions is:” The prices of the products and services available at this site.”

The questionnaire of Trust on Shopping Sites: The questionnaire of “Trust on shopping sites” is the one from Gefen (2002), which has also certified the validity and credibility [6]. It also used 5-point Likert scale to measure the degrees of agreement of online consumers to the shopping websites, (1) strongly disagree to (5) strongly agree for the indicators perceived sacrifice. The sample of the questions is:” This Company used technology well to protect my information.”

The questionnaire of intention to buy online: There are 4 items to measure the online shopper’s buying intention. It also used 5-point Likert scale to measure the degrees of agreement of online consumers to shop online, (1) impossible to (5) very possible for the indicators perceived sacrifice. The sample of the questions is:” How likely is it that you will purchase from this store in the next three months?”

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The questionnaire of demographics: It is used to survey the E-consumers’ basic information, including gender, age, marital status, education background, location of surfing the Internet, the times of online shopping and the name of websites frequently visited.

C. Procedure

The survey was initially pre-tested on 3 graduate students. Questions unfitted or miss understandable were removed. The survey was then pre-tested secondly on 30 graduate students (16 female, 14 male). Modifications were made based on feedback (remove questions which are not significant in Independent Sample Test). Then I institute our final questionnaire. The distribution was carried out primarily through two ways: personal connection in classroom and e-mail. By doing the former one, one of the researchers made a brief in-class presentation, followed by a request to ask the ones who are interested in the project to participate. Then, I chose people who have participated in online shopping recently as participants and distributed questionnaires to them and took back after 15 minutes.

By distributing though e-mail, the author used 5 membership lists of virtual study organization to contact the online shoppers in some virtual communities. The researchers first connected the members though IM (QQ, MSN) tools. If the members according with the requirement of the study accepted to participate, researchers will deliver him/her a questionnaire through e-mail. After finished, the questionnaire could be sent back though e-mail again.

D. Statistic Methods

First the author used the SPSS 12.0 to analyze the responsibility of the data, and then used the Lisrel to do the structural equation analysis.

V. RESEARCH RESULTS

A. The Demographic Information of The Sample

The author distributes 300 questionnaires and collects 257. Eliminating invalidate ones, the final number of validate questionnaires is 238.

B. The Reliability of The Questionnaire

The author uses Cronbach’s Alpha to analyze the internal reliability of each dimension in the questionnaires. The Cronbach’s Alpha value is shown in Table II. The results show that the reliability can be accepted of every dimension.

The result of reliability analysis is acceptable. However, it is easy to find that the fourth question on Ability dimension has weak influence on the coefficient of correlation. It can increase Cronbach’s Alpha and further increase the reliability if this question is canceled. In addition, through a close analysis, the authors found that this question could only indirectly reflect the familiarity for the website with the market and the rivals. It was unable to fully test the Ability Dimension of trust. In conclusion, this question is canceled, so the reliability of final questionnaire satisfies the requirements of research.

C. The result of SEM

Structural equation modeling (SEM) is a covariance-based approach in that it attempts to minimize the difference between the sample covariance and those predicated by the theoretical model (Chin and Newsted 1999). SEM is often used to test and confirm hypotheses in a research model. SEM reproduces the covariance matrix of all observed measures during the parameter estimate process (Chin and Newsted 1999). Important goodness-of-fit indices of SEM model are shown as below.

The empirical model and the goodness-of-fit SEM acquired by analyzing the extroverted consumers’ relative data, using LISREL, is statistical acceptable. The result can be found in Table III.

From the model indicators, the theory structure in this study is a good goodness-of-fit model. It is acceptable in statistics. Model goodness-of-fit results are very similar except GFI and AGFI (both of them are less than 0.7), and this is acceptable. RFI and NFI are less than 0.9, but more than 0.8, so the model goodness-of-fit results are relatively good. Other indicators are more than 0.9, so the model goodness-of-fit results are very good. Bentler&Chou (1987) pointed out that it was difficult to
achieve the assumed goodness-of-fit for the model with many variables.

Without considering the other variables, there is a positive relation between perceived value and buying intention. Meanwhile, there is also a positive influence from perceived product sacrifice on buying intention. Ability of the sellers can positive affect the online shopper’s buying intention, which means the online shoppers want to spend money when they think the sellers have ability to offer products or service. Benevolence significantly influence the online shopper’s buying intention, too. When consumers think the motivation of the sellers is to benefit the consumer, they have positive feelings to the sellers. Integrity has weak positive influence on buying intention, which is not significantly.

![Figure 2. Research Result](image)

Based on the above results, Hypothesis 1, 2, 3, 4, and 5 are confirmed, and Hypothesis 6.

VI. DISCUSSION

There is a significant relationship between perceived value and intention to buy. There is also a significant relationship between perceived product sacrifice and intention to buy. This finding is similar with studies by Zeithaml et al. (2002) and Parasuraman et al. (2005), which show positive relationships between an online consumer’s perception of value and the consumer’s intention to purchase [2] [3]. Koiso-Kanttila (2005) synthesized existing literature about consumer benefits of the web [10]. Perceived value/benefit includes convenience, speed/time savings, ease of use, prices/cost saving, selection of items. Many of these factors found to be significant in a lot of literatures about online consumer behavior.

Because the Internet providers don’t have face-to-face trade with consumers, it is difficult to be sure those sellers are who they say they are, that they will deliver the quality goods and services promised, and will protect the personal information they collect. It is difficult for consumers to determine if online vendors are trustworthy by using more traditional methods such as: direct examination of products, a relationship with the vendor, prior experience, community opinion regarding sellers or their firms, etc. (Wang, 2001) [11]. So trust has significantly influence on online buying behavior.

Crosby, etc., (1990) noted that salespeople often act as relationship managers with customers [12]; therefore, the quality of the relationship between the customers and salespeople influence the buying behavior. They presented a model that observes the nature, consequences, and antecedents of relationship quality as perceived by the customer. The buying behavior is dependent on how well the customer is satisfied and the customer’s level of trust. Several researchers believe that trust issues have affected consumers make online purchase. Pavlous and Chai (2002) emphasized that the significance of trust is greater in online commerce than in face-to-face business transactions, because of the uncertainty of online purchases. In a word, formation of trust is important to whether consumers will purchase or not.

Geffen et al. (2003) integrated TAM and the construct of trust to study factors that build trust in the online situation, which lacks human interaction that often leads to trust [13]. Their research included experienced, repeat online consumers and indicated that consumer trust is as important to online commerce, perceived usefulness and perceived ease of use. The study also revealed that online trust is created through a belief that the vendor has nothing to gain by being untrustworthy.

However, Ba and Pavlou (2002) explained that compared to traditional markets, good feedback systems that allow consumers to make known their experiences with sellers [14]. Through rating the quality of the service provided by the sellers and posting comments would ascertain credibility of online business and would allow for more competition among e-business.

VII. CONCLUSION

This study proposed and tested the factors which influence online consumer’s intention to buy. The model include factors that have been found significant in previous research when tested individually or in pairs and combined factors that have not previously been tested together. The dependent variables were consumer’s intention to buy online, defined as the likelihood that a consumer plans to buy online in the near future. The independent variables include perceived value and trust. Perceived value is measured by perceived value and perceived product sacrifice, trust includes ability, benevolence and integrity.

The results show that perceived value and perceived product sacrifice have significantly influence on online shopper’s buying intention. On the other hand, ability and benevolence also have positive effect on online shopper’s buying intention. But integrity, as a part of trust, has no significantly influence on online shopper’s buying intention.

VIII. LIMITATION OF STUDY AND FUTURE STUDY
The conclusion of the study was limited by the amount of information and data discovered in the documents, reports, and studies comprising the literature review. In addition, the use of survey only to collect the data was a limitation because the data cannot be triangulated. Babbie(2004) describes triangulation as “the use of several different research methods to test the same findings”. Triangulation allows stronger support for the presence of a relationship [15]. However, similar limitation inhibits the validation of findings of any study or research project.

Second limitation was the sample. The author just used college students as the study objectives. If the results of this research want to be generalized, there will be more similar researches with different objectives.

Another limitation was the use of the Likert scale. As Gill and Jonson (2002) noted, participants may or may not give an accurate assessment of their beliefs, feelings, attitudes or behaviors [16]. Rather, they may answer according to what they feel the correct response should be, not how they really feel, or may respond by always marking the most neutral possible answer. Thus, the data is legitimate only to the extent that participants are completely honest.

Based on the findings, conclusions and limitation of this study, recommendations are presented in this section.

First, the research methods can be developed. Lab research can be introduced into the research. Because the field study has some factors which are difficult to control, such as the feeling of objectives, the environment factors. In laboratory, those factors can be controlled effectively.

Second, the research objectives can be distributed, more distributed samples can give more generalized result, which should be much more useful to the development of the theories.

Last, there are a lot of the factors influencing online shopper’s buying intention in researches. There are several factors explored in this research. But the factors in different researches can be consistent, the model of factors influencing online shopper’s buying intention can be riched and it will be much more useful to guide the management applications.

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