

Technology Readiness, Trustworthiness, and Use of E-Auctions

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ABSTRACT

The quality of service received from an e-auction website owes much to the use of self-service technology. Researchers have proposed that user personality traits and user perceptions of the service provider have an impact on individual use of web-based technology. This paper describes the development and validation of a conceptual model illustrating the impact of both the personality trait of technology readiness and the perception of online service provider trustworthiness on intentions to continue with the service. Using survey data collected from e-auction users in China and employing SEM analysis procedures, we found that both technology readiness and perceived service provider trustworthiness had an impact on user satisfaction of e-auction services which, in turn, had an impact on intentions to continue with the e-auction services. Implications and future research directions are also included in the study.

INTRODUCTION

In today's digital and networked society, the quality of life is often measured by how needs are satisfied by both offline and online services. Current literature proposes that to enjoy the desired quality of online services, users of business websites with a type of self-service technology should be sufficiently "technology ready." Individual users should possess the inclination to use the Internet and the web-based business applications. According to Parasuraman (2000), a person with optimism and innovativeness with little discomfort and insecurity is more likely to use a new technology. As a consequence, a Technology Readiness Index (TRI) was developed and tested in western culture settings. This stream of research asks for more effort to test its usability in different countries and cultures (Parasuraman, 2000).

Research also finds that as individuals become more Web-knowledgeable, they are increasingly aware of the risks and liabilities of online shopping. Trust theory proposes that confidence in people, in institutions and as a general disposition, influences human behavior (Mishra, 1996; Rousseau, et al., 1998).

This study merges these two streams of research into one model. Do personality traits regarding technology readiness have any impact on people's perceived trustworthiness toward e-auctions? Do people's technology readiness and perceived trustworthiness in e-auctions influence their behavioral intentions regarding use of web-based self-service technology? The combined approach will help us understand the nature of using web-based self-service technology. This paper addresses this issue by first focusing on ascertaining the generalizability of Parasuraman's (2000) simplified TRI to e-auction users in China. We then build upon our initial findings to investigate the impact of TRI on trustworthiness. Our third inquiry extends the investigation to the impact of TRI and trustworthiness on e-auction satisfaction which, in turn, leads to the impact on intentions to continue using e-auctions.

MODEL DEVELOPMENT AND HYPOTHESES

Technology Readiness Index

Researchers believe that use of self-service technology is influenced by both the technology design and the user characteristics, since personality affects the environment people choose and the speed with which one adapts to a new technology (Buss, 1987; Pocius, 1991). Mick and Fournier (1998) argue that consumers can simultaneously exhibit positive feelings (such as intelligence or efficacy) and negative feelings (such as ignorance or ineptitude) towards new technology. Parasuraman (2000) captured consumers' positive and negative feelings about technology in TRI, a multi-item scale. He defines technology readiness (TR) as "a propensity to embrace and use new technologies for accomplishing goals in home life and at work" (p. 308). TRI measures four dimensions of technology readiness: Optimism, Innovativeness, Discomfort, and Insecurity. Of these dimensions, optimism and innovativeness are drivers of technological readiness and discomfort and insecurity are inhibitors of technological readiness. The four dimensions are relatively independent of each other, with each trait indicating a person's openness to technology.

Optimism, according to Parasuraman, represents a positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives. Optimists tend to accept their situation and are less likely to be escapist (Scheier, & Carver, 1987). Therefore, optimists are more willing to use new technologies.

Innovativeness refers to a tendency to be a technology pioneer and a thought leader. This is similar to the theory construct of personal innovativeness in IT (PIIT) in the IS field - “willingness of an individual to try out any new information technology” (Agarwal & Prasad, 1998). Various studies have shown support for including this trait in explaining technology acceptance decisions, especially for identifying early adopters.

Discomfort is a perceived lack of control over technology and a feeling of being overwhelmed by it. Persons scoring high on the discomfort trait perceive technology as more complex and may find self-service technology hard to satisfy their own needs.

Insecurity indicates distrust of technology and skepticism about its ability to work properly. Such apprehensiveness results in individuals avoiding the use of computers due to their innate fear of technology. The reasons for this might lie in the skepticism people have to new technologies. We thus posit that people with a sense of insecurity will have lower satisfaction of a technology.

Literature tells us that personality concerns aspects of an individual’s thoughts and behavior that are stable over time and relatively consistent across different situations (Roberts & DelVecchio, 2000). In management theory, personality characteristics have been regarded as important in moderating human behaviors. Online consumer literature finds personality traits posing both significant challenges as well as unexpected opportunities to online service providers in identifying loyal customers (Ranaweera, Bansal, & McDougall, 2008). Since the emergence of TRI, studies were conducted in different settings (i.e., Jaafar, Abdul Aziz, Ramayah, & Saad, 2007; Lanseng, & Andreassen, 2007; Sophonthummapharn, & Tesar, 2007; Victorino, Karniouchina, & Verma, 2009; Walczuch, Lemmink, & Streukens, 2007) and in different countries (i.e., Elliott, Meng, & Hall, 2008; Jaafar, Ramayah, Abdul-Aziz, & Saad, Basri, 2007; Tsikritsis, 2004) investigating the strengths of TRI in revealing technology readiness in people, or exploring its applicability to different cultural environments.

Some studies found TR positive in improving service quality, enhancing satisfaction and behavioral intentions toward SSTs (Lin, & Hsieh, 2006; Lanseng, & Andreassen, 2007). Others had mixed results (Liljander, Gillberg, Gummerus, & van Riel, 2006; Walczuch, Lemmink, Streukens, 2007; Yen, 2005). However, perceptions and level of user satisfaction did vary across consumer segments based on TR. To sum up, the causal relationship between TR and service satisfaction is well-founded. Our task is to discover how TR dimensions relate to perceptions. To keep in line with the literature, we pose the following hypotheses:

Hypothesis 1: Data from e-auction users in China will yield the same four dimensions of technology readiness as designed by Parasuraman (2000).

Hypothesis 2: Perceived optimism and innovativeness toward SST will have a positive impact on user perceived satisfaction with e-auctions in China.

Hypothesis 3: Perceived discomfort and insecurity toward SST will have a negative impact on user perceived satisfaction with e-auctions in China.

Trustworthiness

Trustworthiness refers to one person's perception that another person or party is reliable, dependable, and worthy of trust (Caldwell, Hayes, Karri, & Bernal, 2007). Web trustworthiness (web trust in some literature), as an overall perception or belief, may positively or negatively affect current user perceptions of a specific Web vendor and its online service quality, which will, in turn, adjust user intentions to continue with certain web-enabled services (Rousseau, Sitkin, Burt, & Camerer, 1998). Such overall opinion or perception is associated with a person's past experience and often serves as a mediating role between personality and behavior (Baek-Kyoo and Lim, Aug2009; Kee, & Knox, 1970).

Recent studies in marketing have specifically explored the relationship between trustworthiness and customer satisfaction. Most findings reveal that trustworthiness has an impact on customer satisfaction and loyalty in relationship management (Lundstrom, & Dixit, 2008; Ryu, Min, & Zushi, 2008). Satisfaction can be created or increased by building a trustworthy image and by exhibiting trustworthy behavior (Chiou, & Droge, 2006; Ndubisi, & Wah, 2005). Trustworthy partners and trust building are even more important in maximizing satisfaction of cooperation in virtual domains (Mun, Shin, Lee, & Jung, 2009). A recent study in China found that in C2C e-markets where millions of anonymous agents buy and sell a plethora of goods, perceived trustworthiness of the Internet as a virtual business platform plus capability, integrity and benevolence of the e-market provider and the online business partners were related to perceived satisfaction and the intention to continue using the e-market (Lu, Wang, Yu, & Wu, 2009). Based on the literature regarding both TR and trustworthiness, we propose the follow hypothesis:

Hypothesis 4: Web trustworthiness will have an impact on user satisfaction with e-auctions in China.

Further, researchers believe that personality often serves as an antecedent of perception which helps to determine behavioral intentions (Raja, Johns, & Ntalianis, 2004). Optimism and innovativeness both represent a positive driver of technology use. Optimism represents a positive view and a dimension of confidence in technology. Innovativeness symbolizes a tendency to be a technology pioneer. By the same logic, an innovative and optimistic person is more likely to put trust in a technology innovation and more willing to use it. On the contrary, discomfort and insecurity both represent a negative feeling toward a technology innovation which may have negative impact on one's trust perception toward the technology. Therefore, we propose the following hypotheses:

Hypothesis 5: TR in terms of optimism and innovativeness will have a positive impact on perceived Web trustworthiness in China.

Hypothesis 6: TR in terms of discomfort and insecurity will have a negative impact on perceived Web trustworthiness in China.

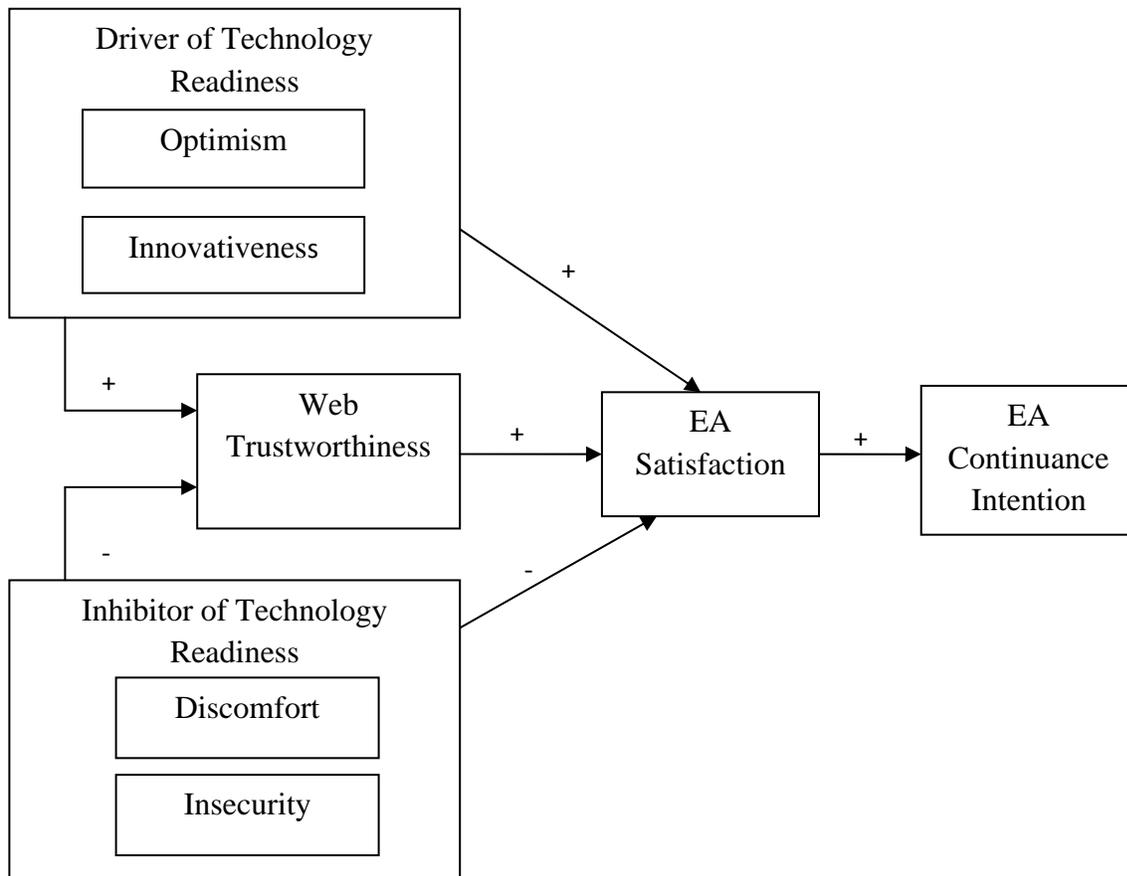
Satisfaction

Satisfaction has long been the goal of usability studies, IS success research in MIS, and consumer loyalty and retention in marketing. Satisfaction is also regarded as an attitude toward intention in TAM. The satisfaction attitude, in turn, predicts user intentions or actual use behavior (Davis, 1989).

Satisfaction has been receiving enormous attention in recent consumer-based EC studies. Recent statistics show that 80 percent of highly satisfied online consumers would shop again within two months and 90 percent would recommend the Internet stores, but 87 percent of unsatisfied consumers would leave their Internet vendors permanently (Cheung, & Lee, 2001). Researchers have proposed several research models to explain the formation of satisfaction (Bansal, McDougall, Dikolli, & Sedatole, 2004; Kohli, Devaraj, & Mahmood, 2004). These models have helped us to understand online consumer satisfaction in various aspects. Combining user satisfaction and e-auction user intention in the same model will provide a better picture of success than if either measure were used alone. Therefore, based on the findings from both user satisfaction and technology acceptance literatures, we reach the following hypothesis:

Hypothesis 7: User perceived satisfaction with an e-auction business will have a positive impact on their e-auction continuance intentions.

Figure 1 illustrates the theory constructs and hypothesized relationships in our operational research model. According to this model, the success of an e-auction business is largely in the hands of the online consumers. The TR driver in terms of optimism and



innovativeness, and the inhibitor in terms of discomfort and insecurity all influence user perceived e-auction satisfaction. Both types of personality traits also impact e-auction satisfaction indirectly via Web trustworthiness. User e-auction satisfaction will, in turn, drive intentions to return. The next section will describe the instrument development and the validation process of this theory model.

METHODOLOGY

Sample

The sample for this study was users of the top three e-auction providers in China – Taobao.com, Eachnet.com and Paipai.com (CNNICb, 2008). An e-auction is a virtual market mechanism that uses a competitive process by which a seller solicits consecutive bids from buyers (forward auctions) or a buyer solicits bids from sellers (reverse auctions), with prices determined dynamically by the bids (Turban, King, McKay, Marshall, Lee, & Viehland, 2008). According to the China Internet Network Information Center (2008), for the first six months last year, total e-commerce transactions reached 16.2 billion yuan. Overall online shopping rose to 27.9%. Of the online business models, C2C e-auction is the hottest among Chinese netizens. Taobao.com, the Chinese eBay, had a market penetration rate of 81.5% and an actual market share of 56.3%. According to this year's report (CNNIC, 2009), Taobao achieved the volume of online transactions for 80.9 billion Chinese yuan by the end of June, close to their annual volume of transactions for last year. Their registered users reached 140 million, well over one fourth of the entire web population in that country. No doubt, Taobao.com is the most influential C2C auction portal and the thermometer of e-commerce development in China. Eachnet.com, the real eBay China, is currently under the flag of TOM. EachNet followed Taobao as the number two e-auction provider in current China, with 8.4% market penetration rate and 5.8% actual market share (CNNICb, 2008). EachNet was China's very first online auction provider. They are expected to do better in the future. Paipai.com is under the flag of QQ.com, the largest online social networking provider in China. Paipai.com is the youngest of the three. They went into the e-auction business in 2006, and their market penetration rate was 7.2% and actual market share was 5.0% for last year (CNNICb, 2008). Their online customers are mostly in Guangzhou and nearby region, while Taobao and EachNet have most of their users in Hangzhou, Shanghai, and nearby regions.

E-auction tools are application software that can either be installed on a Web server or a desktop comprising proxy bidding tools, auction sniping tools that allow consumers to place last minute bids, e-auction listing tools showing items on auction sites, auction marketing services that display ads on behalf of auction sellers, and auction seller tools to make the listing more attractive or easier for buyers to obtain access to information more quickly. No doubt, the quality of service from an e-auction website largely depends on whether the e-auction user is familiar with the tools and functions provided at the website. Further, security and trust have become the biggest issue for online shopping (Pavlou, 2003). Our sample is likely to be representative of web-based SST users at large and C2C e-auction users in China.

Instrument

TR was assessed through the use of the simplified TRI from Prof. Parasuraman. This short version contains five items (1,3,5,7,9) as TR driver, and five items (2,4,6,8,10) as TR inhibitor as shown in the appendix. The reason for using this short version is our concern about the large number of items in the questionnaire. The length of the questionnaire might present challenges to scale administration and result in decreased response rate or accuracy due to response fatigue and agreement bias (Barnhart and Ratchford, 2007). The participants were asked to select the e-auction websites they used the most. We assumed that this was the technology with which they had the most experience. Their answers to the TR items might more or less be affected by such experience.

The items on Web trustworthiness, web satisfaction, and web continuance intentions were from an existing questionnaire –EWAM- used in a previous study (Lu, Wang, Yu & Wu, 2009). All the survey items were first developed and put together in English to serve as the basis for Chinese translation. A five-point Likert scale was employed for all the closed questions, with end-point anchors of Strongly Disagree (1) to Strongly Agree (5). One of the co-authors took the major responsibility to translate the instrument into Chinese. The Chinese version was then back translated by another co-author to remove and reduce major translation errors.

Data Collection

We used an online survey for data collection. A website was devoted to our survey (<http://www.zhijizhibi.com/>). We designed our online survey in a way that each survey participant had to save the answer to a survey question before proceeding to the next. The server automatically saved the participant's responses to the survey database. To attract web users to our survey, we used an investigator to enter the virtual chat rooms provided by <http://bbs.qq.com/> and by www.ZUCC.edu respectively on a regular basis. This investigator would send out messages inviting those in the chat room to join the online survey. Certain monetary incentives were rewarded for completing the online survey. Online communities, virtual chat rooms, and social networking websites are the hottest among Chinese netizens (CNNIC, 2009). In two months (02/01/2009-03/31/2009), 1200 invitations were distributed in those chat rooms, and 259 netizens participated in our online survey (return rate at 22%).

QQ.com is the most popular web portal famous for its instant messaging (IM) service in China. Since its entrance into Chinese households, QQ quickly emerged as a modern cultural phenomenon. QQ chat program is also the most heavily trafficked among Chinese netizens. According to *the 24th Survey and Statistical Report on the Internet Development in China* by CNNIC (2009), messaging, chatting, and online networking represents one the three most popular Web usage patterns in China, besides information searching and online entertainment. Fifty per cent of the Chinese netizens have the habit of using the Web for communication and social networking purposes. According to Netpop Research, 73% the social networking site visitors are below age 35 (Fu, 2009). According to CNNIC (2009), online shoppers, however, only comprise less than 30% of the total netizens and represent the most Internet savvy and innovative ones in China. They are mostly in the age range of 18-30. It is much more likely that

social networking site users include Web shoppers than vice versa. This is our major reason for using QQ.com to solicit survey participants in our study.

The popularity of online chatting and networking is deeply rooted in the collectivist Chinese society which values relationship handling and relationship networks (*guanxiwang*) more than individual decisions and independence. Such cultural impact on the Web use patterns in China is receiving increased attention from western web designers and professionals (Spethman and Singh, 2009). Some even believe that the popularity of Web 2.0 and social networking websites in China is exceeding that in the United States, and shows its great potential for further proliferation.

DATA ANALYSIS AND RESULTS

Descriptive statistics show that the sample was experienced web users, most with three-year or less e-auction experiences. Of the 259 respondents, 47.5% were females; over 80% were in the age range of 20-25, and the oldest was 48. Eighty-five percent of the participants had a college education. Forty-seven percent were actually university students. Two hundred and four (78.8%) of the participants were pure buyers. Two-hundred and twenty-three (86%) were Taobao users.

This sample, to a substantial extent, reflects the current features of the Web population in China -- with the largest component being high school and college students under the age of 30 and a higher percentage of EC users with an education level of college or above (CNNIC, 2007; CNNIC, 2008).

We examined the TRI variables as presented in the online survey. One Discomfort item was mis-represented. It was possible that the technician creating the online survey on the server made the mistake. This item was deleted from the variable list. Scale reliability testing for all the TRI short form variables resulted in a Cronbach alpha value of 0.73 which meets the criterion set by Nunnally (1978). We ran factor analysis over the TRI variables using principal components extraction with varimax rotation. The eigen value only identified two factors --factor 1 (TR4, TR5, TR7, TR9, TR10) and factor 2 (TR1, TR2, TR3, TR6). Since variables TR2, TR4, TR6, TR10 were designed to identify TR inhibitor, a cross loading problem was present. For this study, we dropped all the inhibitor variables. The rest of the TR variables remained with two driver factors as originally designed and thus used in model testing.

Confirmative Factor Analysis (CFA)

We used Amos 17.0 for windows to test for multivariate normality. After the CFA measurement model was created, Mardia's multivariate kurtosis value was examined. Since Mardia's value exceeds the level for multivariate normality, Bollen-Stine bootstrap procedures were run to control for the abnormal distribution (Byrne, 2009). Two thousand bootstrap samples were requested. The p value obtained was greater than .05, the measurement model was accepted, and the SEM procedures were continued for model testing.

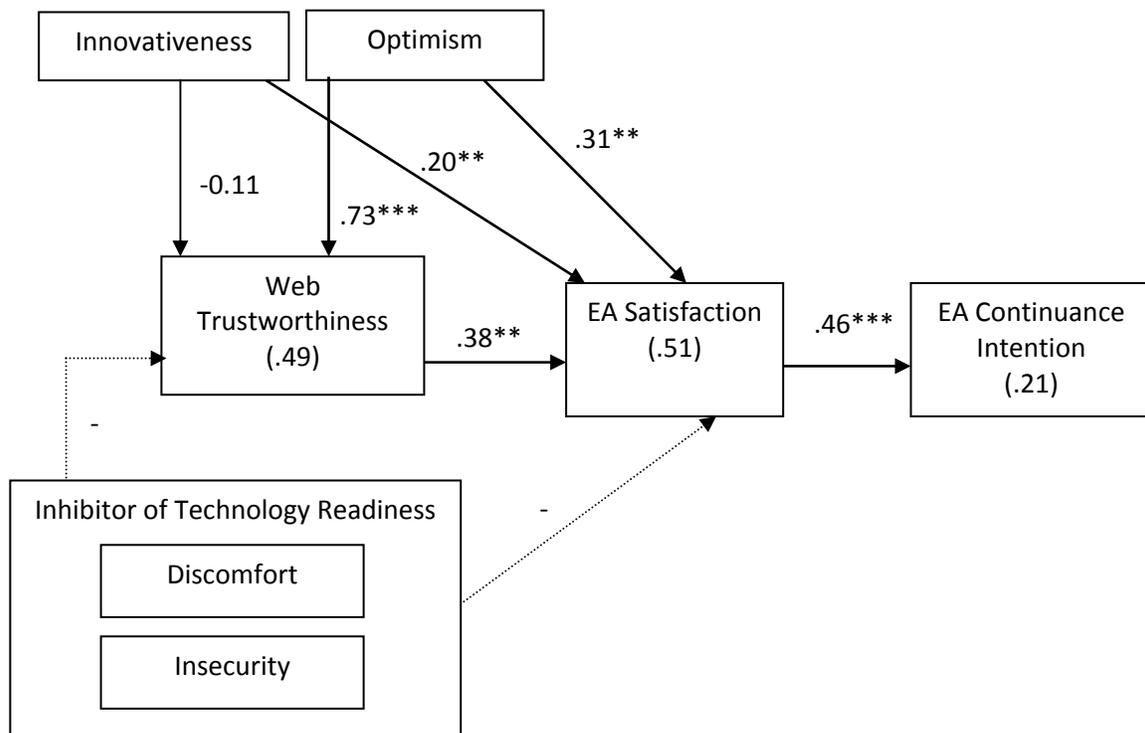
We empirically assessed convergent validity by examining the factor loadings. Discriminant validity was determined when indicators loaded more strongly on their corresponding construct than on any of the others in the model. The measurement CFA model results indicated acceptable convergent and discriminant validity.

Individual item reliability was evidenced in the empirical data, since all the loadings exceed 0.40, which conforms to the requirement for a major element in a construct (Byrne, 2009). Discriminant validity was acceptable as each correlation coefficient was less than 1 by an amount greater than twice its respective standard error (Bagozzi and Warshaw, 1990).

The measures used to assess model fit included Chi Square/df, goodness-of-fit (GFI), adjusted goodness-of-fit index (AGFI), index of fit (IFI), Tucker–Lewis index (TLI, equivalent to the non-normed fit index), comparative fit index (CFI), and root mean square error of approximation (RMSEA). Those measures revealed an acceptable model fit (Chi Square/df=2.44, GFI=.920, AGFI= .87, IFI= .911, TLI= .873, CFI = .909, RMSEA= .075).

The Structural Path Model

To test the hypothesized relationships, a structural model was then created. The model fit remained reasonably acceptable (Chi Square/df=2.605, GFI=.909, AGFI= .862, IFI= .895, TLI= .858, CFI = .893, RMSEA= .079). The path coefficients and explained variance for this structural model are shown in Figure 2. The anticipated predictors such as Innovativeness, Optimism, and Web Trustworthiness had reasonably strong direct impacts on perceived Satisfaction and collectively explained 51% of the variance. Satisfaction had a strong direct influence on Continuance Intention (.46). Optimism had a very strong direct impact on Web Trustworthiness (0.73) and reasonable indirect effects on satisfaction (0.323). Innovativeness, unexpectedly, had a weak negative impact on Web trustworthiness (-.11). For explanatory power of the entire model, 21% of the variance of Continuance Intention was explained.



DISCUSSION OF FINDINGS

Our empirical data did not reveal the same four dimensions of technology readiness as expected using the short scale. Hypothesis 1, thus, is rejected. However, most respondents scored high on two driver factors – optimism and innovativeness (mode=4 except on TR5). Compared to Elliott, Meng and Hall's (2008) findings among a group of Chinese university students, the mean scores on optimism (3.695 vs. 3.59) and on innovativeness (3.34 vs. 3.04) from our study were higher. According to the literature, people with high TRI levels score high on optimism and innovativeness. Our research participants represented a group of highly technology ready people. As online shoppers and frequent online chat room users, they obviously felt comfortable using web enabled tools. As our SEM procedures show clearly the positive causal relationships from constructs Optimism and Innovativeness to perceived Satisfaction, Hypothesis 2 is therefore, supported by the empirical data. Optimism and Innovativeness were significant predictors of likelihood to feel satisfied at the e-auction services. Optimism appears to be the stronger predictor (beta = .30), followed by Innovativeness (beta = .22).

Since the constructs Discomfort and Insecurity were unidentified in our study, Hypothesis 3 was left untested. However, we examined the input on the inhibitor variables one by one and found two Insecurity variables got high mean scores and mode scores (M=3.58, Mode=4 for TR2 and M=3.68 and Mode=4 for TR6). The mode on TR4 is also high (Mode=4). Most respondents had no confidence that the information sent to a machine or over the Internet gets to the right place. They worried that information sent over the Internet would be seen by unwanted third party. Regression analysis reveals that these three insecurity variables have significant statistically positive relationships with mean continuance intention ($p < .02$). Since these items are negative statements, it means that the more users were aware of the potential insecurity problems on the Internet, the higher their intention level to continue using e-auctions. This echoes the finding in the literature that awareness of the potential problems on the Internet does not necessarily prevent people from using the Internet (Mishra, 1996; Rousseau, et al., 1998).

Our SEM procedures revealed a clear positive causal relationship between Web Trustworthiness and user perceived Satisfaction with e-auctions (.39). Thus, Hypothesis 4 is supported by the empirical data. This finding adds to the results in our previous study (Lu, Wang, Yu, Wu, 2009).

The direct impact of optimism on web trustworthiness was very strong. Unexpectedly, the impact of innovativeness on web trustworthiness was a weak and negative one. Thus, Hypothesis 5 is only partially supported in this study. On one hand, the empirical data once again supported the notion that personality serves as an antecedent of perception which helps to determine behavioral intentions (Raja, Johns, & Ntalianis, 2004). On the other hand, innovativeness did not seem to have any positive impact on web trustworthiness, and yet, it had a positive impact on satisfaction. Walczuch and her colleagues also found a negative impact of Innovativeness on technology usefulness perceptions (2007). They asked for further research on the impact nature of innovativeness. Since our sample was relatively small, we would like to

refrain from making any comments at this point. Since TR discomfort and insecurity were not included in model testing, Hypothesis 6 remains untested.

User perceived satisfaction was identified as having a strong positive impact on their e-auction continuance intentions as expected (.46). Thus, Hypothesis 7 is supported by the empirical data. This also supports the finding in our previous study (Lu, Wang, Yu, & Wu, 2009). This finding is also in line with most findings on satisfaction in the marketing field and on attitude in IS research.

All the hypotheses and the relevant findings are listed in Table 1. Our study findings appear to indicate that young optimistic and innovative e-auction users who regard the Internet, the e-auction website, and online business partners as trustworthy will likely be satisfied with the services received from her frequently used e-auction website and will intend to continue using it.

Hypotheses	Results
H1: Data from e-auction users in China will yield the same four dimensions of technology readiness as designed by Parasuraman (2000).	Rejected.
H2: Perceived optimism and innovativeness toward SST will have a positive impact on user perceived satisfaction with e-auctions in China.	Supported.
H3: Perceived discomfort and insecurity toward SST will have a negative impact on user perceived satisfaction with e-auctions in China.	Untested.
H4: Web trustworthiness will have an impact on user satisfaction with e-auctions in China.	Supported.
H5: TR in terms of optimism and innovativeness will have a positive impact on perceived Web trustworthiness in China.	Partially supported.
H6: TR in terms of discomfort and insecurity will have a negative impact on perceived Web trustworthiness in China.	Untested.
H7: User perceived satisfaction with an e-auction business will have a positive impact on their e-auction continuance intentions.	Supported.

Table 1: Results of Hypotheses Testing

Implications

Assessing and predicting the likelihood of using self-service technology is a complex issue. Our study did not reveal all four of the TR dimensions as in Parasonoman’s (2000) study. The adoption of the short form, sample selection, and different cultural setting might accounted for this consequence. However, our empirical data has provided positive insight into the relative importance of two TR predictors – optimism and innovativeness of using technology - to use in self-selected e-auctions in China. This, to a certain extent, supports the previous finding that personality traits in terms of optimism and innovativeness of TR have a significant positive

effect on technology adoption. Personality traits work on behavioral intentions through perceptions.

This study also revealed that perceived Web trustworthiness serves as another predictor of satisfaction of frequently used e-auctions. This construct can serve as a mediating factor between personality and more specific perceptions and behavioral intentions. Most respondents in our study seemed to confront online transactions more openly and positively. This finding seems to comply with the conclusion in the latest report released by CNNIC (2009) that 84.3% of all Internet users in China consider the Internet the most important and most trustworthy source of information. It is true that many important official reports are released on the Internet in China.

IS professionals and online service providers should pay more attention to the influence of personality on online shopper behavioral intentions. Simple questions asking about the quality of online application designs and functions and superficial studies of user age and education level may have limited usefulness. In-depth studies of online user perceptions combined with studies of relevant personal characteristics including web trustworthiness and technology preparedness will help to explore deeper relationships and more specific preferences concerning self-service technology and online service quality. A manager can adopt his or her strategy on how to stimulate use of the IS by employees, based on their personalities (Walczuch et al, 2007). In our case, awareness of the technology readiness and web trustworthiness of customers can help managers adjust the online business experience to an optimal optimistic and trustworthy one.

Research Directions

Our study included an online survey among e-auction users in China. Since the respondents were recruited from online chat rooms, the results may not be generalized to web users in other settings. Studies using different samples and other types of self-service technologies should be performed to examine whether the relationship between the technology readiness dimensions and likelihood to use self-service technology will vary across research contexts and demographic characteristics of consumers.

The simplified TRI was adopted to supplement the use of another instrument, EWAM (E-auction Web Acceptance Method). Results of using the short version are limited in the literature. Studies are needed to verify its validity and reliability in recognizing the same four dimensions of technology readiness among people and to compare the power of the short version versus the full-blown TRI.

In our study the explanatory power of the model is not very strong. Only 21% of the variance in Continuance Intention was explained by perceived Satisfaction and its two antecedents. According to TAM related studies, the usefulness and ease of use of the technology may be instrumental in determining user decisional behaviors. In Lu, Wang, Yu and Wu's (2009) study among Taobao users, actual user-friendly design, functionality, and interactivity of an e-auction provider helped to explain 60% of their continuance intentions. Therefore, future studies combining TRI and trustworthiness with usefulness and ease of use of the technology may provide more information on the user decisional process.

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Appendix A – Survey Items for the Constructs under Study

Web Trustworthiness

Do you agree that the Internet as a legal business platform is trustworthy?

Do you agree that the business-partner (seller) inspire confidence in you?

Do you agree that this e-auction website is trustworthy?

Do you agree that this e-auction website is dependable?

Optimism

1. You find new technologies to be mentally stimulating

3. You like computer programs that allow you to tailor things to fit your own needs

Innovativeness

5. Other people come to you for advice on new technologies

7. You can usually figure out new high-tech products and services without help from others

9. In general, you are among the first in your circle of friends to acquire new technology when it appears

Insecurity (Excluded)

2. If you provide information to a machine or over the Internet, you can never be sure it really gets to the right place

4. You do not consider it safe to do any kind of financial business online

6. You worry that information you send over the Internet will be seen by other people

Discomfort (Excluded)

8. When you get technical support from a provider of a high-tech product or service, you sometimes feel as if you are being taken advantage of by someone who knows more than you do

10. It is embarrassing when you have trouble with a high-tech gadget while people are watching

Perceived Satisfaction

Do you agree that you are delighted at the process of getting services from this website?

Do you agree that you are satisfied at the services provided at this website?

Do you agree that you are happy with the information and services from this website?

Continuance Intention

Do you want to use this online auction in the future?

Do you intend to continue using this online auction?