

*Full Length Research Paper*

# The role of trust and ease of use in the development of Internet banking

Zhengwei Ma<sup>1\*</sup>, Jinkun Zhao<sup>2</sup> and Ming Li<sup>3</sup>

<sup>1</sup>China University of Petroleum (Beijing) /School of Business Administration, Beijing, China.

<sup>2</sup>Harbin University/ Teaching Supervision Department, Harbin, China.

<sup>3</sup>China University of Petroleum (Beijing) /School of Business Administration, Beijing, China.

Accepted 4 November, 2013

**Chinese customers adopted online banking service over fourteen years. But low customer satisfaction is still a problem of internet banking development in China. This study investigates how trust and ease of use influence internet banking customer satisfaction in China. Authors developed a theoretical model based on literature review. We analyzed the data using structured equation modeling (SEM) to evaluate the strength of the hypothesized relationships, if any, among the constructs, which include Ease of use and Trust as intervening variables, and Customer Satisfaction as the dependent variable. The results provide support of the expectation model. This study contributes to the literature by formulating and validating trust and ease of use model to increase customer satisfaction, and its findings provide useful information for bank management in formulating internet banking.**

**Key words:** Trust, ease of use, satisfaction, internet banking.

## INTRODUCTION

With the rapid growth of information technology, Internet banking provides efficient channels for delivering innovative financial services for each bank (Liao and Wong, 2008). Customers can receive financial services and perform transactions on the Internet through the web site of a bank during off-office hours and from anywhere where Internet access is available. In China, Industrial and Commercial Bank of China Limited (ICBC) is the first bank to provide Internet banking service to customer in 1997. Subsequently, several large size commercial banks have begun investing in Internet banking to significantly strengthen competitiveness and growth. During the past few years, most large and middle size commercial banks provide the internet banking service to customers. The internet banking market becomes more and more competitive. Many banks want to keep or extend the market share in the internet banking service sector. It is known that customer satisfaction has played an important role for decision making. In order to enhance the capability of

competition, Internet banking services should realize which criteria are determinants for customer satisfaction, and then advance the performance on these critical criteria.

Satisfaction is one of the most important customer reactions in Internet banking service, and its importance is reflected in the ability to help build up customer loyalty (Anderson and Srinivasan, 2003), enhance favorable word of mouth (Bhattacharjee, 2001), lead to frequent use (Reibstein, 2002) and improve the banks' market share and profitability (Reichheld and Scheffer, 2000). In these several years, many researchers have taken different approaches and focused on a variety of aspects in investigating satisfaction with consumer based e-service. Yoo and Donthu (2001) believe ease of use is one important fact influencing internet banking customer satisfaction. Luo et al. (2010) proved that trust is the potential factor for customer adopted e-banking service.

Authors will adopt the new research model for this

\*Corresponding author. E-mail: [mzw8632425@yahoo.com.cn](mailto:mzw8632425@yahoo.com.cn).

study, and adjust the model to reflect the characteristics of Internet banking. We will propose perceived ease to use and trust, to enhance the understanding of customer satisfaction of Internet banking. We used a structural equation modeling (SEM) approach to validate the research model. This paper will help researchers, developers, and managers to understand the major determinants of customer satisfaction of Internet banking.

## LITERATURE REVIEW

With the most global banking corporations offering and improving internet banking services rapidly on the rise, it is an opportune time to study customer satisfaction of internet banking. Such a study will be interesting to both academics and banking executives. Specifically, this study investigates individuals' perception about the satisfaction of internet banking for corporate purposes. An abundance of studies aimed at extending our understanding of customer satisfaction have been conducted in the past.

### Trust (TR)

There are so many different definitions of trust across research areas. Definition and conceptualization is very confused. McKnight and Chervany (2002) divided trust into four kinds: They are disposition to trust, institution based trust, trusting belief, and trusting intention. Disposition to trust is the extent to which one displays a consistent tendency to be willing to depend on others in general across a broad spectrum of situations and people. Institution based trust means one believes that the conditions conducive to situational success in an endeavor or aspect of one's life are in place. Trusting belief is where one believes that the other party has one or more characteristics beneficial to oneself. Trusting intention means that one is willing to depend on, or intends to depend on, the other party even though one cannot control that party.

Mayer et al. (1995) find that trust has three characteristics: they are ability, benevolence, and integrity. Ability means that trustor believes trustee has the power to do what the trustor need done. Benevolence is the extent to which a trustee wants to do good to a trustor, aside from an egocentric profit motive. Integrity means that a trustor thinks that a trustee will make good-faith agreements, tell the truth, act ethically and fulfill promises. McKnight and Chervany (2002) found one other factor, predictability. Mayer et al. (1995) asserted that trust must be beyond predictability, because one person does not trust the other parties who are highly predictable to ignore the needs of others and act in a self-interested fashion.

The question of trust could be more important in the

Internet banking environment than in the entity banking environment (Ratnasingham, 1998). Because uncertainty and risk are inherent, and contracts and warranties are often absent in the internet environment (Grazioli and Jarvenpaa, 2000). In the Internet banking environment, customers in all over the world are allowed to access critical files on computers and information transferred via the Internet. Therefore, Internet banking is inherently risky from the viewpoint of security. Moreover, Internet banking is highly uncertain, because the parties involved in a transaction are not in the same place (Clarke, 1997). Customers cannot observe a teller's behavior directly, and cannot depend on things like physical proximity. So trust is important factor in Internet banking environment; author believed that customer trust is a major factor influencing customer's satisfaction of Internet banking.

### Perceived ease of use (PEU)

In information systems literature, ease of use was suggested as a causal antecedent to perceived customer satisfaction in Venkatesh and Davis (1996)'s study. Igbaria et al. (1997) found that perceived ease of use is the one of most important factors in the acceptance of personal computing. Ease of use has been regarded as a factor that influences users' satisfaction (McHaney and Cronan, 1998), a measurement of system quality (DeLone and McLean, 1992), and a determinant of IT adoption (Davis, 1989). These phenomena have been supported by e-transaction studies. That is, in those studies that propose a key dimension of web quality (Aladwani and Palvia, 2002) or find determinants of customer satisfaction (Pikkarainen et al., 2006), ease of use is frequently used. In particular, Liao and Cheung (2008) proposed and empirically tested ease of use as a measurement of consumer satisfaction with internet banking.

In the study, authors also investigate this relationship. Customers who are easy to use will also perceive the services to be more useful, as suggested by previous research findings (Lucas and Spitler, 1999; Lederer et al., 2000). Meanwhile, convenience is very important reason why customers adopt Internet banking service. In other words, customers do not need to spend mass of time and effort to learn how to use the services. Perceived ease of use represents an important motivating component of customer adopted Internet services. Therefore, perceived ease of use is an antecedent of customer satisfaction with online banking.

### Customer satisfaction (CS)

Lee (2009) found that customers' complaints had a direct effect on customer satisfaction. They reported that as one-dimensional attributes increased, the level of overall customer satisfaction also increased. Ahmed et al. (2001)

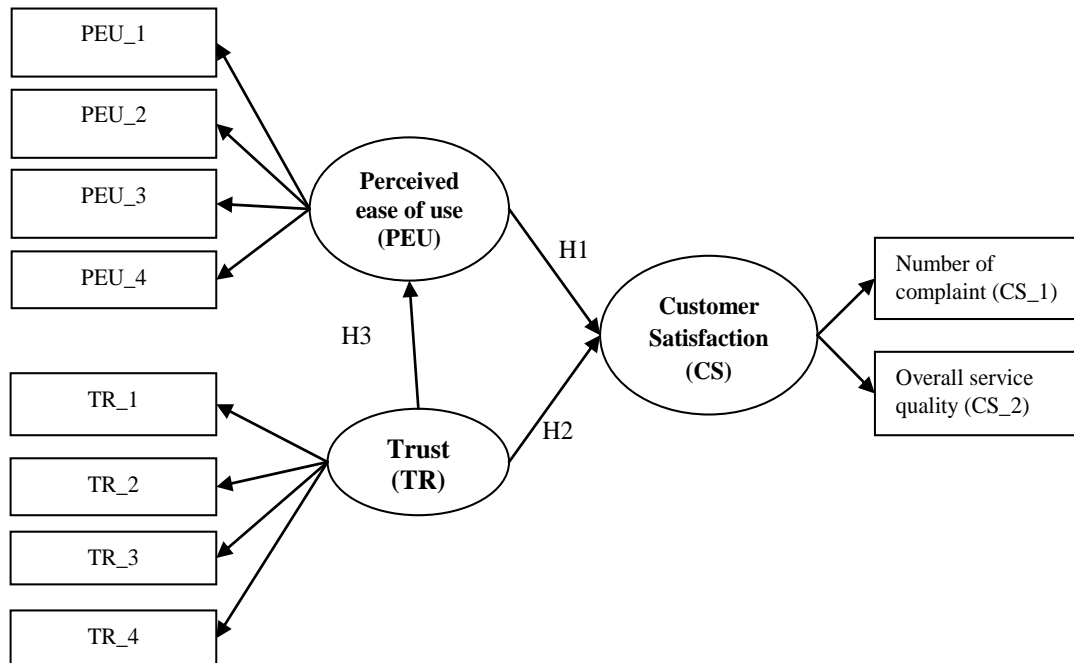


Figure 1. Research factors and hypotheses in the present study.

discovered that major gains in customer satisfaction were likely to come from an alleviation of complaints. These scholars, overall, concur that the number of complains is an index of customer satisfaction. This is why, in the present study, the number of complaints was used to measure customer satisfaction.

Service quality is defined as a long-term cognitive judgment (Yoon, 2010) regarding an organization's "excellence or superiority" (Parasuraman et al., 1991). Two main streams of research into the dimensions of service quality exist: the Nordic school, which tends to incorporate the process and outcome dimensions (Casalo et al., 2007), and the North American school, which draws on SERVQUAL (Parasuraman et al., 1991). A customer-oriented quality strategy is critical to service firms as it drives customers' behavioral intention with, for instance, highly perceived service quality leading to repeat patronage and customer loyalty (Zeithaml, 2000). Accordingly, substandard service quality will lead to negative word-of-mouth, which may result in a loss of sales and profits as the customers migrate to competitors (Zeithaml et al., 2002). These factors stress the importance of delivering high-level services, especially within an electronic environment, where customers can readily compare service firms and where switching costs are low (Van-Riel et al., 2001).

China Financial Certification Authority (CFCA) was established by 14 national banks in China. It is the authority agency to monitor internet banking services in China. CFCA uses two indexes to measure quality of internet banking: Percentage of increase in the number of

users and the frequency of internet banking service use. These measurement criteria were adopted in the present study to verify the overall internet banking quality.

## CONSTRUCTS FOR THE PRESENT STUDY AND HYPOTHESIS

According to the possible connection among trust, perceived ease of use and customer satisfaction in handling private data, a direct relationship might be established among the three concepts. And follow the prior study; one construct is addressed in the present study: Trust, perceived ease of use and customer satisfaction, all of which are elaborated in prior paragraphs. The relationships among trust, perceived ease of use and customer satisfaction, as embedded in the hypotheses, are illustrated in Figure 1.

Taking into account the previous considerations, the relationship among trust, perceived ease of use and customer satisfaction are evident in personal data handling and should be examined in greater detail. With the aim of testing these connections in the internet banking customer satisfaction, the following hypotheses are proposed:

**H1:** There will be a positive relationship between perceived ease of use and customer satisfaction.

**H2:** There will be a positive relationship between trust and customer satisfaction.

**H3:** There will be a positive relationship between trust

**Table 1.** Factor loadings (from SPSS exploratory factor analysis).

Factors	Factor loading	Cronbach alpha	Variance explained (%) 80.612%	Construct Reliability (CR)	AVE
CS		0.855	23.476	0.8577	0.7508
CS 1	0.850				
CS 2	0.835				
PEU		0.913	29.990	0.8995	0.6912
PEU_1	0.789				
PEU_2	0.753				
PEU_3	0.744				
PEU_4	0.703				
TR		0.902	27.147	0.903	0.6995
TR_1	0.805				
TR_2	0.779				
TR_3	0.653				
TR_4	0.609				

Used SPSS Principal Axis Factoring extraction with Equamax rotation method.

and perceived ease of use.

## MATERIALS AND METHOD

### Data Collection

The generation of the initial questionnaire was ascertained by experts and managers interviews at banks as well as through in-depth discussions with online banking users. All questions were scored using a seven-point Likert-scale, where 1 corresponds to "strongly disagree" and 7 to "strongly agree". Pre-tests of the initial 15-item questionnaire were carried out with 30 internet banking users to improve the questionnaire. The resulting modified 10-item pool was presented to Chinese users of internet banking in drop in survey. Respondents were asked to refer to their own internet banking service (the one they use regularly) when answering the questionnaire. Non-random method of collecting the data (volunteer sampling) generated 198 fully usable questionnaires. The questionnaires of collection are non-random samples. So authors compared some of the survey results with available information about the population. The results are very similar and as a consequence, authors may conclude that our sample represents the profile of the average Chinese internet banking users.

## MEASURES VALIDATION AND RESULTS

### Exploratory factor analysis

An exploratory factor analysis using SPSS 17 was conducted on all the data. The rotated factor matrix, resulting from an Equamax rotated principal axis factor extraction of the independent variables using the 1.0 eigenvalue cut-off criterion (Table 1), which indicates that eleven factors emerged and reports their factor loadings.

The data were tested using the SPSS 17 exploratory factor analysis to evaluate the Cronbach alpha. The Cronbach alpha indicator is the most frequently used test for assessing reliability. Some scholars consider that it

underestimates reliability (Smith and Fretwell, 1974). Consequently, the use of composite reliability has been suggested (Jöreskog, 1971), using a cut-off value of 0.7. The results show the value for perceived ease of use's Cronbach alpha is 0.913; the value for trust's Cronbach alpha is 0.902; the value for customer satisfaction's Cronbach alpha is 0.855. This is satisfactory. Each item was evaluated individually to ensure convergent validity and item reliability. All factor loadings were larger than 0.5, representing an acceptable significant level of internal validity. The factor loadings ranged from 0.85 - 0.835 for customer satisfaction; from 0.703 - 0.789 for perceived ease of use; from 0.609 - 0.805 for trust. All factor loadings were of an acceptable significant level, all ten items were retained for further analysis (Table 1).

### Confirmatory factor analysis

Authors developed a structural equations model (SEM), which the objective of testing is the proposed hypotheses (Figure 2). Authors observed that the hypothesis was supported at the 0.01 level and, in a similar way. Model fit was acceptable (Chi-square = 50.701 df,  $p < 0.05$ , normed Chi-Square = 1.690). From calculating, the author obtained structural equations model (SEM) fit indexes, and listed these processes in the following paragraphs.

The GFI (goodness of fit index) was devised by Jöreskog and Sörbom (1984) for MI and UI estimation, and generalized to other estimation criteria by Tanaka and Huba (1985). The GFI is given by,

$$GFI = 1 - \frac{\hat{F}}{\hat{F}_b} \quad (1)$$

where  $\hat{F}$  is the minimum value of the discrepancy function and  $\hat{F}_b$  is obtained by evaluating  $F$  with  $\sum^{(g)} = 0$ ,  $g = 1$ ,

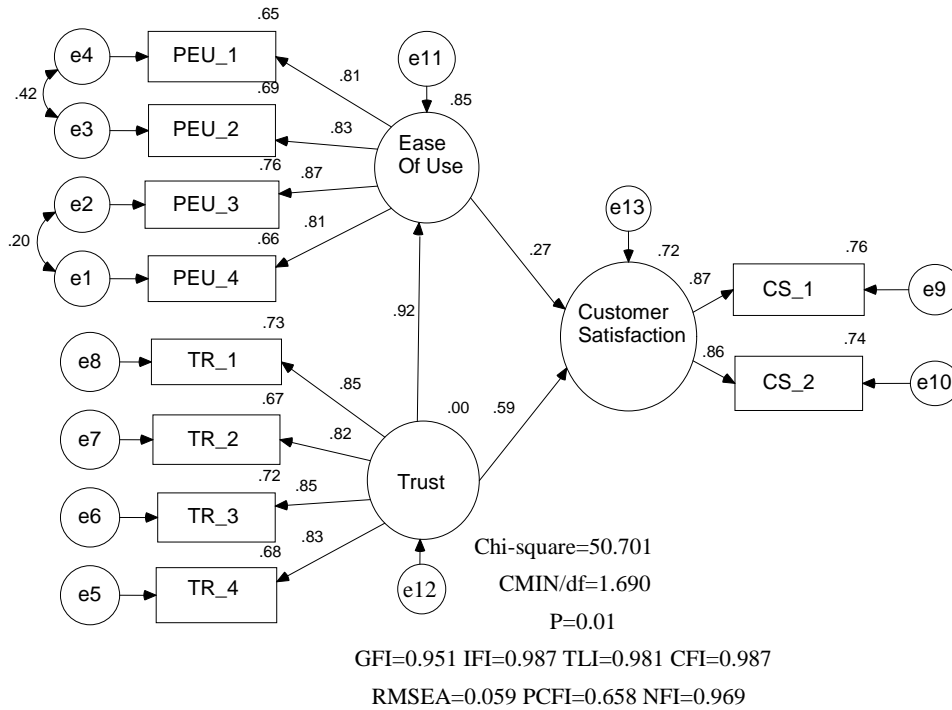


Figure 2. The structural equation model.

2,...,G. An exception has to be made for maximum likelihood estimation, since (D2) is not defined for  $\Sigma^{(g)} = 0$ . For the purpose of computing GFI in the case of maximum likelihood estimation,  $f(\Sigma^{(g)} ; S^{(g)})$  is calculated as:

$$f(\Sigma^{(g)} ; S^{(g)}) = \frac{1}{2} \text{tr} [K^{(g)-1}(S^{(g)} - \Sigma^{(g)})]^2 \tag{2}$$

with  $K^{(g)} = \Sigma^{(g)}(\hat{\gamma}_{ML})$ , where  $\hat{\gamma}_{ML}$  is the maximum likelihood estimate of  $\gamma$ . From using formula (1) and (2), the author calculated that the Model's GFI is 0.951.

The AGFI (adjusted goodness of fit index) takes into account the degrees of freedom available for testing the model. It is given by,

$$AGFI = 1 - (1 - GFI) \frac{d_b}{d} \tag{3}$$

Where

$$d_b = \sum_{g=1}^G p^{*(g)} \tag{4}$$

From the formula (3) and (4), the author got that the model's AGFI value is 0.909.

The Bentler-Bonett normed (Bentler and Bonett, 1980) fit index (NFI), or  $\Delta_1$  in the notation of Bollen (1989) can be written as,

$$NFI = \Delta_1 = 1 - \frac{\hat{C}}{C_b} = 1 - \frac{\hat{F}}{F_b} \tag{5}$$

Where  $\hat{C} = n\hat{F}$  is the minimum discrepancy of the model being evaluated and  $C_b = n\hat{F}_b$  is the minimum discrepancy of the baseline model. From the formula (5), the author calculated that the Model's NFI is 0.969.

The comparative fit index (CFI; Bentler, 1990) is given by,

$$CFI = 1 - \frac{\max(\hat{C}-d,0)}{\max(C_b-d_b,0)} = 1 - \frac{NCP}{NCP_b} \tag{6}$$

where  $\hat{C}$ ,  $d$ , and  $NCP$  are the discrepancy, the degrees of freedom and the noncentrality parameter estimate for the model being evaluated, and  $C_b$ ,  $d_b$  and  $NCP_b$  are the discrepancy, the degrees of freedom and the noncentrality parameter estimate for the baseline model. From the formula (6), the author calculated that the Model of the study's CFI is 0.987.

$F_0$  incorporates no penalty for model complexity and will tend to favor models with many parameters. In comparing the two nested models,  $F_0$  will never favor the simpler model. Steiger and Lind (1980) suggested compensating for the effect of model complexity by dividing  $F_0$  by the number of degrees of freedom for testing the model. Taking the square root of the resulting ratio gives the population "root mean square error of approximation", called RMS by Steiger and Lind (1980), and RMSEA by Browne and Cudeck (1992).

$$\text{Population RMSEA} = \sqrt{\frac{F_0}{d}} \tag{7}$$

**Table 2.** Fit statistics of final model.

Fit statistic	Suggestion	Obtained
Chi-square		50.701
Df		30
Chi-square significance	P < or = 0.05	0.01
Chi-square/df	< 5	1.904
GFI	> 0.90	0.951
AGFI	> 0.90	0.909
NFI	> 0.90	0.969
CFI	> 0.90	0.987
RMSEA	< 0.08	0.059

$$\text{Estimated RMSEA} = \sqrt{\frac{\hat{F}_0}{d}} \tag{8}$$

The results show that the RMSEA index is 0.059.

Overall, our model exhibited a reasonable fit with the data collected. We assessed the model fit using other common fit indices: Goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), comparative fit index (CFI), root mean square error of approximation (RMSEA). The model exhibited a fit value exceeding or close to the commonly recommended threshold for the respective indices, the commonly suggested value listed in Table 2.

It was also notable that this model has allowed authors to explain at a very high level trust and perceived ease of use in customer satisfaction of online banking service. Besides, according to the standardized estimates, authors may say that customer satisfaction is clearly and positively influenced by trust and perceived ease of use in handling personal data ( $\beta_1 = 0.59$  and  $\beta_2 = 0.27$ ), and trust is clearly and positively influenced by perceived ease of use ( $\beta_3 = 0.92$ ). Compared with PEU\_1, PEU\_2 and PEU\_4, PEU\_3 ( $\beta > 0.85$ ) has larger effect for perceived ease of use, and authors found that TR\_1 ( $\beta > 0.85$ ) has larger effect than TR\_2, TR\_3 and TR\_4 for trust in Figure 2.

**Construct reliability analysis**

The construct reliability of the latent variables is an evaluation standard for the inner quality in a structural equation model. If the construct reliability is higher than 0.7, the inner quality of the model is considered acceptable (Kline, 1998). The author will use the model standardized regression weights to calculate the construct reliability, presented as  $\rho_c$ . Construct reliability of customer satisfaction and customer service quality were calculated at a suggested lower limit of 0.70 with equation (1). The results (Construct Reliability) are shown in Table 1.

$$\rho_{c1} = \left[ \frac{(\sum \lambda_1)^2}{(\sum \lambda_1)^2 + \sum \theta_1} \right] \tag{9}$$

Another index, similar to construct reliability, is “average variance extracted (AVE),” presented as  $\rho_v$ . This index can explain how much variance explained in the latent variable comes from the observed variables. The higher the average variance extracted, the better the observed variables could explain the latent variable. Generally speaking, the model’s inner quality is considered good when the average variance extracted is higher than 0.5. The average variance extracted from customer satisfaction and customer service quality was calculated at a suggested lower limit of 0.50 with equation (2). The results (Average Variance Extracted, AVE) are shown in Table 1.

$$\rho_{v1} = \left[ \frac{(\sum \lambda_1^2)}{(\sum \lambda_1^2) + \sum \theta_1} \right] \tag{10}$$

**DISCUSSION**

The results of the study provide support for the research model presented in Figure 1. And the results also prove the hypotheses regarding the directional linkage among the model’s factors. The finding reveals that trust ( $\beta_3 = 0.59$ ) has a positive influence on customer satisfaction in internet banking service. In the same time, authors find that trust ( $\beta_3 = 0.92$ ) has a strong positive influence on ease of use. This implies that customers might not adopt the internet banking because of trust. Second, the study found the positive influence of ease of use on customer satisfaction was significant. Customer satisfaction is positively influenced by ease of use ( $\beta_3 = 0.27$ ) in Figure 2.

In conclusion, these results provide two key insights into the determinants of internet banking customer satisfaction. First, trust can affect both ease of use and customer satisfaction, and trust could indirectly affect customer satisfaction through ease of use. Without trust internet banking customers may not adopt internet banking service. When limited resources become the barrier to improve all of two factors, banks should improve trust first, and ease of use to be second. Second, the online customers more care about trust compared to ease of use. If banks can be trusted by customers, it will increase customer satisfaction. For example, Bank of American promises that the bank can compensate customer loss, if the loss happens at using the internet banking service. So Chinese banking corporations should launch policy to increase customer’s trust, for example customers’ property loss insurance, pay back customers’ loss policy.

**Limitation**

Since this empirical study was performed with a time constraint, as with other cross-sectional studies, it is not without limitations. The internet banking service in China, as well as knowledge about customer behavior in relation to internet banking, is at the infancy stage. At a time

when rapid changes in new technologies come to market daily, the results of a cross-sectional study may not be perfectly generalizable.

Also there are other limitations to the present study. The sample was China-focused, with all of the respondents living in China. The participants in this survey may have possessed attributes and behaviors that differed from other country in the world, and the sample was restricted to the customers of banks and may have possessed attributes and behaviors that differ from those of consumers in other business industries. Lastly, as mentioned earlier, in the data collection section, since it was impossible to send follow-up surveys, no attempts were made to ascertain the existence of non-response bias by comparing responses to the first-wave surveys with those to a second wave.

## FUTURE STUDY

This study only covers two factors of trust and ease of use in customer satisfaction of internet banking area. Future research may follow up the present study in several ways. First, the present study focuses on trust, ease of use and customer satisfaction as perceived by consumers who have conducted internet transactions. However, a mass of individuals primarily utilize the Internet as information sources and have never conducted commercial transactions over internet banking websites. These customers may have some unique perspectives regarding trust and ease of use. Thus, future studies should employ a more generalized website quality scale which taps perceptions from both groups. Second, as the e-commerce field becomes increasingly mature, customers will develop distinct expectations for the quality of online services. Accordingly, more and more industry-wide service standards will be set up and implemented. Thus, future studies may utilize the expectation-disconfirmation paradigm to measure existing and new dimensions of internet service quality and customer satisfaction.

## ACKNOWLEDGEMENT

I would like to express my deepest appreciation to all individuals who have helped me complete the study. And the project was sponsored by Research Funds of China University of Petroleum-Beijing.

## REFERENCES

- Aladwani AM, Palvia PC (2002). Developing and validating an instrument for measuring user-perceived web quality. *Inform. Manage.* 39(6):467-476.
- Ahmed I, Gul S, Hayat U, Qasim M (2001). Service quality, service features and customer complaint handling as the major determinants of customer satisfaction in banking sector: A case study of National Bank of Pakistan. Retrieved January 14, 2001, from <http://www.wbiconpro.com/5%5B1%5D.ISHFA.pdf>.
- Anderson RE, Srinivasan SS (2003). E-satisfaction and E-loyalty: A contingency framework. *Psychol. Market.* 20(2):123-138.
- Bentler PM (1990). Comparative fit indexes in structural models. *Psychol. Bull.* 107(2):238-246.
- Bentler PM, Bonett DG (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychol. Bull.* 88(3):588-606.
- Bhattacharjee A (2001). An empirical analysis of the antecedents of electronic commerce service continuance. *Decis. Support Syst.* 32(2): 201-214.
- Bollen KA (1989). A new incremental fit index for general structural equation models. *Sociol. Methods Res.* 17(1):303-316.
- Browne MW, Cudeck R (1992). Alternative ways of assessing model fit. *Sociol. Methods Res.* 21(2):230-258.
- Casalo LV, Flavian C, Guinaliu M (2007). The role of security, privacy, usability and reputation in the development of online banking. *Online Inform. Rev.* 31(5):583-603.
- Clarke R (1997). Promises and threats in electronic commerce, available at [www.anu.edu.au/people/Roger.Clarke/EC/Quantum.html](http://www.anu.edu.au/people/Roger.Clarke/EC/Quantum.html).
- Davis FD (1989). Perceived usefulness, perceived ease of use, and user acceptance. *MIS Q.* 13(3):319-340.
- DeLone WH, McLean ER (1992). Information system success: The quest for the dependent variable. *Inform. Syst. Res.* 3(1):60-95.
- Grazioli S, Jarvenpaa SL (2000). Perils of Internet fraud: an empirical investigation of deception and trust with experienced Internet. *IEEE Transactions on Systems, Man, and Cybernetics-Part A: Syst. Hum.* 30(4):395-410.
- Igbaria M, Zinatelli N, Cragg P, Cavaye ALM (1997). Personal computing acceptance factors in small firms: A structural equation model. *MIS Q.* 21(3):279-305.
- Jöreskog KG, Sörbom D (1984). LISREL-VI User's Guide (3rd Ed.). Mooresville, IN: Scientific Software.
- Jöreskog KG (1971). Simultaneous factor analysis in several populations. *Psychometrika* 36(1):409-426.
- Kline RB (1998). Principles and practice of structural equation modeling. New York: The Guilford Press.
- Lederer AL, Maupin DJ, Sena MP, Zhuang Y (2000). The technology acceptance model and the World Wide Web. *Decis. Support Syst.* 29(3):269-282.
- Lee MC (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Res. Appl.* 8:130-141.
- Liao Z, Cheung MT (2008). Measuring consumer satisfaction in Internet banking: a core framework. *Commun. ACM.* 51(4):47-51.
- Liao Z, Wong WK (2008). The determinants of customer interactions with internet enabled e-banking services. *J. Oper. Res. Soc.* 59:1201-1210.
- Lucas JHC, Spittler VK (1999). Technology use and performance: A field study of broker workstation. *Decis. Sci.* 30(2):291-311.
- Luo X, Li H, Zhang J, Shim JP (2010). Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services. *Decis. Support Syst.* 49(2):222-234.
- Mayer RC, Davis JH, Schoorman FD (1995). An integrative model of organizational trust. *Acad. Manage. Rev.* 20(3):709-734.
- McHaney R, Cronan TP (1998). Computer simulation success: On the use of the end-user computing satisfaction instrument: A comment. *Decis. Sci.* 29(2):525-536.
- McKnight DH, Chervany NL (2002). What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. *Int. J. Electron. Commerce* 6(2):35-59.
- Parasuraman A, Berry LL, Zeithaml VA (1991). Refinement and reassessment of the SERVQUAL scale. *J. Retail.* 67(4):420-450.
- Pikkarainen K, Pikkarainen T, Karjaluoto H, Pahnla S (2006). The measurement of end-user computing satisfaction of online banking services: Empirical evidence from Finland. *Int. J. Bank Market.* 24(3):158-172.
- Ratnasingham P (1998). The importance of trust in electronic commerce. *Internet Research: Electronic Networking Appl. Policy* 8(4):313-321.
- Reichheld FF, Scheffer P (2000). E-loyalty: Your secret weapon on the web. *Harvard Bus. Rev.* pp.105-113.

- Reibstein DJ (2002). What attracts customers to online stores, and what keeps them coming back?. *Acad. Market. Sci.* 30(4):465-473.
- Smith CC, Fretwell SD (1974). The optimal balance between size and number of Offspring. *Am. Naturalist* 108(962):499-506.
- Steiger JH, Lind JC (1980). Statistically-based tests for the number of common factors. *Proc. Annu. Spring Meeting Psychomet. Soc.* pp.3-12.
- Tanaka JS, Huba GJ (1985). A fit index for covariance structure models under arbitrary GLS estimation. *Br. J. Math. Stat. Psychol.* 38(2):197-201.
- Van-Riel ACR, Lijander V, Jurriens P (2001). Exploring consumer evaluations of eservices: A portal site. *Int. J. Service Ind. Manage.* 12(4):359-377.
- Venkatesh V, Davis FD (1996). A model of the antecedents of perceived ease of use: Development and test. *Decis. Sci.* 27(3):451-481.
- Yoo B, Donthu N (2001). Developing a scale to measure the perceived quality of an Internet shopping site (SITEQUAL). *Q. J. Electronic Commerce* 2(1):31-45.
- Yoon C (2010). Antecedents of customer satisfaction with online banking in China: The effects of experience. *Comput. Hum. Behav.* 26(6):1296-1304.
- Zeithaml VA, Parasuraman A, Malhotra A (2002). Service quality delivery through web sites: A critical review of extant knowledge. *J. Acad. Market. Sci.* 30(4):362-375.
- Zeithaml VA (2000). Service quality, profitability and the economic worth of customers: What we know and what we need to learn. *J. Acad. Market. Sci.* 28(1):67-85.