20

The Moderating Effect of Switching Costs on the Customer Satisfaction-retention Link: Retail Internet Banking Service in Hong Kong

Chi-Bo Wong, Hong Kong Shue Yan University, Hong Kong, cbwong@hksyu.edu Joseph M. Mula, University of Southern Queensland, Australia, mula@usq.edu.au

Abstract

The objective of this research was to develop a model that examines the direct effects of customer satisfaction and switching costs on customer retention as well as the moderating effect of switching costs on the relationship between customer satisfaction and customer retention in the segments of basic and advanced Internet banking users. This empirical research was conducted within the context of the retail Internet banking industry in Hong Kong. An online questionnaire was employed as the means of data collection. This research confirms the significant positive effects of customer satisfaction and switching costs on customer retention in both segments of basic and advanced Internet banking users. It is interesting that switching costs play a significant moderating effect on the customer satisfaction-retention link only for the segment of basic Internet banking users. For the segment of advanced Internet banking users, the moderating effect of switching costs does not significantly affect satisfaction-retention link.

Keywords: Customer retention, Customer satisfaction, Switching costs, Moderating effect.

1. Introduction

The utilization of Internet banking services continues to show healthy growth in Hong Kong. There were 4.9 million personal and 307,000 business Internet banking accounts at the end of 2007, compared with 3.8 million and 234,000 respectively in 2006 (Hong Kong Monetary Authority, 2008). Internet banking allows customers to access banking services 24 hours a day, 7 days a week. Like ATMs, Internet banking empowers customers to choose when and where they conduct their banking services. Empirical results indicated that the Internet banking customers are more satisfied with their banks than non-Internet banking customers (Mols, 1998). The ACNielsen (2002) research found that customer satisfaction with Internet banking was high across the Asia pacific. Only 4 percent of Internet banking customers in Singapore, and 6 percent in Hong Kong, were dissatisfied with their Internet banks, while in South Korea and China 8 percent were dissatisfied with their Internet banks, and for Taiwan the figure was 12 percent.

The consumer movement from traditional branch banking to Internet banking has meant that new strategies to attract new customers and retain existing ones become critical (Karjaluoto, 2002). Reichheld (1996) found that a five percent increase in customer loyalty produces an eighty-five percent increase in profitability in the banking industry. Viewed in this light, it is postulated that managing effective customer retention strategies can be regarded as a vitally important issue in the banking industry.

In spite of the rapid adoption of Internet banking and the importance of customer retention to the banking industry, little empirical investigation or real understanding of the retention of Internet customers has been presented in the literature. In the past, the key to understanding the power of a corporation to retain customers was thought to lie in the measurement of customer satisfaction. Ranaweera and Prabhu (2003) argue that ideally, firms should aim at a combined strategy that makes switching costs act as a complement to customer satisfaction. While customer satisfaction may be one important driver of customer retention, switching costs are also likely to influence customer retention, both independently and in tandem (Lee et al., 2001; Ranaweera and Prabhu, 2003). For example, the presence of switching costs can mean that some seemingly satisfied customers that are retained are actually dissatisfied but do not defect because of high switching costs. Thus the level of switching costs may have a moderating effect on the relationship between customer satisfaction and customer retention.

2. Research Objectives

In the context of this research, Internet banks offer a variety of services to retail customers. Customers choose services appropriate for their levels of banking needs. Hence, respondents of this research were divided into two segments, namely basic and advanced Internet banking users, according to the sophisticated levels of Internet banking service(s) used. Basic Internet banking segment contained those users, who only used their Internet banks for account monitoring, while advanced Internet banking segment contained those users, who used their Internet banks to pay bills, transfer funds and/or security trading, in addition to account monitoring. Analyzing the data by segments provide additional information about the moderating effect of switching costs on the across-segment differences on the customer satisfaction-retention link. Specific objectives have been formulated to:

(1) develop a model that examines the direct effects

of customer satisfaction and switching costs on customer retention as well as the moderating effect of switching costs on the customer satisfaction-retention link.

(2) and examine heterogeneity on the customer satisfaction-retention link in both segments of basic and advanced Internet banking users.

3. Concepts of Consumer Heterogeneity

Previous research on self-service technologies and technology adoption cycles has indicated that the importance of understanding the issue of consumer heterogeneity in determining their behavior in technology settings (Dabholkar and Bagozzi, 2002; Meuter et al., 2003). Blattberg and Deighton (1991) suggest that firms should partition their customers based on behaviorally and attitudinally homogeneous groups that spend at different levels and then estimate the retention characteristics for each group.

The moderating effect of switching costs on the relationship between customer satisfaction and customer retention has been supported by Lee et al., (2001) who examined the moderating effect of switching costs on the customer satisfaction-lovalty link among different segments of mobile phone users in France. The results are interesting. First, switching costs play a significant moderating effect on the satisfaction-loyalty link only for the economy and standard mobile phone users. For heavy mobile phone users, switching costs do not affect the satisfaction-loyalty link. Thus, it seems that the influence of customer satisfaction and switching costs on customer retention varies with different customer characteristics. The impact of such characteristics could be accentuated by the customers' lack of familiarity with the medium and low technology readiness (Parasuraman, 2000). Therefore, customer characteristics could have a significant impact on the adoption and use of the Internet as a medium for commercial transactions by household customers. Literature on the adoption of innovative information services in general (Atkin, et al., 1995), and Internet adoption in particular (Atkin, et al., 1998) supports such a proposition. If there are substantial differences in behavior among individuals, or at least among groups of individuals, such differences could occur at least partly from consumers' different reactions to the medium.

4. Model and Hypotheses

Since research on factors associated with customer retention of Internet banking services has been relatively sparse, past research on the direct effects of customer satisfaction and switching costs on customer retention as well as the moderating effect of switching costs on the relationship between the customer satisfaction and customer retention in non-Internet settings were used to derive the model of this research (Lee et al., 2001; Ranaweera and Prabhu, 2003). In other words, it is assumed that prior studies on the effects of customer satisfaction and switching costs on customer retention in non-Internet settings can perhaps be applied to customer retention within Internet banking setting. Based on a review of the literature (Lee et al., 2001; Ranaweera and Prabhu, 2003), a model which links customer satisfaction and switching costs on customer retention was developed (Figure 1).



Fig 1. A model of the influence of satisfaction and switching costs on customer retention

4.1. Customer satisfaction as a driver of customer retention

While the effect customer satisfaction plays in retaining customers is now perceived as more complex than initially thought (Mittal and Kamakura, 2001; Oliver, 1999), the literature review identified that customer satisfaction has traditionally been regarded as a fundamental determinant of long-term customer behavior (Oliver, 1980; Yi, 1990). The more satisfied customers are, the greater is their retention (Anderson and Sullivam, 1993; Fornell, 1992; Lee et al., 2001; Ranaweera and Prabhu, 2003). Cronin and Taylor (1992) and Patterson et al. (1997) found that customer satisfaction has a significant positive effect on repurchase intention in a range of services. Day et al., (1988) stated that client satisfaction is unquestionably the key determinant in retaining current clients in professional services. Kotler (1994) stated that the key to customer retention is customer satisfaction. Using the aforementioned literature, the first hypothesis was formulated:

H1a: For basic Internet banking users, the higher the level of customer satisfaction, the higher the level of customer retention.

H1b: For advanced Internet banking users, the higher the level of customer satisfaction, the higher the level of customer retention.

4.2. Switching costs as a driver of customer retention Ping (1993) found that when customers perceive the

The Moderating Effect of Switching Costs on the Customer Satisfaction-retention Link: Retail Internet Banking Service in Hong Kong

switching costs to be high (associated with leaving the current relationship and establishing a new one), they tend to be loyal. Jones and Sasser (1995) mentioned switching costs as one factor that determines the competitiveness of market environment, since high switching costs discourage consumers to switch to alternate providers. Lee et al. (2001) and Ranaweera and Prabhu (2003) have tested and confirmed the positive effect of switching costs on customer retention in continued purchasing settings of mobile phone services in France and the fixed line telephone market in the UK respectively. In line with existing research, a second hypothesis was formulated:

H2a: For basic Internet banking users, the higher the level of perceived switching costs, the higher the level of customer retention.

H2b: For advanced Internet banking users, the higher the level of perceived switching costs, the higher the level of customer retention.

4.3. Moderating effect of switching costs

All other things being equal, both customer satisfaction and switching costs are thought to be key antecedents of customer retention. However, under the conditions of low switching costs, an Internet bank customer would be expected to stay or leave based on their satisfaction with the relationship. Gronhang and Gilly (1991) argue that a dissatisfied customer may remain loyal because of high switching costs. Lee et al. (2001) stated that customer loyalty may be due to satisfaction or it may be due to dissatisfaction in a product category in which relatively high switching costs make customers more difficult to change providers. Similarly, customer disloyalty can be due to dissatisfaction or linked to satisfaction in a market in which low switching costs make customers easy to change providers. Lee et al.,'s (2001) study of the mobile phone service in France and Ranaweera's and Prabhu's (2003) study of the fixed telephone line sector in the UK were two of the few studies that found empirical support for it. Nevertheless, where switching costs are sufficiently strong, they are likely to act as a significant constraint to switching to alternative providers. This would indicate that service providers are more likely to retain dissatisfied customers who perceive high switching costs. During the pilot study, a number of respondents indicated that they did not want to switch to another main Internet bank due to the perceived switching costs, even when their overall satisfaction with their main Internet banks was not very high. As two respondents expressed:

"I only use basic Internet banking service for account monitoring and found that it will cost me a lot of time and effort to change my main Internet bank."

"I am not satisfied with my main Internet bank. However, I found that it is hard to switch to alternate main Internet bank as I have a house mortgage and personal loan with my main Internet bank."

Therefore, the third hypothesis was formulated:

H3a: For a given level of customer satisfaction, the higher the level of perceived switching costs, the higher the level of customer retention in the segment of basic Internet banking users.

H3b: For a given level of customer satisfaction, the higher the level of perceived switching costs, the higher the level of customer retention in the segment of advanced Internet banking users.

Diagrammatically, the above moderating effect of switching costs can be represented as follows (Figure 2). For a given level of customer satisfaction(S), customers may perceive two different levels of customer retention, L_1 and L_2 , depending on their perceived level of switching costs. The difference between L_1 and L_2 is due to the moderating effect of switching costs on the customer satisfaction-retention link.



Fig 2: Moderating effect of switching costs on the customer satisfaction-retention link

5. Research Methodology

5.1. Selection of industry

This empirical research was conducted within the context of the retail Internet banking industry in Hong Kong. The retail Internet banking setting is regarded as being in a continuous purchasing setting which is particularly suited to the objectives of this research since all two main effects of customer satisfaction and switching costs are likely to have a strong impact on customer retention in this setting (Ranaweera and Prabhu, 2003). Such setting is qualitatively distinct from discrete purchasing patterns. First, relationships between banks and

IBIMA BUSINESS REVIEW Volume 2, 2009 Internet banking users are generally of a long-term nature, which is a suitable context to study the effects of overall customer satisfaction and perceived switching costs on customer retention. Second, in a continuous purchasing setting, switching main Internet bank is not as simple as walking to another bank. Due to the presence of switching costs, switching to another main Internet bank requires considerable time and effort. As a result, the switching decision is made after considerable thought.

5.2. Questionnaire design

An online questionnaire was employed as the means of data collection. The questionnaire items were first written in English. The Chinese version questionnaire was then developed by applying Brislin's (1980) recommendation to minimize the problem of lack of equivalence between the English and Chinese versions. Specifically, the English version of the questionnaire was first translated into Chinese by a Chinese translator and translated back into English by another Chinese translator to check the translation's accuracy. When a major inconsistency occurred in the translation, a discussion between two translators was conducted to reconcile the differences. The precise wording of the questionnaire was based on original English language version and adjusted so that it was smooth and natural sounding, as well as equivalent, in both languages. Pilot testing the final version of the online questionnaires with 15 basic and 15 advanced Internet banking users was also conducted in order to ensure the appropriateness of question wording, format and structure.

To facilitate response, high-structured questions were used in the design of questionnaire. Bank customers with aged 18 or above constituted the target population of this research. Participation in this research was voluntary. The online questionnaire was placed on a free survey server for one month. The questionnaire was also submitted to popular free search engines in Hong Kong to request participation in the survey.

6. Measures of constructs

Customer retention, customer satisfaction and switching costs were all measured using multiple item, seven-point Likert-type scales with anchors "1=strongly disagree" and "7=strongly agree", based on validated scales from the extant literature. Confirmatory factor analysis was employed to confirm the underlying structure of the measures. The results of this analysis confirmed the reliability and validity of these previously validated measures (Churchill, 1979; Nunnally, 1978) (see the Appendix for the items and their corresponding reliability coefficients).

6.1. Customer satisfaction (CS)

Following Cronin et al., (2000), this research conceptualized the construct of customer satisfaction as an evaluation of an emotion, reflecting the degree to which Internet bank customers believe their main Internet banks evoke positive feelings. Consistent with Cronin et al.,'s approach, the overall customer satisfaction measure includes three items in this research, one item reflected the emotional category and two items reflected the evaluative category. The score of overall customer satisfaction of each respondent was calculated by adding the scores of the three items and then dividing by three. Hence, the range of scores is from 1 to 7.

6.2. Switching costs (SC)

Following Porter (1980), the construct of switching cost, in this research, was conceptualized as the perception of the magnitude of the additional costs required for Internet banking customers to terminate the current relationship with their main Internet banks and secure an alternative. Switching costs has been identified as a factor contributing to maintaining a relationship (Morgan and Hunt, 1994). Morgan and Hunt state switching costs to be of an economic nature only. However, switching costs may comprise of psychological and emotional costs. Switching costs, in this research, was measured by five items adapted from the switching costs measure developed by Ping (1993). The score of switching costs of each respondent was calculated by adding the scores of the five items and then dividing by five. Hence, the range of scores is from 1 to 7.

6.3. Customer retention (CR)

The construct of customer retention, in this research, was defined as the future propensity of an Internet bank customer to stay with his/her main Internet bank. Accordingly, this research measured customer retention by adapting a three-item formative scale. This scale was used to measure "propensity to leave" in a business-to-business relationship (Morgan and Hunt, 1994) and in a business-to-customer relationship (Ranaweera and Prabhu, 2003). The three items used measured the likelihood of the respondents leaving their main Internet banks at three different periods in the future: three months, six months and one year respectively. The overall score was a summation of the three weighted items. Following Morgan and Hunt's approach, the first item was weighted four times, the second two times, and the third item was left unweighted. Hence, the range of scores is from 1 to 7.

7. Analysis of Results

7.1.Response rate

After one month, 743 responses were received. The number of responses was considered to be sufficient for data analysis as Alreck and Settle (1985) stated that for populations of 10,000 and more, most

experienced researchers would probably consider a sample size between 200 and 1,000 respondents. Since no counter was placed on the survey web page, no mechanism was used to monitor the number of visits to the web page when compared to the number of actual survey responses. Though the response rate was acceptable, non-respondent bias as recommended by Armstrong and Overton (1977) was tested. Specifically, we divided respondents into two groups, namely early and late respondents in order to compare the means for the three constructs for the two groups. It was assumed that late respondents were likely to be similar to non-respondents. The results of this analysis indicated that no significant differences for the three constructs were found between the two groups at the 0.05 level, confirming the absence of significant non-respondent bias.

7.2. Internet banking usage

Several Internet banking usage measures were collected in this research. They were: (a) name of main Internet bank; (b) years with main Internet bank; (c) frequency of usage; (d) number of Internet bank account(s); and (e) segment of Internet banking (Table 1). Top three banks had over three-quarter (77.1%) of Internet bank users. These results were consistent with the findings of Nielsen/NetRatings (2003), which showed Hong Kong Shanghai Bank Corporation led the Internet banking in Hong Kong, followed by Hang Seng Bank, and Bank of China. Less than half of respondents (43.4%) had Internet banking experience less than 2 years. About 47% of respondents used Internet banking at least a few times per week. About 71% of respondents had more than one Internet bank accounts, indicating split Internet bank behavior was common in Hong Kong. There were 48.5% of respondents who claimed that they were advanced Internet banking users, while basic Internet banking users were slightly more (51.5%).

7.3. Descriptive statistics and correlation matrix for constructs

The mean scores of customer satisfaction, switching costs and customer retention were 3.621, 3.539 and 4.143 respectively (Table 2). As customer satisfaction and switching costs were less than the central point of 4 in a seven-point Likert-type scale, these indicate that respondents generally perceived less satisfaction and low switching costs towards their main Internet banks. However, since the mean of customer retention was more than 4, this indicates respondents were generally loyal to their main Internet banks. To check the extent of the actual departure from normality of each construct, the value of skewness and kurtosis of the three constructs were computed (Table 2). As all values of skewness and kurtosis of the three constructs fell within acceptable limits of ± 1 , the data obtained from the three constructs did not show deviations from normality (Hair et al., 1998).

The results of correlation analysis (Table 3) suggest that there were significant positive associations of customer satisfaction (p<0.00) and switching costs (p<0.00) on customer retention, with satisfaction explaining a higher proportion of variance in the customer retention (R=0.458) than switching costs (R=0.277). In addition, switching costs is marginally correlated with customer satisfaction (p=0.051) at 0.05 significance level. The overall results of the correlation matrix provide tentative evidence that the theoretical model of this research may be true (Figure 1). There is a significant relationship between customer satisfaction and customer retention. In addition, there is also significant relationship between switching costs and customer retention.

Table 1: Inte	ernet banking usage by i	respondents
		% of
		respondents
		(N=743)
Name of main	Hong Kong Shanghai	30.4
Internet bank	Bank Corporation	
	Hang Seng Bank	26.9
	Bank of China	19.8
	Citibank	7.1
	Standard Chartered	6.5
	Bank	
	The Bank of East	5.5
	Asia	
	Others	3.8
Years with	Less than 12 months	20.1
main Internet	13 to 24 months	23.3
Ualik	25-36 months	20.7
	37 to 48 months	19.8
	More than 48 months	16.2
Frequency of	Every day	23.3
usage	A few times per week	23.4
-	Once a week	17.6
	Once a month	19.4

	Less than once a month	16.3
Number of	Only 1	41.9
Internet bank	2	29.3
account(s)	3 or more	28.8
Segment of	Basic	51.5
Internet bank	Advanced	48.5

Table 2: Descriptive statistics for constructs

Constructs	Mean	Standard Deviation	Skewness	Kurtosis
CS	3.621	1.591	0.247	-0.767

SC	3.539	1.517	0.304	-0.869
CR	4.143	1.479	-0.015	-0.791

Constructs	CS	SC	CR
CS	1.000		
	-		
SC	0.072	1.000	
	(0.051)		
CR	0.458*	0.277*	1.000
	(0.000)	(0.000)	-

Table 3:	Correl	ation	<i>matrix</i> for	constructs

*Correlation	is	significant	at 0.01	level	(2-tailed)
					(

7.4. Regression analysis

Multiple regression analysis was used to test the three hypotheses of this research for both basic and advanced Internet banking segments. The regression analysis (Table 4) shows that there are significant positive relationship between customer satisfaction and customer retention and between switching costs and customer retention in both segments of basic and advanced Internet banking users. Hence, all H1a, H1b, H2a and H2b are supported. However, switching costs play a significant moderating effect on the customer satisfaction-retention link only for the segment of basic Internet banking users. For the segment of advanced Internet banking users, switching costs do not play a significant moderating effect on the customer satisfaction-retention link. Hence, H3a is supported and H3b is rejected. The overall results of segment analysis indicate that the moderating effect of switching costs on the relationship between customer satisfaction and customer retention varies in different Internet banking customer segments. The negative sign of H3a (β =-0.454) indicates that switching costs act as a constraint, limiting those who are less than satisfied from leaving their main Internet banks. This indicates that switching costs, where appropriate, can be an effective, alternative means of strengthening customer retention. Table 5 shows the overall results of all hypotheses of this research.

Tuble 4. Results of regression unalysis			
Independent	Basic	Advanced	
factors	Internet	Internet	
	banking	banking	
	segment	segment	
CS	0.717*	0.689*	
SC	0.650*	0.352*	
$CS \times SC$	-0.454*	-0.360	
Segment size	383	360	
% of respondents	51.5%	48.5%	
R^2	0.352	0.231	
Adjusted R^2	0.347	0.225	

Table 4: Results of regression analysis

F	11.179*	5.707*		
Dependent factor: Customer retention				

Notes: $\alpha < 0.01$. β coefficients have been reported. All changes in R^2 values had a significant F statistic (*p<0.01)

Table 5:	Results	of hy	potheses
----------	---------	-------	----------

Hypotheses	Results
H1a	Supported
H1b	Supported
H2a	Supported
H2b	Supported
H3a	Supported
H3b	Rejected

The results of the segment analysis as shown in Figure 3 and Figure 4, indicate that the model of the basic Internet banking segment explains the highest variance in the dependent factor of customer retention than the model of the advanced Internet banking segment. The model of the basic Internet banking segment is comparatively the best model derived from this research (Adjusted $R^2_{\text{Basic Internet}}$ $P_{\text{banking segment}} = 0.347 > \text{Adjusted } R^2_{\text{Advanced Internet banking segment}} = 0.225$). These results also indicate that customer satisfaction of the basic Internet banking segment is a slightly stronger driver of customer retention than the advanced Internet banking segment ($\beta_{customer satisfaction of basic Internet banking segment = 0.717 >$ $\beta_{\text{customer satisfaction of advanced Internet banking segment} = 0.689$). However, it is interesting to note that switching costs of basic Internet banking segment is a much stronger driver of customer retention than advanced Internet banking segment (Bswitching costs of basic Internet banking segment = $0.650 > \beta_{switching costs of advanced Internet banking segment}$ = 0.352).



Fig 3: Results of regression analysis for basic Internet banking segment



Fig 4: Results of regression analysis for advanced Internet banking segment

8. Conclusions and Implications

Consistent with previous research, this research confirms the significant positive relationship between customer satisfaction and customer retention and between switching costs and customer retention in both segments of basic and advanced Internet users. Also this research found that switching costs play a significant moderating effect on the customer satisfaction-retention link only for the segment of basic Internet banking users (Figure 3). For the segment of advanced Internet banking users, the moderating effect of switching costs does not significantly affect satisfaction-retention link (Figure 4). This means that dissatisfied advanced users will switch to alternative main Internet banks even in the presence of high switching costs. This result indicates the moderating effect of switching costs will be no longer an effective strategy to retain customers as more and more customers become advanced Internet banking users in the future. Long-term customer retention in future competitive Internet banking markets may require a bank to go beyond mere basic customer satisfaction and switching costs and to look for other ways of establishing ties for retaining customers. It is recommended that banks should develop different customer retention programs for the basic and advanced Internet banking segments.

For the basic Internet banking segment, banks should implement a reward program in order to encourage the basic Internet banking users to try to use one or a few advanced Internet banking services. At the same time, banks should also implement a customer relationship program so as to increase customer satisfaction. Once a satisfied basic Internet banking user starts to use and eventually adopts the advanced Internet banking services, their switching to another bank will be more difficult and it should be easier for the bank to retain them.

For the advanced Internet banking segment, the attention of banks is to maintain both high satisfaction and switching costs. There are two possible ways to achieve these objectives. First, banks should segment the whole advanced Internet banking users into segments with same customer characteristics (e.g. segments of using bills payment, funds transfer and security trading) and regularly promote the benefits of using these services in order to increase customers' perceived satisfaction of using each individual advanced Internet banking service. Second, banks should encourage the existing advanced Internet banking users to consume more advanced Internet banking services. As more banking services are adopted, advanced Internet banking users will perceive higher switching costs; this will

make it more difficult for the advanced Internet banking user to switch.

9. Limitations

The limitations of this research can be classified as three main categories. Firstly, research investigating actual retention, rather than intention to remain using the Internet banking service, is encouraged. Although previous research has always used intention to stay as a surrogate for actual retention (Garbarino and Johnson, 1999; Morgan and Hunt, 1994; Rust and Zahorik, 1993; Shemwell et al., 1994; Sirohi et al., 1998), intention to remain using main Internet banking services may not accurately represent actual retention. Secondly, this empirical research was based on the survey of Internet banking industry. Naturally, the findings of this research are most likely to hold for other similar low customer contact and mass service context with a continuous purchasing pattern (Ranaweera and Prabhu, 2003). This research needs to be replicated for other Internet-based services to further validate of the research model of this research. Finally, respondents of this research were divided into two segments, namely basic Internet banking users and advanced Internet banking users, according to the sophisticated level of Internet banking services used. As advanced Internet banking users were defined as those users who used Internet banking to pay bills, transfer funds and/or trade securities, this definition might be considered too generic.

10. Future Research

Although this research has served to reveal certain aspects within the arena of retention of customers in the context of Internet banking in the Hong Kong, there is still a room for further research in order to ascertain and enrich the findings of this research. Firstly, since Internet banking relies heavily on maintaining relationships with customer (Barnes, 1997), the theoretical model of this research should be tested in other kinds of e-commerce industries, such as Internet retailing and Internet travel agencies, in order to strengthen the generalizability of the findings. Second, the results of segment analysis indicate that the influence of customer satisfaction and switching costs on customer retention varies in different customer segments. Future research should heterogeneity examine on the customer satisfaction-retention link among different advanced banking segments (i.e. bills payment, funds transfer and security trading).

References

[1] ACNielsen. Taking it to the Bank Online: ACNielsen Looks at Internet Banking in South Korea, Hong Kong, Singapore, China, and Taiwan, Retrieved October 5, 2007, from: http://www.acnielsen.com.sg/news_archive.asp.

- [2] Alreck, P. and Settle, R. *The Survey Research Handbook*, 1985, US: Irwin.
- [3] Anderson, E. and Sullivan, M. "The Antecedents and Consequences of Customer Satisfaction for Firms," *Marketing Science* (12:2), 1993, pp. 125-145.
- [4] Armstrong, J. C. and Overton, T. S. "Estimating Non-response Bias in Mail Surveys", *Journal of Marketing Research* (XIV), 1997, pp. 396-402.
- [5] Atkin, D. "Audio Information Services and the Electronic Media Environment: A Pilot Study," *The Information Society* (11), 1995, pp. 75-83.
- [6] Atkin, D., Jeffres, L. and Neuendorf, K. "Understanding Internet Adoption as Telecommunications Behavior," *Journal of Broadcasting & Electronic Media* (42:4), 1998, pp. 475-490.
- [7] Barnes, J. G. "Closeness, Strength, and Satisfaction: Examining the Nature of Relationships between Providers of Financial Services and Their Retail Customers," *Psychology and Marketing* (14:8), 1997, pp. 765-790.
- [8] Blattberg, R. and Deighton, J. "Interactive Marketing: Exploiting the Age of Accessibility," *Sloan Management Review* (Fall), 1991, pp. 5-14.
- [9] Brislin, R. Translation and Content Analysis of Oral and Written Materials, 1980, In: H. C. Triandis and J. W.
- [10] Churchill, G. A. "A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research* (16), 1979, pp. 64-73.
- [11] Cronin, J. J. and Taylor, S. A. "Measuring Service Quality: A Reexamination and Extension," *Journal of Marketing* (56), 1992, pp. 55-68.
- [12] Cronin, J. J., Brady, M. K., and Hult, G. T. M. "Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioural Intentions in Service Environments," *Journal of Retailing* (76:2), 2000, pp. 193-218.
- [13] Dabholkar, P. and Bagozzi, R. P. "An Attitudinal Model of Technology-Based Self-Service: Moderating Effects of Consumer Traits and Situational Factors," *Journal of the Academy of Marketing Science* (30:3), Summer 2002, pp. 184-202.
- [14] Day, E., and Denton, L. L., and Hickner, J. A. "Clients' Selection and Retention Criteria: Some Marketing Implications for the Small CPA Firm," *Journal of Professional Services Marketing* (3:4), 1988, pp. 85-91.
- [15] Fornell, C. "A National Customer Satisfaction Barometer: The Swedish Experience," *Journal* of Marketing (56), 1992, pp. 1-18.
- [16] Garbarino, E. and Johnson, M. S. "The

Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships," *Journal of Marketing* (63:2), 1999, pp. 70-87.

- [17] Gronhaug, K. and Gilly, M. C. "A Transaction Cost Approach to Customer Dissatisfaction and Complaint Actions," *Journal of Economic Psychology* (12), 1991, pp. 165-83.
- [18] Hair, J., Anderson, R., Tatham, R., and Black, W. Multivariate Data Analysis, Prentice-Hall, Engleweed Cliffs, NJ, 1988.
- [19] Hong Kong Monetary Authority. Banking Stability. Hong Kong Monetary Authority Annual Report 2007, Retrieved November 5, 2008, from://www.info.gov.hk/hkma/eng/public/ar07 /pdf/13 bank stability.pdf.
- [20] Jones, T. and Sasser, W. "Why Satisfied Customers Defect," *Harvard Business Review* (11-12), 1995, pp. 88-99.
- [21] Karjaluoto, H. "Selection Criteria for a Mode of Bill Payment: Empirical Investigation among Finnish Bank Customers," *Journal of Retail and Distribution Management* (20:6), 2002, pp. 331-339.
- [22] Kotler, P. Marketing Management. Analysis, Planning, Implementation, and Control, Eighth Edition, Prentice-Hall, Englewood Cliffs, NJ, 1994.
- [23] Lee, J., Lee, J., and Feick, L. "The Impact of Switching Costs on the Customer Satisfaction-loyalty Link: Mobile Phone Service in France," *Journal of Services Marketing* (15:1), 2001, pp. 35-48.
- [24] Meuter, M. L., Ostrom, A. L., Bitner, M. J., and Roundtree, R. "The Influence of Technology Anxiety on Consumer Use and Experiences with Self-service Technologies," *Journal of Business Research* (56:11), 2003, pp. 899-907.
- [25] Mittal, V. and Kamakura, W. A. "Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics," *Journal of Marketing Research* (38), 2001, pp. 131-42.
- [26] Mols, N. P. "The Behavioral Consequences of PC Banking," *International Journal of Bank Marketing* (16:5), 1998, pp. 195-201.
- [27] Morgan R. M. and Hunt, S. D. "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing* (58:3), 1994, pp. 20-38.
- [28] Nunnally, J. C. *Psychometric Theory*, McGraw-Hill, 2nd ed., 1978, New York.
- [29] Oliver, R. L. "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *Journal of Marketing Research* (17:4), 1980, pp. 460-469.
- [30] Oliver, R. L. "Whence Consumer Loyalty," Journal of Marketing (63), 1999, pp. 33-44.
- [31] Patterson, P. G., Johnson, L. W., and Spreng, R.

A. "Modeling the Determinants of Customer Satisfaction for Business-to-Business Professional Services," *Journal of the Academy of Marketing Science* (25:1), 1997, pp. 4-17.

- [32] Ping, R. A. "The Effects of Satisfaction and Structural Constraints on Retailer Exiting, Voice, Loyalty, Opportunism, and Neglect," *Journal of Retailing* (69:3), 1993, pp. 321-49.
- [33] Porter, M. E. Competitive Strategy: Techniques for Analyzing Industries and Competitors, New York: The Free Press, 1980.
- [34] Ranaweera, C. and Prabhu, J. "The Influence of Satisfaction, Trust and Switching Barriers on Customer Retention in a Continuous Purchasing Setting," *International Journal of Service Industry Management* (14:4), 2003, pp. 374-395.
- [35] Reichheld, F. F. The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value, Harvard Business School Press, Boston, MA, 1996.
- [36] Rust, R. T. and Zahorik, A. J. "Customer Satisfaction, Customer Retention, and Market Share," *Journal of Retailing* (69:2), 1993, pp. 193-215.
- [37] Shemwell, D. J., Cronin J. J., and Bullard, W. R. "Relational Exchange in Services: An Empirical Investigation of Ongoing Customer Service Provider Relationships," *International Journal* of Service Industry Management (5:3), 1994, pp. 57-68.
- [38] Sirohi, N., McLaughlin, E. W., and Wittink, D. R. "A Model of Consumer Perceptions and Store Loyalty Intentions for a Supermarket Retailer," *Journal of Retailing* (74:2), 1998, pp. 223-245.
- [39] Yi, Y. A Critical Review of Customer Satisfaction, American Marketing Association, Chicago, IL, 1990.

Copyright © 2009 by the International Business Information Management Association (IBIMA). All rights reserved. Authors retain copyright for their manuscripts and provide this journal with a publication permission agreement as a part of IBIMA copyright agreement. IBIMA may not necessarily agree with the content of the manuscript. The content and proofreading of this manuscript as well as any errors are the sole responsibility of its author(s). No part or all of this work should be copied or reproduced in digital, hard, or any other format for commercial use without written permission. To purchase reprints of this article please e-mail: admin@ibima.org.

Appen	dix:
-------	------

Scale Items and Factor Analysis		
Scale	Items	Factor Loadings
Custo	mer Satisfaction(CS)	
(eiger	<i>value=2.311, variance=21.011,</i>	
alpha	=0.9064)	
CS2	I think I did the right thing when I	0.893
	chose my main Internet bank.	
CS3	Overall, I am happy with my main	0.830
	Internet bank.	
CS1	My main Internet bank meets my	0.814
	expectation.	
Switch	hing Costs(SC)	
(eiger	<i>walue=3.763, variance=34.211,</i>	
alpha	=0.9384)	
SC3	It is risky to change my main	0.884
	Internet bank as the new provider	
	may not give good services.	
SC4	I would feel frustrated if I	0.875
	terminated my current	
	relationship with my main	
	Internet bank.	
SC1	It would cost me a lot of time to	0.851
	change my main Internet bank.	
SC5	Considering everything the cost to	0.846
	stop using my main Internet bank	
	and start up with a new main	
	Internet bank would be high.	
SC2	It would cost me a lot of effort to	0.844
	change my main Internet bank.	
Custo	mer Retention(CR)	
(eiger	value=2.040, variance=18.546,	
alpha	=0.8628)	
CR2	What do you think are the chances	0.837
	of switching to an alternate main	
	Internet bank within the next six	
	months?	
CR3	What do you think are the chances	0.756
	of switching to an alternate main	
	Internet bank within the next one	
	year?	
CR1	What do you think are the chances	0.741
	of switching to an alternate main	
	Internet bank within the next three	

months?