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Zhuo Dai
School of Busines,Jiujiang University,Jiujiang city,P.R. China, daizhuo1@126.com

Xiaoting Zheng
School of Busines,Jiujiang University,Jiujiang city,P.R. China

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Dai Zhuo*, Zheng Xiaoting

School of Busines, Jiujiang University, Jiujiang city, P.R. China

Abstract: Customers' Loyalty is important to internet banking. Customers' Loyalty is not only involved in the survival of internet banking, but also the revenue of intenet banking. This paper studies the factors influencing personal internet banking customers' loyalty. The model of loyalty of internet banking is constructed on the basis of theoretical research and china's reality. And the model is tested by LISREL8.7 and SPSS17.0.

Keyword: Internet banking ,satisfction, loyalty , switching costs, word-of-mouth,

1. INTRODUCTION

Loyalty involves customers' behavior and attitude. Loyalty can be divided into four stages: the first stage is cognitive loyalty, which is based on the products or services provided enterprises; second stage is the emotional loyalty, which is the result of repeated cognitive loyalty and a positive attitude towards a product or service; the third stage is conative loyalty, which is a high level of loyalty and the driving force of the heart;the fourth stage is the behavioral loyalty, which is a continuing action of purchasing and this action is the result of eliminating the wishes of buying other brand products.

Customer loyalty is the key to the survival of self-service technologies such as internet banking. The importance of customers' loyalty comes from this fact: the cost of retaining old customers is five times that of accessing new customers. Looking for new customers, creating new accounts for new customers and promoting internet banking services to new customers need cost. When the number of a company's old customers increases 5% ,the cost of this company reduces 18%. Thus, internet   banking should focus on customer loyalty. The customer loyalty of internet banking can continue to increase the scale of internet banking customers and take full advantage of network externalities to further increase the size of customers in a positive feedback effect. Previous studies have shown that old customers will bring about greater gains than new customers for banks. There are three reasons.First of all,the old customers are more likely to buy additional services and play word-of-mouth effect than new customers. Secondly, the banks can take full advantage of learning the cumulative effect of the old customers and sunk costs to improve ROI. Finally, the old customers are willing to pay higher prices for banking services than new customer.There is a strong positive correlation between customer loyalty and profitability of banks.

Moreover,the articles about internet banking have a great quantity.However, articles about loyalty of internet banking have a small quantity. Some studies have discussed how to retain old customers of traditional banks, but this discussion do not reflect the influence of the rapid development of the Internet. Therefore, this study attempts to integrate network technology into the concept of marketing to discover the factors influencing internet banking customers' loyalty.And measures to maintain a long-term relationship between bansk and customers are proposed.

2. LITERATURE REVIEW

Newman et al. (1973)[1] defines loyalty as buying only one brand of products without considering and

* Corresponding author. Email:daizhuo1@126.com

collecting the information of other brands. Deighton et al. (1994)[2] think that loyalty is customers' preference for a certain brand resulting from purchasing experience. Some scholars believe that loyalty is that customers regularly buy the same brand of products.Other scholars define loyalty as follows: a certain brand of products generates the customers'satisfaction, which bring about a continuous purchase behavior. As can be seen from the above definition,loyalty has always been associated with the brand and loyalty means repeated purchase preference for some kind of brand.

Qu Yunbo (1996)[3] believes that loyalty is the possibility about customers switching to another brand. Wang Yuanyong (2002) proposes the indicators of   measuring loyalty, such as,the re-purchase rate. Lei Dazhang (2004)[4]studies customer loyalty and influencing factors of customer loyalty.He finds the definition of loyalty is manifold. The representative definition is the number of repeated purchase.For example, some scholars think customer loyalty is three times purchase in a row. Ji Jian et al (1999)[5] argue that brand loyalty include two aspects.They are behavioral loyalty and emotional loyalty.Behavioral loyalty means that customers continue to buy a particular brand.This behavior may be derived from the good opinion to this brand or the high rate of market coverage .Emotional loyalty is that the customers have feeling to brands and have desires to purchase repeatedly.

Gu Wei et al (2005)[6] also believe that customer loyalty include two factors:emotional attachment and behavioral orientation. Luo Ziming (1999)[7]thinks brand loyalty is brand preferences and repeated purchase during a long time. Zhou Meihua (2004)[8]summarizes and validates the indicators of loyalty. (1)the number of customers purchase. The more the number of customer purchase is, the higher the customer loyalty is, and vice versa.(2)the time of customers selecting. Generally, the shorter the selection time is, the higher the customer loyalty is, and vice versa. (3) the number of customers recommending to other customers. The more the number is, the higher customers loyalty are, and vice versa.(4)the price sensitivity   of customer. When consumers like the company's products or services, they are less sensitive to the price of these products or services; when they do not like the company's products or services, they are more sensitive to the price of these products or services.Therefore, the price sensitivity can measure the degree of customer loyalty.(5) customer' attitude to alternate products or services. If a customer is interested in alternates,customer shows low loyalty.If a customer is not interested in alternates, customer shows high loyalty.(6)risk tolerance of customer. If a customer appears high tolerance to product quality incidents , customer shows high loyalty.If a customer is very disgusted with product quality incidents,customer shows low loyalty.

Previous studies have shown that if they will be loyal the customers are satisfied. However, recent studies have shown that customer satisfaction is not a guarantee of loyalty. The increased satisfaction does not necessarily lead to the improvement of loyalty. The survey of bank satisfaction shows that 80% -90% of customers are satisfied, but satisfaction does not mean that customers will continue to use or not to go to other banks. The study finds that 65% -85% of customers who are satisfied with the previous service provider still turn to other service providers. Therefore, it is necessary to explore the factors influencing internet banking customers'loyalty.

3. THE HYPOTHESIS OF STUDY
3.1 Satisfaction(SA)

There are many definitions of satisfaction in previous studies. Scholars believe that satisfaction is a overall post-purchase attitude,which reflects the degree of liking or disliking after the customers purchases.It can be seen as a comprehensive measure of customers' purchase and consumption experience,as well as a whole attitude. According to this definition, satisfaction in this study defines as a comprehensive measure of experience and the overall attitude of self-service technology after customers use internet banking.

H1:Satisfaction is positively related to customer loyalty(LO).The higher satisfaction is , the higher loyalty is.

3.2 peiceived price(PP)

The price of products or services is cumstomers' sacrifice in order to get products and services. Jacoby et al. (1977) [9]distinguished the objective price and perceived price. Objective price is the actual price of products or services, and customers' perception of price is the experience of price. The study shows that different groups of people have different perception of price.The group of giving maximum attention to the price is women, married persons and the elderly.

Earlier marketing theory hold price is a single-dimension concept. Thus, the price is only regarded a sacrifice to get products. Lichtenstein et al. (1993)[10] studied the negative and positive perception of price.They discover and define seven interactive and different variables about perception of price. Five variables (value consciousness, price consciousness, coupons, discount sales, price leadership) have a negative impact on the perception of price. Two variables (price - quality mode and the credibility of sensitivity) have a positive impact on the perception of price. It can be inferred:

H2:Perceived price(PP) has a significant and negative influence on personal internet banking customer satisfaction.

3.3 perceived quality(PQ)

Olshavsky (1985)[11] thought perceived quality is perception of product's overall quality, Holbrook et al. (1981)[12] raised the perceived quality is a form of value judgments. According to an integrated method proposed by Klaus (1985)[13], quality of service is the value received by customers. Perceived quality is consistent with customers' attitude in a long run..Perceived quality differs from objective quality.Objective quality is the objective characteristics of things. Perceived quality is an attitude. Perceived quality is associated with satisfaction.But it is different from satisfaction,which comes from the comparison between expectations and reality (Rowley, 1998)[14]. Perception of good quality lead to the occurrence of satisfaction .Hence there is a correlation between satisfaction and perceived quality (Rowley, 1998)[14].It can be inferred:

H3: Perceived quality(PQ) is positively related to personal internet banking customer satisfaction.

3.4 switching cost (SC)

Switching cost means the customer perception of the cost of time, money, and psychological aspects involved the end of the relationship with existing brands and the establishment of the relationship with new alternatives.Consumers need to invest time, energy and money to use self-service technology and master its usage. According to sunk cost effect theory, if people have already paid for some goods or services, the frequency of use these goods or services will increases.These costs will lead to the more frequent use of investment. This phenomenon can also be explained by using the conception of self-defense. The theory deems in order to maintain the consistency of the self-image and affirm the correctness of the behavior or decision,people always take with previous consistent behavior. Repeating this behavior would lead to the formation of loyalty.

H4: switching costs is positively related to personal internet banking customer loyalty(LO).The higher the switching costs are,the higher loyalty is.

3.5 word of mouth(WOM)

With the development of society,the communication between the consumers is becoming more and more easy.Telephones, cell phones, the Internet and other communication tools allow consumers to communicate and exchange at any time.cars, trains, airplanes and other transportation allow consumers to meet in a short time. Therefore,word-of-mouth marketing should receive emphasis. The study shows that 60% of consumers acknowledge they once tried to buy a new brand under the influence of family and friends. The reason why

consumers value word-of-mouth is that most consumers have incomplete information, for example, information about the product, price, quality.However, word of mouth can affect consumers' judgments and purchase. It is not only an important tool to obtain information of purchase decision, but also an important source of information.Word-of-mouth can help consumers reduce the asymmetry of information and the risk of consumers' purchase. Some scholars believe that word of mouth is a way of interpersonal communication and a leadership of the kind of public opinion. Word-of-mouth can affect the attitudes of consumers and influence consumers' purchasing decisions.By word-of-mouth marketing, you can increase the possibility of customers' purchase or use. According to the direction of word of mouth, word of mouth can be divided into positive word-of-mouth and negative word-of-mouth.

H5：positive word-of-mouth is positively related to personal internet banking customer loyalty(LO).

Thus, we can set up the model of loyalty of internet banking. The model is shown as figure 1.
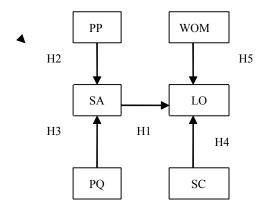

Figure1   The model of loyalty of IB

4. THE DESIGN OF STUDY

Questionnaire adopts five Likert scale in this study.The variables of questionnaire come from related literatures.After completing the original questionnaire and consulting E-commerce and internet banking experts,the the questionnaire was revised.Questionnaires are released by internet.Four questions about satisfaction (SA) are designed. Three questions about Perceived quality (PQ) are designed. The number of questions about perceived risk (PP) is four. Three questions about switching cost(SC) are designed.There are three questions about word-of-mouth(WOA). The number of questions about loyalty (LO) is two. The number of effective responses is 268.

5. THE RESULT OF STUDY

5.1   analysis of reliability

In this study, analysis of reliability are carried out by SPSS18.0. The results shows in table 1.The indicator of measurement is Cronbach'a. The sample can be accepted when Cronbach'a is over 0.7. As can be seen from the table 1, Cronbach'a of various factors and overall responses is acceptable.Therefore questionaire is credible.

Table 1   Mean, std deviation and Cronbach's alpha

constructs	items	means	Std deviation	Cronbach's alpha
SA	SA1	3.33	0.68	0.953
	SA2	3.32	0.743	

	SA3	3.56	0.704	
	SA4	3.59	0.976	
PQ	PQ1	3.37	0.887	0.923
	PQ2	3.34	0.911	
	PQ3	3.37	0.866	
SC	SC1	3.32	0.887	0.956
	SC2	3.63	0.954	
	SC3	3.26	0.92	
PP	PP1	1.34	0.809	0.952
	PP2	166	0.778	
	PP3	1.68	0.91	
	PP4	1.44	0.686	
WOA	WOA1	3.29	0.768	0.867
	WOA2	3.02	0.856	
	WOA3	3.31	0.907	
LO	LO1	3.3	0.788	0.766
	LO2	3.7	0.892	

5.2 analyse of validity

5.2.1 construct validity

Table 2   The comparison between one-factor and six-factors measurement model

MODEL	one factor	six factors	ideal value
X^2/df	20.68	2.56	<5
NNFI	0.37	0.94	>0.9
RMSEA	0.44	0.076	<0.08
NFI	0.38	0.96	>0.9
CFI	0.33	0.93	>0.9
IFI	0.23	0.91	>0.9
GFI	0.29	0.95	>0.9
AGFI	0.28	0.92	>0.8
PGFI	0.38	0.63	>.5
RFI	0.44	0.95	>0.9

From table 2,we can see the indicators of six-factor model have reached or exceeded the ideal value, and the six-factor model is better than one factor model.Therefore, construct validity of the questionnaire is confirmed

5.2.2 convergent validity

Table 3   Factor loadings,CR and AVE

factors	items	factor loadings	CR	AVE
SA	SA1	0.91***	0.68	0.953
	SA2	0.94***		
	SA3	0.72***		
	SA4	0.95***		
PQ	PQ1	0.98***	0.887	0.923
	PQ2	0.92***		
	PQ3	0.7***		
SC	SC1	0.91***	0.887	0.956
	SC2	0.95***		
	SC2	0.81***		
PP	PP1	0.66***	0.809	0.952
	PP2	0.92***		
	PP3	0..67***		
	PP4	0.77***		
WOA	WOA1	0.7***	0.768	0.867
	WOA2	0.84***		
	WOA3	0.79***		
LO	LO1	0.88***	0.788	0.666
	LO2	0.67***		

***denotes value is significant at the level of P<0.001

Test of convergent validity applies three criteria. First,all standardized factor loadings are greater than 0.6, and reach to the significant level.Second, average variance extract(AVE) is greater than 0.4. Third, composite reliability (CR) is greater than 0.4. The results are shown as table 3.

As can be seen from the above table, all the standard have been met.Therefore, the questionnaire has good convergent validity.

5.3   the fitness of model

The paper uses the following indicators to measure the fitness of overall model:X2/df, GFI, CFI, NFI, NNFI, IFI, RMSEA, AGFI, RFI, PGFI.The result is shown as table 4.Their values are up to criteria.The result of testing hypotheses is shown in table 5.All hypotheses are supported.

Table 4   Goodness of   fit

Fit index	Criteria	indicators
X^2/df	<5	1.76
GFI	>0.8	0.94
CFI	>0.9	0.93
NFI	>0.9	0.92
NNFI	>0.9	0.91
IFI	>0.9	0.98
RMSEA	<0.08	0.061

RFI	>0.9	0.96
AGFI	>0.8	0.85
PGFI	>0.5	0.66

Table 5   The result of hypothesis

hypothesis	path coefficient	support
PP→SA	—0.21***	yes
PQ→SA	0.32***	yes
SA→LO	0.27***	yes
SC→LO	0.16***	yes
WOM→LO	0.33***	yes

***denotes value is significant at the level of P<0.001

6. CONCLUSION

Empirical research supports all assumptions.Satisfaction is positively related to loyalyt.WOM is positively related to loyalty.Perceived quality have a positive impact on satisfaction.Perceived price has a negative impact on satisfaction. The results show that satisfaction is the key factor causing personal internet banking customers' loyalty . If the customer is satisfied with internet banking, they are more likely to be loyalty. In addition, switching costs may strengthen the loyalty of customer.

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