

Moderating Effect of Personal Innovativeness in the Model for E-store Loyalty

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Abstract—Customer loyalty is an eventful precondition of enterprise development. Many researches indicated that the customer satisfaction and switching costs are important predictors of the customer loyalty. However, few studies focus on the moderating variables between these relationships. This study focuses on the moderating effect of personal innovativeness to the relationship between customer satisfaction, switching costs and E-store loyalty. The results show that the customer satisfaction and switching costs have positive significant impact on E-store loyalty, and personal innovativeness has moderating effect on the relationship between switching costs and E-store loyalty.

Keywords—*e-store loyalty; customer satisfaction; switching costs; personal innovativeness*

I. INTRODUCTION

In recent years, the B2C and C2C e-commerce developed rapidly in China. According to the report of China Internet Network Information Center in January 2009, there were already 7.4 million online shopping customers in China. The annual growth rate of online shopping customers was 60 percent. Online shopping is more convenient and cheaper than offline purchasing. However, it is easier for customers to change suppliers on web than offline shopping. How to enhance customer loyalty is an important issue for e-commerce enterprises. Previous research indicated that increasing customer satisfaction and switching costs is effective means of improving customer loyalty [1].

The relationship between satisfaction and loyalty is not surrogates for each other [2]. It is possible for a customer to be loyal without being highly satisfied (e.g., when there are few other choices) and to be highly satisfied but not be loyal (e.g., when too many alternatives are available). The relationship between switching costs and customer loyalty is also influenced by other factors. Within the context of online shopping, the perceived switching costs are influenced by inherent features of customers [3].

Recent research in this regard sheds light on stable individual differences such as an innovative predisposition to explain different influences on online shopping behavior [4]. Innovativeness has been proved to be extremely relevant for explaining the adoption of new products or shopping procedures. Does innovativeness also have effect in the model for e-Store loyalty? This study aims to discussing the moderating effect of innovativeness on the relationship

between customer satisfaction, switching costs and e-store loyalty.

II. LITERATURE REVIEW AND HYPOTHESES

A. Customer Loyalty

Customers with high loyalty buy the products of the same manufacturers or from the same shops in a certain period. It is considered to have a powerful impact on company performance. After the emergence of e-commerce, this concept was extended to online shopping. E-store loyalty was defined as the repeating purchases in favor of the certain e-store [5]. Although the basic meaning is the same, the main considering object is the e-store itself instead of certain product brands within the context of online shopping. Previous research shows that the correlations such as customer satisfaction, trust, price and services still have significant effects on e-store loyalty [6].

B. Customer Satisfaction

After the customer satisfaction management was put forward, a great deal researches were done in this area. Customer satisfaction means the consumer's sense that consumption provides outcomes against a standard of pleasure versus displeasure [7]. It is considered as a vital variable which affects customer behavior and loyalty. Generally satisfaction is an antecedent of loyalty. Satisfaction with e-stores, like satisfaction with traditional retailers, is not derived solely from the customer's satisfaction with the product purchased [8]. The dominant factors of e-stores satisfaction are convenience, site design, financial security which reflect the characteristics of the web-site itself. As the performance of the e-store rises, the customers will have high satisfaction levels and tend to repeat purchasing. Hence, higher satisfaction level relate with higher levels of loyalty. This leads to,

H1. Customer satisfaction relates positively to e-store loyalty.

C. Switching Cost

Switching cost was defined as "the perceived economic and psychic costs associated with changing from one alternative to another" [9]. Switching costs include time, effort, and economic costs such as those associated with adapting to new products or new stores. Firms can offer hard or soft benefits to enhance switching barriers. Hard benefits means direct

financial advantages such as discount, free presents and so on. Hard benefits can attract customer's attention immediately. Soft benefits, such as member card, integrals and special merchandise recommendations, on contrast, reinforce the customer's sense of "special status" which would build long-term loyalty. The customers keep the relationship with former suppliers maybe not because of the degree of satisfaction but because the perceived switching cost is too high or there is no suitable alternatives. Study shows that e-store loyalty is affected by customer satisfaction and switching cost simultaneously [8]. Higher switching costs lead to higher e-store loyalty. This leads to,

H2. Switching costs relate positively to e-store loyalty.

D. Personal Innovativeness

Personal innovativeness is considered an inherent feature of all individuals with respect to new products or services. This concept is related to individual attitude towards new ideas and innovative decisions regardless of other people's experience. It has proven to be extremely relevant for explaining the adoption of new products or shopping procedures [10]. Rogers' innovation diffusion theory suggests that users' personality differences can potentially influence how users form their intentions to perform behaviors [11]. Online shoppers cannot make sure the quality of products or services when they make orders on the web, therefore it take more risks than offline shopping. Within the context of online shopping, personal innovativeness has been explored as a concept of risk-taking tendencies, since an innovative behavior such as online shopping involves unavoidable risk and uncertainty [4]. The customers with high innovativeness accept online shopping better than others.

When customers change their previous e-store, they have to login, read help documents and try the services of new e-store. All the processes are totally new to the customers. Therefore the proneness of accepting new e-store is similar with taking new products because they are both risk-taking processes. The procedure of changing e-store should be influenced by personal innovativeness too. In this study, personal innovativeness is explored as a moderator on the relationship between customer satisfaction, switching costs and e-store loyalty.

Customers with high innovativeness are expected to be more possible to change e-stores because of their tendency of risk-taking. The relationship between customer satisfaction and e-store loyalty changes when customers have different person innovativeness. This leads to,

H3. Personal innovativeness has a moderation effect between customer satisfaction and e-store loyalty.

Similarly, the relationship between switching costs and e-store loyalty changes when customers have different person innovativeness. This leads to,

H4. Personal innovativeness has a moderation effect between switching costs and e-store loyalty.

Fig. 1 shows that personal innovativeness serves as a key moderator in the model of e-store loyalty.

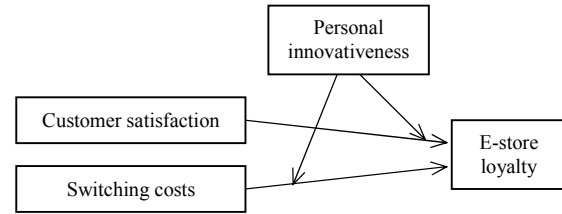


Figure 1. Conception model of e-store loyalty

III. METHODOLOGY

A. Measurement

Information was collected using a structured survey with a set of multi-attribute scales. The scale used for the measurement of customer satisfaction was developed from literature within online context [12]. Switching costs was measured by means of an adaptation of the scale proposed by previous research [13]. E-store loyalty is measured on scale adapted from [14]. Personal innovativeness is measured on scale adapted from [15]. All the items used seven point Likert scale.

B. Data collection

A convenience sampling method was used for data collection. Data were collected from both internet and papyery questionnaires. Respondents were asked to indicate an e-store the used frequently and all the questions were based on the specified e-store. The total number of usable respondents was 201. Of the final sample, 53% are male, 47% are female. The distribution of educational attainment is that 2.5% are senior high school or lower, 11.9% are college, 77.6% are bachelor, 6% are master and 2% are doctor. According to the distribution, the sample was representative for online shoppers.

IV. ANALYSIS AND RESULTS

A. Reliability and Validity Assessment

Cronbach's alpha reliability index was calculated to measure the reliability of each construct. According to the criterion, Cronbach's alpha should be higher than 0.7 [16]. All the scales have strong reliability. The Cronbach alpha of customer satisfaction is 0.90; switching costs is 0.78; e-store loyalty is 0.82; personal innovativeness is 0.72.

In order to examine the validity, the value of factor loading was calculated. The ideal level for factor loading value for measurement items is 0.7 or higher, and 0.6 is also acceptable for an application across disciplines. All the factor loadings are larger than 0.63, thus, convergent validity is considered to be satisfactory.

B. Hypotheses testing

Results of the hierarchical moderated regression analysis are showed in Table 1. In the first step of the regression, the independent variables enter into the equation. In the second

TABLE I. HIERARCHICAL MODERATED REGRESSION ANALYSIS

	e-store loyalty			VIF
	Model 1	Model 2	Model 3	
Independent variables				
Customer satisfaction	0.475***	0.441***	0.447***	1.346
Switching costs	0.346***	0.312***	0.212***	1.485
Moderator				
Personal innovativeness		0.144**	0.190***	1.401
Interaction				
Customer satisfaction × Personal innovativeness			0.016	1.503
Switching costs × Personal innovativeness			-0.128*	1.670
R^2	0.498	0.527		
Adjusted R^2	0.493	0.515		
F-Value	98.108***	69.709***		
ΔR^2	0.498	0.017	0.012	
F-Value for ΔR^2	98.108***	6.983**	3.467*	

Standardized regression coefficients are reported in columns marked Model 1, Model 2, Model 3.

Where * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

step, adds the moderator (personal innovativeness) into the regression equation. In the third step, the interaction of independent variables and moderator enter into the equation. For avoiding collinearity, the standardized values of the independent variables and moderator are used to compute the interaction. From Table 1, all the values of VIF in model 3 are less than 2. Hence there is no serious collinearity in the multiple linear regressions.

After entering the interaction terms, customer satisfaction ($\beta=0.447$, $p < 0.001$) and switching costs ($\beta=0.212$, $p < 0.001$) are both significantly related to e-store loyalty. Thus, H1 and H2 were supported. Customer satisfaction and switching costs relate positively to e-store loyalty.

From model 3, even though the increased amount of variance was slight, the addition of interaction terms improves the amount of variance in e-store loyalty significantly ($\Delta R^2=0.012$, $F=3.467$, $p < 0.05$). The interaction of switching costs and personal innovativeness was significantly related to e-store loyalty ($\beta = -0.128$, $p < 0.05$). Thus, H4 which hypothesized that personal innovativeness has a moderation effect between switching costs and e-store loyalty was not rejected. However, the interaction of customer satisfaction and personal innovativeness was not significantly related to e-store loyalty ($\beta = -0.016$, n.s.). Therefore, H3 proposed that personal innovativeness has a moderation effect between customer satisfaction and e-store loyalty was rejected.

C. Interaction effects

The significant interaction effects were showed in Fig. 2 using the methods proposed in [17]. The relationship between switching costs and e-store loyalty at two levels (means ± 1 standard deviation) of personal innovativeness is depicted in Fig. 2.

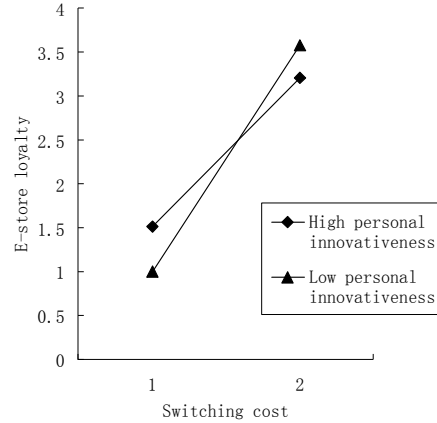


Figure 2. Relationship between switching costs and e-loyalty at two levels of personal innovativeness

In Fig. 2, ‘1’ of X-axis means low switching cost and ‘2’ of X-axis means high switching cost. The relationship between switching cost and e-store loyalty is stronger among online shoppers with low personal innovativeness than among respondents with high personal innovativeness.

V. DISCUSSION AND CONCLUSION

A. Discussion

The main focus of this study was to examine how personal innovativeness affects the e-store loyalty. The relationship among customer satisfaction, switching costs and e-store loyalty was tested first. The results showed that customer satisfaction and switching costs relate positively to e-store loyalty. Based on this conclusion, the moderating effect of personal innovativeness on the relationship among customer satisfaction, switching costs and e-store loyalty was tested. Results showed that personal innovativeness has a moderation effect between switching costs and e-store loyalty. However, no significant moderating effect was found on the relationship between customer satisfaction and e-loyalty.

Switching costs is not an economic factor controlled totally by enterprises; it is also affected by the perceived factors of the customers [3]. The relationship between switching costs and e-store loyalty is affected by other personal traits such as personal innovativeness. With high innovativeness, customers tend to search new e-stores even with high loyalty. The likely of changing e-stores are higher, and the relationship between switching costs and e-store loyalty is weaker among customers with high personal innovativeness than among customers with low personal innovativeness. Satisfaction is a general antecedent of loyalty [18]. It is a stable reflection of the customers’ feelings generated through the purchasing process. The correlation between customer satisfaction and loyalty is more solid than switching cost. So the relationship between customer satisfaction and e-store loyalty was not moderated by personal innovativeness in this study.

Previous researches on personal innovativeness were focus on the correlation between personal innovativeness and the

adoption of new products or technologies based on innovation diffusion theory. Correlative studies approved the moderating effect of personal innovativeness on the adoption of new web services [4][19]. However, customer loyalty is eventful for those suppliers of web services because it is crucial for their long term development. The main contribution of this study is the examination of the moderating effect of personal innovativeness on the relationship between switching costs and e-store loyalty. Through empirical research, it is confirmed that personal innovativeness has significant impact on the process of switching to new e-stores. Switching to new e-stores means that the customers had to adapt to new services provided by different e-stores. It is similar with taking new products or technologies. Hence it is affected by personal innovativeness which represents the individual attitude towards new ideas and innovative decisions.

The findings of this study also provide some important advices for online stores. First, for maintaining existing customers, the most effective way is still improving customer satisfaction. Similar to traditional business pattern, the levels of satisfaction have direct positive impact on repurchasing intention and word of mouth. This is the basic competing prerequisite for each e-store. Other competing means may only have temporary effects, and the customers attracted will turn to other e-store because of low satisfaction.

Second, switching costs is meaningful for enhancing e-store loyalty too, while their relationship is affected by personal innovativeness. E-stores often provide hard or soft benefits for members to increase switching costs. Such steps could prevent the switching behavior of customers effectively. But such purposes have lower effect on customers with high personal innovativeness than on customers with low personal innovativeness because customers with high personal innovativeness tend to search for new alternatives. However, this is the chance for new enters. As there are already numerous e-stores competing in B2C and C2C business, it is difficult for new enters to gain customers. According to the result of this study, customers with high personal innovativeness have high possibilities of changing e-stores, so they are main objects to win over by new enters. Through enhancing exposal and advertising specialties, new enters could attract curiosity of customers and increase their market shares step by step.

B. Limitations and future research

This study focused solely on the effect of personal innovativeness on the relationship among customer satisfaction, switching costs and e-store loyalty, other variables such as trust, involvement which also have effect on loyalty were not included. The samples were limited in a small scope. Future research should examine the relationship between these variables and test the hypotheses in a larger context.

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