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The Mediating Effect of Commitment on Customer Loyalty in e-Brokerage: An Enhanced Investment Model

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ABSTRACT

Customers could switch service provider easily because of lower searching cost and identical service in online environment. Most marketing research for customer loyalty emphasizes the effect of satisfaction and switching barrier, derived from investment model. However, how satisfaction and switching barrier influence customer loyalty has been less conclusive. The possible reason is neglect of commitment. We inject the concept of commitment in relationship marketing, which consists of affective and continuous commitment, into investment model for enhancing mediating role of commitment.

Empirical results gathered from online survey in virtual financial communities show that commitment is the essential mediator in cultivating customer loyalty. Besides, satisfaction and switching barrier influence loyalty by different component of commitment, affective continuous commitment respectively. Affective commitment is more important than continuous commitment. E-brokerage should pay attention to earning customers' commitment for retaining customers.

Keywords

Commitment, Customer Loyalty, e-Brokerage, Investment Model.

INTRODUCTION

Recently, online investment has been a killer application in financial market (Menon, Konana, Browne and Balasurbramanian, 1999) due to enormous market size and great lifetime value of over US\$1,000 per online customer (Chen and Hitt, 2002). Two phenomenal 18% growth in online trading activities and 73% growth in online investors were recorded from 1997 to 1998 (Bhattacharjee, 2001). The startling growth is also emerging in Taiwan, approximately US\$3.4 billion of online brokerage (15.31% of total stock exchange), and over 3.3 million of online brokerage accounts by March in 2004 (Taiwan Securities Exchange, 2004). Cost of attracting new customer was over US\$400 on average and represented a remarkable percentage of the expenses (Chen and Hitt, 2002). Switching cost in e-brokerage environment is extremely low because users could just have a "click away." Hence, e-broker focuses their strategic efforts on customer retention in order to avoid loss of initial investment cost and potential profit (-Jones, Mothersbauch and Beatty, 2000).

The emerging research stream of customer loyalty stresses that satisfaction is not the only factor for customer retention, but also switching barrier (e.g. Jones et al., 2000). No matter how customer is dissatisfied, s/he would still maintain relationship because of considerable loss of quitting. Yet, the relationship of satisfaction, switching barrier and loyalty is still heated debate. Therefore, we try to figure out customer loyalty from its essence – sustaining long-term relationship with customer, which is the main assertion of investment model and perspective of relationship marketing. In this study, we attempt to answer three key questions. First, what is the essence and effective way of customer loyalty in e-brokerage from the perspective of investment model and relationship marketing? Second, how appropriate is investment model in e-brokerage? Third, why is the controversy about relative role of satisfaction and switch barrier in research of customer loyalty exists?

RESEARCH MODEL

Theoretical Background

Traditionally, the primary strategy of customer loyalty is to delight customer as much as possible (Oliver, 1999). Nevertheless, a satisfied customer could switch to other suppliers for acquiring more qualified service/product or just giving a

trial without any loss. A dissatisfied customer may stay on the same supplier because s/he has no better choice or takes lots of loss when leaving. Some research argues that relationship between satisfaction and customer loyalty is asymmetric (Oliver, 1999). Customer is difficult or costly to change suppliers and has to stay on the same supplier, irrespective of satisfaction, because of relational investment, switching costs, and availability and attractiveness of alternatives (Colgate and Lang, 2001; Jones et al., 2000). Yet, the effect of switching barrier is less than conclusive. One research stream proposes the moderator of switching barrier (e.g. Jones et al., 2000; Yang and Peterson, 2004); the other argues that satisfaction and switching barrier are both the main direct factors (e.g. Colgate and Lang, 2001). The possible reason is ignorance of “commitment,” which is central to perspective of relationship marketing (Morgan and Hunt, 1994; Tellefsen and Thomas, 2005). Identical to the concept of customer loyalty, the mainstream of relationship marketing is toward establishing and maintaining long-term successful relational exchange (Morgan and Hunt, 1994; Peppard, 2000). Moreover, they stress on the key mediating role of relationship commitment, indicating customer’s desire to maintain a valued and indefinitely relationship (Morgan and Hunt, 1994). Oliver (1999) decomposes loyalty into four sequential stages – cognitive loyalty, affective loyalty, conative loyalty and action loyalty (action inertia to repurchase). Among them, affective loyalty is “commitment” and conative loyalty is “customer loyalty” (Julander and Söderlund, 2003; Oliver, 1999; Rusbult, 1980).

The investment model proposed by Rusbult (1980) could comprehend the influence of these two main factors, satisfaction and switch barrier, on customer loyalty. Rusbult’s investment model rooted in interdependence theory and social exchange theory devotes to research of persistence of interpersonal relationship, such as romantic and organizational relationship and is employed in many research areas, such as social, psychological and organizational studies (Le and Agnew, 2003). In these studies, the investment model is robust because of strong explanatory power in commitment and stay/leave (Le and Agnew, 2003; Rusbult, Drigotas and Verette, 1994). Whether an individual remains a relationship depends on the comparison of current relationship and potential alternatives. This comparison involves the satisfaction level of current relationship, the quality of alternatives, and the personal investment of current relationship, as shown in Figure 1.

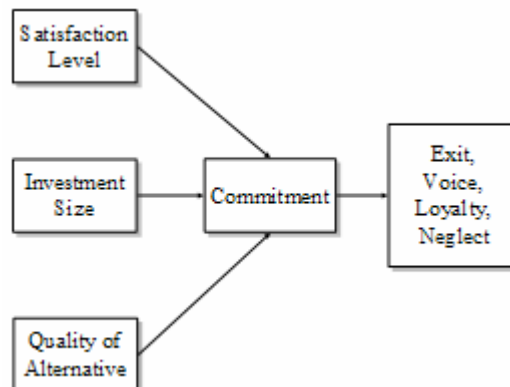


Figure 1. Investment Model (Rusbult, 1980; Rusbult, Farrell, Rogers and Mainous III, 1988)

Rusbult (1980) proposes that commitment is a function of these three elements and an individual generates switching behavioral intention, such as exit, loyally stay and dissatisfiedly stay, based on commitment. Satisfaction level implies psychological fulfillment of current relationship and the other two elements imply the economic comparison of current status and potential alternatives, which is similar to the concept of switching barrier. Investment size is the economic loss of quitting relationship, including initial and continuous investment, but the quality of alternatives is the economic profit of quitting relationship. Consumer would switch suppliers, once s/he perceived the investment attached the current relationship is low, the attractiveness of alternatives is great, or the satisfaction level falls short of the comparison level.

Commitment is a multi-facet construct in perspective of relationship marketing, rather than a uni-dimensional constructs defined by Rusbult (1980), Morgan and Hunts (1994) and Oliver (1999). Meyer and Allen (1987) propose a three-component typology of commitment, including affective, continuous and normative commitment. Affective commitment refers to the emotional attachment to a relationship. Continuous commitment derives from the cost associated with quit or the profit associated with stay. Normative commitment refers to consumer’s obligation of relationship (Meyer and Allen, 1987). Most research derived from this typology only focus on affective and continuous commitment, since it thinks normative commitment is one part of affective commitment (e.g. Allen and Meyer, 1990; Wasti, 2002). Allen and Meyer (1990) propose a possible explanation, which moral obligation could influence individual’s desire and then the sustained desires translate to into moral norms. Bendapudi and Berry (1997) emphasize that the effective strategy for maintaining long-term

relationship with customer is to focus on either the desire to continuous relationship based on psychological perspective, identical to affective commitment, or the dependency in relationship based on economics perspective, identical to continuous commitment. McGee and Ford (1987) re-examined the measurement of commitment proposed by Meyer and Allen (1984, 1987) and proposed that affective commitment is uni-dimensional construct and continuous commitment comprised of two distinct dimensions, few existing alternatives and personal sacrifice associated with leaving the organization (Dunham, Grube and Castaneda, 1994). Affective commitment is negatively correlated with dimension of “few existing alternatives” and positively correlated with dimension of “personal sacrifice associated with leaving the organization.”

Following this line of inference, an extension of investment model for comprehensive investigation on customer loyalty is proposed, as shown in Figure 2.

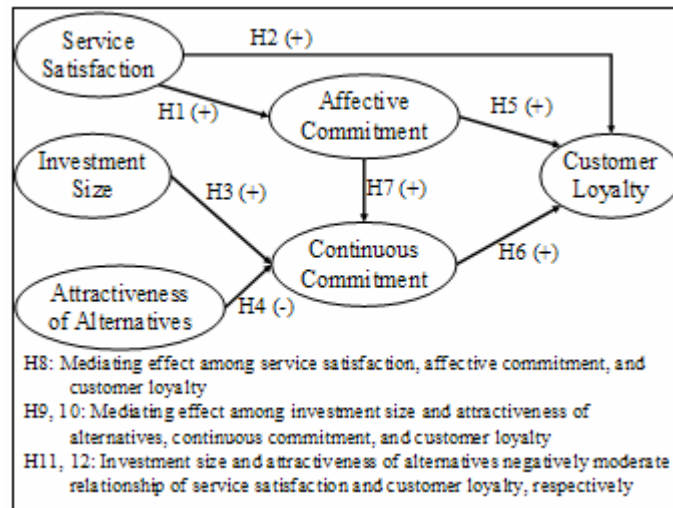


Figure 2. Research Framework

Hypotheses

Satisfaction is defined as cumulative pleasurable fulfillment of some needs, desire, or goals, which sums up the affective response associated with specific service/product and firm (Oliver, 1999; Yang and Peterson, 2004). By the aggregation of satisfied experiences, affective commitment is encoded in customer’s mind (e.g. Allen and Meyer, 1990; Oliver, 1999; Rusbult, 1980). In addition to positive psychological association, consumer with cumulative satisfied experience could remain loyalty to relationship, recommend product/service, say positive thing, and pay more for product/service (Zeithaml, Berry and Parasuraman, 1996). Hence, we propose the following hypotheses.

Hypothesis 1: Service satisfaction of e-brokerage is positively associated with affective commitment.

Hypothesis 2: Service satisfaction of e-brokerage is positively associated with customer loyalty.

Continuous commitment is developed by the consideration for cost of quitting relationship. Allen and Meyer (1990) proposed that the magnitude of investment associated with current relationship and perceived lack of alternative are both antecedents of continuous commitment (Bendapudi and Berry, 1997; Wasti, 2002). Colgate and Lang (2001) think that both lack of alternative and no perceived differences between alternatives are switching barrier. We focus on “attractiveness of alternative”, rather than availability of alternative, since it is impossible that there is no alternative for consumer in competitive e-brokerage market. These lead us to propose the following hypotheses.

Hypothesis 3: Investment size of customer is positively associated with continuous commitment.

Hypothesis 4: Attractiveness of alternatives of customer is negatively associated with continuous commitment.

According to investment model (Rusbult, 1980) and Meyer et al.’s (1993) research, both affective and continuous commitment negatively correlated with intention to leave and positively correlated with loyalty, since both of them refer to association with relationship by their definitions (Wasti, 2002). Hence, we propose the following hypotheses.

Hypothesis 5: Affective commitment of e-brokerage is positively associated with customer loyalty.

Hypothesis 6: Continuous commitment of e-brokerage is positively associated with customer loyalty.

McGee and Ford (1987) argue that affective commitment is negatively correlated with one dimension of continuous commitment – few existing alternatives and positively correlated with the other dimension – personal sacrifice associated with leaving the organization. The latter one is because consumer would translate affective commitment into psychological cost and then “have to” maintain relationship. In our research “few existing alternative” is identical to “attractiveness of alternatives,” so we define dimension of “personal sacrifice associated with leaving the organization” as construct of continuous commitment and propose the hypothesis 7.

Hypothesis 7: Affective commitment of e-brokerage is positively associated with continuous commitment.

Following the perspective of relationship marketing and investment model (Rusbult, 1980, 1987), commitment is the key mediator on customer loyalty (Wasti, 2002). Hence we propose following hypotheses.

Hypothesis 8: The influence of satisfaction on customer loyalty is mediated by affective commitment.

Hypothesis 9: The influence of investment size on customer loyalty is mediated by continuous commitment.

Hypothesis 10: The influence of attractiveness of alternatives on customer loyalty is mediated by continuous commitment.

Nevertheless, one research stream emphasizes the moderating role of switch barrier in the relationship between satisfaction and customer loyalty (e.g. Julander and Söderlund, 2003; Yang and Peterson, 2004). Jones et al.’s (2000) research concludes that influence of service satisfaction on customer loyalty varies by different level of switch barrier. However, we speculate that there is possibly no moderating effect of switch barrier because influenced paths of satisfaction and switch barrier are different based on our framework. In order to testify our argument of mediator of commitment, we also propose hypotheses of moderating effect and we expect there is no moderating effect of switching barrier.

Hypothesis 11: Investment size does not moderate the relationship of satisfaction and customer loyalty.

Hypothesis 12: Attractiveness of alternatives does not moderate the relationship of satisfaction and customer loyalty.

METHODOLOGY

Operationalization and Instrument Design

The instruments for all constructs were adapted from the literature and were revised to fit our research context, as shown in Table 1. All items were anchored on seven-point Likert-type scales, from strongly disagreement to strongly agreement.

Construct	Definition	Source of Measurement
Service Satisfaction	Extent of customer’s perception to which core service given by e-broker could fulfill his/her requirement, desire, goal, and so forth (Oliver, 1999).	Wolfenbarger and Gilly (2003)
Investment Size	Extent of intrinsic and extrinsic resources attached to the relationship with e-broker and disappeared when relationship is close (Rusbult et al., 1994).	Wasti (2002)
Attractiveness of Alternatives	Extent to which consumer senses other viable competing e-broker in marketplace (Jones et al., 2000)	Jones et al. (2000)
Affective Commitment	Degree of consumer’s affective attachment to e-brokerage, which s/he wants to maintain relationship (Allen and Meyer, 1990).	Garbarino and Johnson (1999); Allen and Meyer (1990)
Continuous Commitment	Degree of consumer’s perceived cost associated with quitting relationship, which s/he needs to maintain relationship (Allen and Meyer, 1990).	Wasti (2002)
Customer Loyalty	Degree of consumer’s re-transaction intention toward specific e-brokerage (Oliver, 1999).	Zeithaml et al. (1996)

Table 1. Operationalization for Constructs

The measurement of service satisfaction was adapted from “eTailQ,” which was developed by Wolfenbarger and Gilly (2003), for gauging core service quality for the virtual shopping environment. We added items to measurement of affective commitment developed by Garbarino and Johnson (1999) to supplement items of Allen and Meyer’s (1990). We apply Wasti’s (2002) instrument of continuous commitment, since we focus on “personal costs associated with leaving,” one of dimension of Allen and Meyer’s (1990) construct (Dunham et al., 1994; McGee and Ford, 1987).

A short interview with several colleagues and experts and a pre-test were carried out to ensure face validity and content validity for the compiled questionnaires. We arranged two items at the top of questionnaire for filtering respondents without experience of online brokerage and asking respondents for choosing a specified e-brokerage with whom respondents most frequently trade.

Data Collection and Sampling Procedure

A web-based questionnaire was administered collecting data from online brokerage users. The posted message was put on virtual financial communities in Yahoo, the most popular portal site in Taiwan and bulletin board systems of universities and colleges in Taiwan for two weeks. It contained objectives of this study, solicited participation in this online survey, URL address, and incentive of a drawing for small prizes. Subjects were self-selected for this study via the posted messages. During this period, out of 716, the number of page browsed, 553 questionnaires were filled in. After filtering respondents without experience of online brokerage and unfinished questionnaires, 236 (42.5%) are useable for data analysis

DATA ANALYSIS AND RESULTS

Measurement Model

We performed confirmatory factor analysis to assess reliability, convergent validity, and discriminant validity for five measured constructs and four sub-constructs of service satisfaction simultaneously, using LISREL 8.52. We dropped items with insignificant factor loadings and low factor loading as compared to the suggested 0.7 threshold. The factor loadings of remaining indicators are all significant ($p \leq 0.01$) and values of composite reliability and average extracted variance for each construct are all above the threshold suggested by Bagozzi (1980): 0.7 and 0.5 respectively, indicating acceptable reliability and convergent validity. Discriminant validity is also acceptable based on the assessment of lower correlations between distinct constructs compared to the square root of the average variance extracted (Fornell and Larcker, 1981).

Hypotheses Testing

All fit indices of structural model are acceptable, compared to the desired level suggested by Bentler (1990), as shown in Table 2. This result reveals that this model fit well with the observed data. The results, including path coefficients and explained variances, are presented in Figure 3. All path coefficients are significant at the 0.05 level and the directions are consistent with the predictions. Hence, H1 through H7 are all supported. The explained variances of affective commitment, continuous commitment, and customer loyalty are 42%, 36%, and 56%.

	χ^2	d.f.	$\chi^2/d.f.$	Standardized RMR	RMSEA	CFI	NFI	GFI
Model	177.58	68	2.61	0.07	0.08	0.96	0.94	0.90
Desired Level	Not Significant	--	< 3.0	0.05~0.08	0.05~0.08	> 0.90	> 0.90	> 0.90

Table 2. Fit Indices for Structural Model

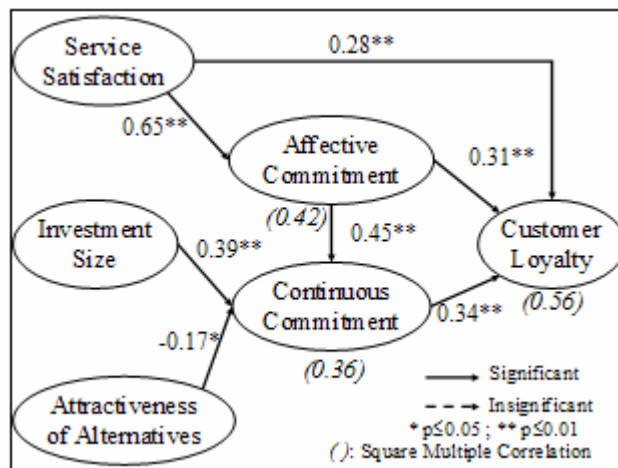


Figure 3. Structural Model Evaluation

As for testing mediating effects of affective commitment and continuous commitment (H8, H9 and H10), the procedure of assessing mediating effects proposed by Kelloway (1998) was adopted. Two more path models were constructed for each setting. Figure 4 presents simplified path diagrams among three constructs involved. The top diagram is the original model presenting a partial mediation case. The middle diagram is a full mediation case. The bottom diagram is a no mediation case. For Brevity, only comparisons of model evaluation and model fit statistics are reported here. The fit indices of full mediation and no mediation models are both worse than partial mediation model, as shown in Table 3. According to χ^2 difference test, partial mediation model is better than full mediation and no mediation models. Hence, the result supports Hypothesis 8.

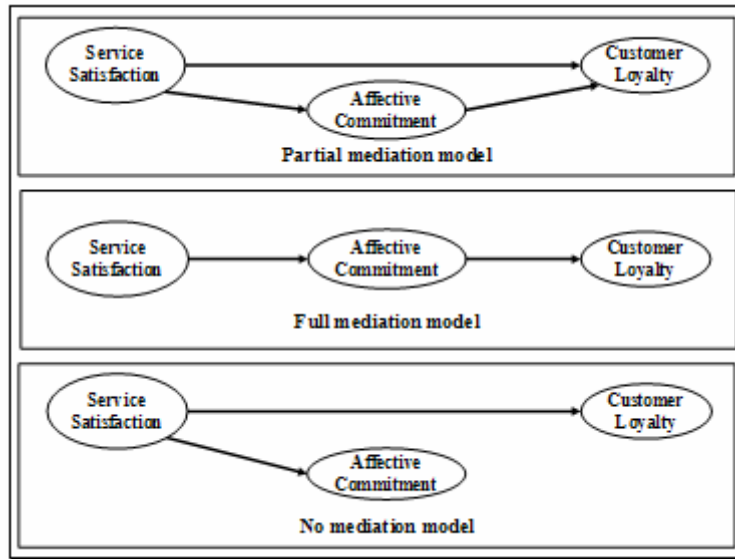


Figure 4. Mediating Models – for Hypothesis 8

We tested H9 and H10 by following the same procedures aforementioned, referred to Figure 4. With regard to Hypothesis 9, the simplified path diagram involved investment size, continuous commitment and customer loyalty. The full mediation case is the original model describing investment size merely indirectly affects customer loyalty through continuous commitment. The fit indices of full mediation case are the best among three models as shown in Table 4. According to result of χ^2 difference test, full-mediating model is better than partial-mediating model, and partial-mediating model is better than no-mediating model. Hence, the result supports Hypothesis 9.

With regard to Hypothesis 10, the simplified path diagram involved attractiveness of alternatives, continuous commitment and customer loyalty. The full mediation case is the original model describing attractiveness of alternatives merely indirectly affects customer loyalty through continuous commitment. The fit indices of full mediation case are the best among three models, as shown in Table 5. According to result of χ^2 difference test, full-mediating model is better than partial-mediating model, and partial-mediating model is better than no-mediating model. Hence, the result supports Hypothesis 10.

	χ^2	d.f.	CFI	NFI	GFI	SRMR	RMSEA
Partial Mediation	177.58	68	0.96	0.94	0.90	0.07	0.08
Full Mediation	185.36	69	0.96	0.94	0.90	0.08	0.09
No Mediation	189.31	69	0.96	0.94	0.90	0.08	0.09
χ^2 Difference Test Results							
Partial Mediation vs. Full Mediation	χ^2 Diff = 7.78 > 3.84 _(0.05, 1)					Accept Partial Mediation	
No Mediation vs. Partial Mediation	χ^2 Diff = 11.73 > 3.84 _(0.05, 1)					Accept Partial Mediation	
Result: Partial Mediation Model > Full Mediation Model & No Mediation Model							

Table 3. Comparison for Mediating Effect Evaluation of Hypothesis 8

	χ^2	d.f.	CFI	NFI	GFI	SRMR	RMSEA
Partial Mediation	176.68	67	0.94	0.91	0.90	0.07	0.08
Full Mediation	177.58	68	0.96	0.94	0.90	0.07	0.08
No Mediation	187.87	68	0.93	0.90	0.90	0.08	0.09
χ^2 Difference Test Results							
Partial Mediation vs. Full Mediation	χ^2 Diff = 0.9 < 3.84 _(0.05, 1)					Accept Full Mediation	
No Mediation vs. Partial Mediation	χ^2 Diff = 11.19 > 3.84 _(0.05, 1)					Accept Partial Mediation	
Result: Full Mediation Model > Partial Mediation Model > No Mediation Model							

Table 4. Comparison for Mediating Effect Evaluation of Hypothesis 9

	χ^2	d.f.	CFI	NFI	GFI	SRMR	RMSEA
Partial Mediation	175.38	67	0.94	0.91	0.90	0.07	0.08
Full Mediation	177.58	68	0.96	0.94	0.90	0.07	0.08
No Mediation	195.06	68	0.93	0.90	0.89	0.10	0.09
χ^2 Difference Test Results							
Partial Mediation vs. Full Mediation	χ^2 Diff = 2.2 < 3.84 _(0.05, 1)					Accept Full Mediation	
No Mediation vs. Partial Mediation	χ^2 Diff = 19.68 > 3.84 _(0.05, 1)					Accept Partial Mediation	
Result: Full Mediation Model > Partial Mediation Model > No Mediation Model							

Table 5. Comparison for Mediating Effect Evaluation of Hypothesis 10

As for testing moderating effect of H11 and H12, the multi-sample approach was performed. The interaction effect exists if the estimated path coefficients in multi-groups are different (Bagozzi and Yi, 1989). The detail procedure is demonstrated in Figure 5.

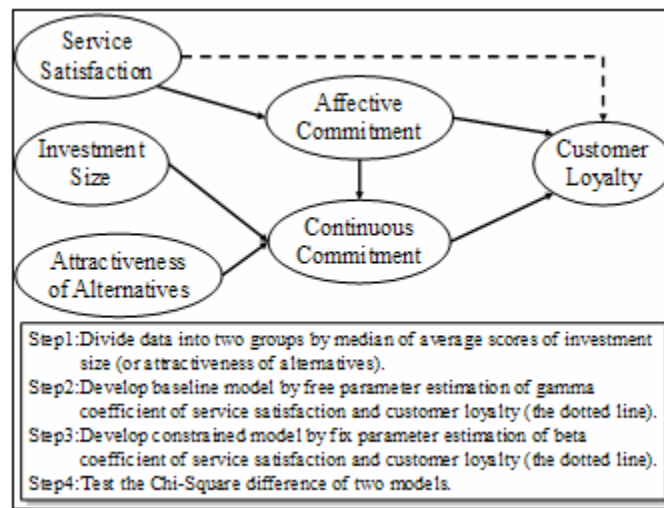


Figure 5. Moderating Models – for Hypothesis 11&12

With regard to Hypothesis 11, observed data was split into two groups by investment size. The baseline model indicates estimated parameters of two groups are different and constrained model indicates that estimated parameters of two groups are the same. The fit indices of two models are similar and the χ^2 difference is insignificant, as shown in Table 6. It reveals that investment size does not moderate the relationship of satisfaction and customer loyalty, i.e. Hypothesis 11 is supported. Hypothesis 12 was assessed by the same procedure. The two groups were categorized by high and low attractiveness of

alternatives. There is no moderating effect of attractiveness of alternatives on association of satisfaction and customer loyalty according to the evidence, as shown in Table 7. Hypothesis 12 is also supported.

	χ^2	d.f.	CFI	NFI	GFI	SRMR	RMSEA	
Baseline Model	268.89	136	0.94	0.89	0.88	0.07	0.09	
Constrained Model	267.71	137	0.94	0.89	0.88	0.07	0.09	
χ^2 Difference Test Results		χ^2 Diff = 1.18 < 3.84 _(0.05, 1)				Accept Constrained Model		

Table 6. Comparison for Moderating Effect Evaluation of Hypothesis 11

	χ^2	d.f.	CFI	NFI	GFI	SRMR	RMSEA	
Partial Mediation	279.93	136	0.95	0.91	0.86	0.10	0.09	
No Mediation	279.79	137	0.95	0.91	0.86	0.10	0.09	
χ^2 Difference Test Results		χ^2 Diff = 0.14 < 3.84 _(0.05, 1)				Accept Constrained Model		

Table 7. Comparison for Moderating Effect Evaluation of Hypothesis 12

DISCUSSION AND IMPLICATION

Academic Implication and Future Research

Our results reinforce the understanding of effective strategies for customer loyalty. They also add to the investment model by showing the distinct mediating effects of affective and continuous commitment. Regardless of adopted strategies, promoting satisfaction or building up switching barrier, the ultimate objective should be to strengthen commitment, in turn, retaining customers. Besides, the moderating effect of switching barrier is inexistence after adding commitment on research model, accentuating the mediating effect of commitment.

The results demonstrate the notable applicability of investment model to e-brokerage. After adding on two components of commitment, the predicting commitment (78%) and predicting customer loyalty (56%) of our model are both much better than reported in other studies (60% and 47% respectively) based on the meta-analysis by Le and Agnew (2003). This evidence highlights the importance of considering satisfaction and switching barrier simultaneously in customer's switching behavior, as well as the supplement of multi-facet concept of commitment to investment model. Satisfaction and switching barrier affect on loyalty by different way. The former assists in building active emotional commitment and the latter for compelled commitment based on economic consideration. It is insufficient for investigating influence of commitment only by affective commitment. Consistent with central theme of relationship marketing, our results indicate that customer would stay on the relationship only when they commit to e-broker psychologically and economically, which is evoked by e-broker's strategies of fulfilling customer's desire, increasing customer's relational investment, and providing more attractive incentives than competitors. Moreover, it is interesting with positive correlation between two components of commitment. Customer probably transforms affective association with e-broker into personal psychological sacrifice of ongoing association, i.e. continuous commitment. However, we speculate that continuous commitment may influence affective commitment reversely, since the lasting relationship provokes customer's emotional association by identification or inertia. The detailed deliberation could be investigated further.

Another interesting finding is the absence of moderating effect of switching barrier on relationship of satisfaction and customer loyalty, which is inconsistent with research, such as Jones et al. (2000) and Julander and Söderlund (2003). First, we think customer would not adjust his/her level of satisfaction by variant switching barrier. Satisfaction and switching barrier act independently on customer loyalty. Customer would compare the level of satisfaction to switching barrier (Colgate and Lang, 2001; Wasti, 2002). If the level of dissatisfaction surpasses the level of switching barrier, customer stops engaging in the remaining relationship. Secondly, the plausible explanation is the entering of commitment. The evidence of our study reveals partially mediating role of affective commitment between satisfaction and customer loyalty, but customer loyalty is primarily affected by commitment. It is possible the moderating effect exist in relationship between satisfaction and affective commitment, rather than between satisfaction and loyalty. In future, the competing models of different moderating effects could be proposed and testified, so as to elaborate on the existence of moderating role of switching barrier.

Practical Implication

Our findings lead to suggestions for e-brokers, who are eager to retain customers. We hereby propose two suggestions.

First, e-broker could make strategic retention program, which either delights customer by providing higher level of service quality, or build costly switching barrier by providing more incentive for VIP customer, lock-in project, relational specific investment, and so on. E-broker could only focus on one of them, since customer's retention is up to comparison of level of satisfaction and switching barrier.

Secondly, no matter what strategies e-broker performs, e-broker should be sure that these strategies could make customer cumulate their commitment to e-broker. Only sufficient commitment could preserve customer and promoting customer's repurchase intention. However, it would be better for e-broker to devote more resource to elevate service satisfaction and affective commitment. Relative to switching barrier, satisfaction is still customer's major consideration for retention. Among switching barriers, strategy of increasing customer's investment size, such as discountable contract, preferential treatment for members, specific service needed time to learn, is more effective than providing relatively attractive program compared to competitors. Besides, customer probably views long-term emotional association as a kind of psychological cost and have to keep on relationship. Accordingly, e-broker could engage in improving customer's service satisfaction, the most effective way, and then increasing customer's lock-in.

REFERENCE

1. Allen, N. J. and Meyer, J. P. (1990) The measurement of antecedents of affective, continuous and normative commitment to the organization, *Journal of Occupational Psychology*, 63, 1-18.
2. Bagozzi, R. P. (1980) *Casual Models in Marketing*, John Wiley and Sons, New York.
3. Bagozzi, R. P. and Yi, Y. (1989) On the use of structural equation models in experimental designs, *Journal of Marketing Research*, 26, 3, 271-284.
4. Bendapudi, N. and Berry, L. L. (1997) Customers' motivations for maintaining relationships with service providers, *Journal of Retailing*, 73, 1, 15-37.
5. Bentler, P. M. (1990) Multivariate analysis with latent variables: Casual modeling, *Annual Review of Psychology*, 31, 419-456.
6. Bhattacharjee, A. (2001) An empirical analysis of the antecedents of electronic commerce service continuance, *Decision Support Systems*, 32, 201-214.
7. Chen, P. Y. and Hitt, L. M. (2002) Measuring switching costs and the determinants of customer retention in Internet-enabled business: A study of the online brokerage industry, *Information Systems Research*, 13, 3, 255-274.
8. Colgate, M. and Lang, B. (2001) Switching barriers in consumer markets: an investigation of the financial service industry, *The Journal of Consumer Marketing*, 18, 4/5, 332-347.
9. Dunham, R. B., Grube, J. A. and Castaneda, M. B. (1994) Organizational commitment: The utility of an integrative definition, *Journal of Applied Psychology*, 79, 370-380.
10. Fornell, C. and Larcker, D. F. (1981) Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research*, 36, 10, 1246-1255.
11. Garbarino, E. and Johnson, M. S. (1999) The different roles of satisfaction trust and commitment in customer relationship, *Journal of Marketing*, 63, 2, 70-87.
12. Jones, T. O., Mothersbaugh, D. L. and Beatty, S. E. (2000) Switching barriers and repurchase intention in services, *Journal of Retailing*, 76, 2, 259-274.
13. Julander, C. and Söderlund, M. (2003) Effects of switching barriers on satisfaction, repurchase intention and attitudinal loyalty, *SSE/EFI Working Paper Series in Business Administration*, 2003:1, January 2003.
14. Kelloway, E. K. (1998) *Using LISREL for Structural Equation Modeling: A Researcher's Guide*, Thousand Oaks: Sage Publication, 81-102.
15. Le, B. and Agnew, C. R. (2003) Commitment and its theorized determinants: A meta-analysis of the investment model, *Personal Relationships*, 10, 37-57.
16. McGee, G. W. and Ford, R. C. (1987) Two or more? Dimensions of organizational commitment: Reexamination of the affective and continuous commitment scales, *Journal of Applied Psychology*, 72, 638-642.

17. Menon, N. M., Konana, P., Browne, G. J. and Balasurbramanian, S. (1999) Understanding trustworthiness beliefs in electronic brokerage usage, in D. Prabudda and J. I. Degross (Eds.) *Proceeding of the Twentieth International Conference on Information Systems*, December 13-15, Charlotte, North Carolina, Omnipress, 552-555.
18. Meyer, J. P. and Allen, N. J. (1984) Testing the 'side-bet' theory' of organizational commitment: Some methodological considerations, *Journal of Applied Psychology*, 69, 372-378.
19. Meyer, J. P. and Allen, N. J. (1987) Organizational commitment: Toward a three-component model, *Research Bulletin*, 660, the University of Western Ontario. Department of Psychology, London.
20. Meyer, J. P., Allen, N. J. and Smith, C. A (1993) Commitment to organizations and occupations: Extension and test of a three-component conceptualization, *Journal of Applied Psychology*, 78, 4, 538-551.
21. Morgan, R. M. and Hunt, S. D. (1994) The commitment-trust theory of relationship marketing, *Journal of Marketing*, 58, 3, 20-38.
22. Oliver, R. L. (1999) Whence consumer loyalty? *Journal of Marketing*, 53, 21-35.
23. Peppard, J. (2000) Customer Relationship Management (CRM) in financial services, *European Management Journal*, 18, 3, 312-327.
24. Rusbult, C. E. (1980) Commitment and satisfaction in romantic associations: A test of the investment model, *Journal of Experimental Social Psychology*, 16, 172-186.
25. Rusbult, C. E., Drigotas, S. M. and Verette, J. (1994) The investment model: An interdependence analysis of commitment process and relationship maintenance phenomena, in D. J. Canary and L. Stafford (Eds.) *Communication and Relational Maintenance*, San Diego: Academic Press, 115-139.
26. Rusbult, C. E., Farrell, D., Rogers, G. and Mainous III, A. G. (1988) Impact of exchange variables on exit, voice, loyalty, and neglect: An integrative model of responses to declining job satisfaction, *Academy of Management Journal*, 31, 3, 599-627.
27. Taiwan Securities Exchange, <http://www.tse.com.tw/home.htm>, <assesses date: April, 2004>.
28. Tellefsen, T. and Thomas, G. P. (2005) The antecedents and consequences of organizational and personal commitment in business service relationships, *Industrial Marketing Management*, 34, 23-37.
29. Wasti, S. A. (2002) Affective and continuous commitment to the organization: Test of an integrated model in the Turkish context, *International Journal of Intercultural Relations*, 26, 525-550.
30. Wolfinger, M. and Gilly, M. C. (2003) eTailQ: Dimensionalizing, measuring and predictingetail quality, *California Management Review*, 43, 2, 34-56.
31. Yang, Z. and Peterson, R. T. (2004) Customer perceived value, satisfaction, and loyalty: The role of switching costs, *Psychology & Marketing*, 21, 10, 799-822.
32. Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1996) The behavior consequences of service quality," *Journal of Marketing*, 60, 31-46.