



Effects of Personality Traits on Member Loyalty to Online Communities: Investigation from the Views of Relationship Proneness, Relational Benefits, and Relationship Quality

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Abstract: The ubiquity of the Internet has accelerated the growth of online communities. The administrators of such communities must consider not only how to recruit new members, but also how to encourage loyalty among existing members. Based on previous works, the present study explored the relationships among personality traits, relationship proneness, relational benefits, relationship quality, and loyalty in the context of online communities. The research sample comprised 599 online community members. The results indicated the positive effects of social affiliation and involvement on relationship proneness, of relationship proneness on relational benefits, of relational benefits on satisfaction and relationship commitment, of satisfaction on relationship commitment and loyalty, and of relationship commitment on loyalty.

Keywords: Online Communities, Personality Traits, Relationship Proneness, Relational Benefits, Relationship Quality, Loyalty

1. Introduction

Advancements in information and communication technology have facilitated the development of many successful Internet-based platforms, including online communities. Numerous types of online community exist, each with various features and goals [1]. In such virtual environments, people can interact and exchange information with others anonymously to fulfill their social or task needs [2]. In online communities, interpersonal interactions are not constrained by time and space; thus, such communities have grown into a large virtual society, second only to the real-world society, and participating in online communities has become an important part of people's modern life.

The rapid growth of online communities has created a new challenge for online community operators: they must explore not only how to attract new members, but also how to convert existing members into loyal ones, who would willingly share information or perform profitable actions (e.g., purchasing

and increase the value of the community [3].

Relationship marketing literature indicates that relationship quality is the key to loyalty, and relationship quality can be measured in terms of satisfaction, trust, commitment, and service quality [4]. In addition, relational benefits and relationship proneness have crucial roles in developing loyalty. Relational benefits originate from successful relationships between customers and service providers [5]. Such successful relationships are built on the service provider's marketing strategy and the customer's proneness to engaging in such relationships [6]. Furthermore, relational benefits and relationship proneness are determinants of relationship quality [7, 8].

The effects of the aforementioned variables on loyalty have been empirically confirmed in the service industry. The persistence of these effects in online communities remains unclear. The purpose of this study was to apply theoretical models concerning relational benefits and relationship proneness, including those proposed by Hennig-Thurau et al. [5], Odekerken-Schröder et al. [7], and Vázquez-Carrasco and

Foxall [8], to the investigation of factors in building loyalty in online communities. The following research questions were addressed:

1. Which dimensions of relationship quality affect loyalty in online communities?
2. How do relational benefits and relationship proneness affect relationship quality in online communities?
3. Which personality traits are associated with relationship proneness?

2. Theoretical Background

Hennig-Thurau *et al.* [5] proposed that relational benefits influence relationship quality, which in turn influences relationship marketing outcomes. In their study, relational benefits were divided into confidence benefits, social benefits, and special treatment benefits, and relationship quality included satisfaction and commitment. Furthermore, relationship marketing outcomes were examined through customer loyalty and word of mouth. The authors reported the positive effects of both satisfaction and commitment on customer loyalty and word of mouth, of satisfaction on commitment, of confidence benefit on satisfaction and customer loyalty, of social benefit on commitment and customer loyalty, and of special treatment benefit on commitment.

Odekerken-Schröder *et al.* [7] proposed a conceptual model of retailer-consumer relationships. The model was divided into three submodels: Submodel 1 was associated with relationship marketing tactics, Submodel 2 with personality traits, and Submodel 3 with relationship outcomes. The authors further examined the relationships between the three submodels and reported that among the four proposed types of personality trait, product category involvement had a significant impact on relationship proneness, whereas the remaining three traits—social affiliation, social recognition, and shopping enjoyment—did not.

Vázquez-Carrasco and Foxall [8] proposed a model considering the relationships between customer personality

traits (i.e., need for variety and social affiliation), relationship proneness, relational benefits, satisfaction, and loyalty. The results of a test demonstrated that both of the personality traits had a significant impact on relationship proneness and that relational benefits had a critical intermediary role between relationship proneness and satisfaction.

3. Research Hypotheses

The present study explored factors that build loyalty in online communities. The research model, shown in Fig. 1, was based on the studies of Hennig-Thurau *et al.* [5], Odekerken-Schröder *et al.* [7], and Vázquez-Carrasco and Foxall [8]. Because the focus was on online community members, rather than retail consumers, the personality trait of shopping enjoyment proposed by Odekerken-Schröder *et al.* [7] was considered inapplicable. The present study adopted the three remaining personality trait types, in addition to the trait of need for variety proposed by Vázquez-Carrasco and Foxall [8], and explored the effect of the personality traits on relationship proneness. Although Odekerken-Schröder *et al.* [7] confirmed that involvement has a positive effect on relationship proneness, the present study incorporated the effect of social recognition on relationship proneness—which was unconfirmed and hypothesized in their study on the basis of the literature—into the research model. In addition, Vázquez-Carrasco and Foxall [8] reported that need for variety and social affiliation had a negative effect and a positive effect, respectively, on relationship proneness. Consequently, the present study proposed the following hypotheses:

H1: Social affiliation has a positive impact on relationship proneness

H2: Social recognition has a positive impact on relationship proneness

H3: Involvement has a positive impact on relationship proneness

H4: Need for variety has a negative impact on relationship proneness

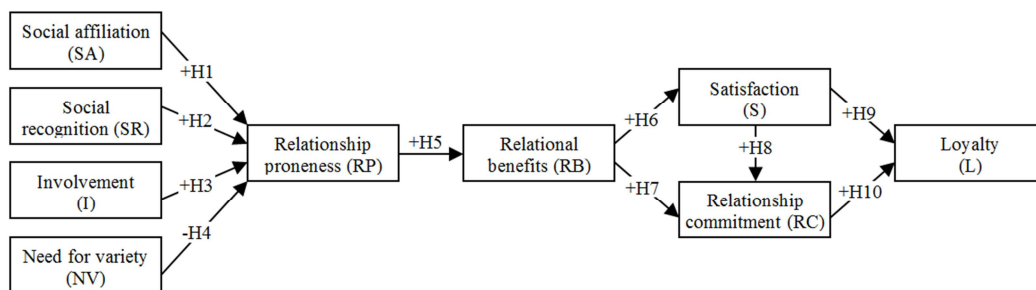


Figure 1. Research model.

Hennig-Thurau *et al.* [5] identified three types of relational benefits: confidence benefits, social benefits, and special treatment benefits. Considering the characteristics of online communities, the present study used the first two types but adopted a unitary construct strategy to represent relational benefits. Vázquez-Carrasco and Foxall [8] showed that

relationship proneness positively influences relational benefits, which in turn positively influences satisfaction. Adamson *et al.* [9] investigated relational benefits in the context of small banks in Hong Kong and reported a positive relationship between relational benefits and customer commitment. In addition, Park and Kim [10] confirmed a positive relationship

between relational benefits and customer commitment among users of online stores and online ticketing systems. On the basis of these findings, the present study proposed the following hypotheses:

H5: Relationship proneness has a positive impact on relational benefits

H6: Relational benefits have a positive impact on satisfaction

H7: Relational benefits have a positive impact on relationship commitment

According to Hennig-Thurau et al. [5], the relationship quality construct comprises satisfaction and relationship commitment; both of these subconstructs positively influence loyalty, and satisfaction positively influences relationship commitment. Caruana [11] supported the viewpoint that customer satisfaction influences loyalty. Furthermore, Abdul-Muhmin [12] reported that relationship satisfaction has a positive impact on relationship commitment, and Selnes [13] and Macintosh and Lockshin [14] have revealed that customer satisfaction and commitment have positive impacts on loyalty. Therefore, the present study proposed the following hypotheses:

H8: Satisfaction has a positive impact on relationship commitment

H9: Satisfaction has a positive impact on loyalty

H10: Relationship commitment has a positive impact on loyalty

4. Methodology

The measurements of the principal research constructs were based on previous studies: those for social recognition, relationship proneness, and loyalty were adapted from the study of Odekerken-Schröder et al. [7]; those for need for variety and relational benefits were adapted from the study of Vázquez-Carrasco and Foxall [8]; those for social affiliation were adapted from the study of Cheek and Buss [15]; those for involvement were adapted from the study of Mittal [16]; those for satisfaction were adapted from the study of Kumar et al. [17]; and those for relationship commitment were adapted from the study of Morgan and Hunt [18].

After drafting a questionnaire, a person with a doctorate in Management Information Systems assessed the suitability of the items. Eight graduate students from the Department of Information Management who were online community members were then requested to answer the questionnaire. Consequently, ambiguous items were modified, ensuring that the respondents had complete understanding of the items. Finally, the questionnaire was pilot-tested on a small sample ($n=30$), and the results showed that all constructs had α coefficients greater than 0.7.

The subjects of the present study were online community members. A convenience sampling method was adopted; a link to the web-based questionnaire was posted on widely used online communities in Taiwan. In total, 629 questionnaires were returned, 599 of which were valid. The demographic characteristics of the respondents are presented in Table 1.

Table 1. Respondent profile.

		<i>N or values</i>	<i>%</i>
Gender	Male	330	55.1
	Female	269	44.9
	Min	16	
Age	Max	36	
	Mean	23.85	
	S.D.	3.14	
	Min	0	
Disposable income (NT\$)	Max	150000	
	Mean	12585.52	
	S.D.	12687.1	
	Junior high (or lower)	4	0.7
Education	Senior high	11	1.8
	Undergraduate	427	71.3
	Graduate	157	26.2
	Min	1	
Experience of participating in online communities (years)	Max	13	
	Mean	4.63	
	S.D.	2.50	
	Min	0	
Types of most frequently participated online communities	Business/Finance	40	6.7
	Sports/race	58	9.7
	Idol/star/celebrity	28	4.7
	Friendship/chat	60	10.0
	Academia/profession	44	7.3
	Campus/club	61	10.2
	Life/fashion	80	13.4
	Game/entertainment	92	15.4
	Shopping/transaction	53	8.8
	Others	83	13.9

5. Reliability and Validity

This study used SmartPLS 2.0 [19] for the data analysis. First, a reliability analysis was performed; the results of which showed that the Cronbach's α of each construct exceeded the recommended value of 0.7 [20], except for that of involvement, which was 0.69 but still considered acceptable. In addition, the composite reliability of each construct was greater than 0.8, indicating good reliability of the constructs [20]. The reliability statistics is presented in Table 2.

Table 2. Reliability statistics.

Constructs	Cronbach's α	Composite reliability
Involvement (I)	0.69	0.81
Loyalty (L)	0.79	0.86
Need for variety (NV)	0.80	0.87
Relational benefits (RB)	0.79	0.84
Relationship commitment (RC)	0.79	0.86
Relationship proneness (RP)	0.77	0.85
Satisfaction (S)	0.78	0.86
Social affiliation (SA)	0.72	0.83
Social recognition (SR)	0.70	0.81

The outer loadings of the items for each construct were greater than 0.6, except for those of RB2 and SR4, which were then eliminated. Further analysis revealed that the outer loading of RB4 was less than 0.6. After RB4 was eliminated, the outer loadings of all remaining items were greater than 0.6. The items with outer loadings less than 0.7 (i.e., I3, RB1, RB3, RB5, RB7, and RP4) were then eliminated. Reanalysis revealed that the outer loadings of the remaining items were all greater than 0.7. The average variance extracted (AVE) of

each construct was greater than 0.5, demonstrating convergent validity [21]. Finally, the square root of the AVE for each construct was greater than its correlations with the other constructs, indicating considerable discriminant validity [21]. The validity statistics are presented in Tables 3 and 4.

Table 3. *Outer loadings.*

Construct codes (AVE)	Item codes	Outer loadings	t-statistics
I (0.59)			
I1		0.80	21.55**
I2		0.73	14.39**
I4		0.76	18.18**
L (0.62)			
L1		0.71	14.21**
L2		0.80	22.97**
L3		0.87	43.14**
L4		0.75	21.32**
NV (0.63)			
NV1		0.83	22.50**
NV2		0.73	13.11**
NV3		0.85	26.42**
NV4		0.74	10.32**
RB (0.74)			
RB6		0.84	25.05**
RB8		0.88	32.31**
RC (0.61)			
RC1		0.76	19.72**
RC2		0.79	20.73**
RC3		0.79	22.03**
RC4		0.79	21.48**
RP (0.70)			
RP1		0.85	26.95**
RP2		0.88	34.86**
RP3		0.79	20.66**
S (0.61)			
S1		0.82	27.75**
S2		0.78	19.72**
S3		0.74	13.82**
S4		0.78	22.46**
SA (0.55)			
SA1		0.75	17.32**
SA2		0.78	19.78**
SA3		0.70	11.96**
SA4		0.73	15.35**
SR (0.64)			
SR1		0.79	19.13**
SR2		0.78	14.79**
SR3		0.81	17.43**

I: involvement; L: loyalty; NV: need for variety; RB: relational benefits; RC: relationship commitment; RP: relationship proneness; S: satisfaction; SA: social affiliation; SR: social recognition.

** : $p < 0.01$

Table 4. *AVE and inter-construct correlations.*

Construct codes	Correlations between constructs								
	I	L	NV	RB	RC	RP	S	SA	SR
I	0.77								
L	0.47	0.79							
NV	0.38	0.31	0.79						
RB	0.46	0.44	0.39	0.86					
RC	0.48	0.67	0.30	0.46	0.78				
RP	0.63	0.54	0.33	0.51	0.55	0.84			
S	0.51	0.63	0.31	0.49	0.68	0.55	0.78		
SA	0.57	0.46	0.41	0.55	0.42	0.54	0.40	0.74	
SR	0.43	0.38	0.40	0.45	0.33	0.43	0.33	0.57	0.80

The main diagonal shows the square root of AVE.

I: involvement; L: loyalty; NV: need for variety; RB: relational benefits; RC: relationship commitment; RP: relationship proneness; S: satisfaction; SA: social affiliation; SR: social recognition.

6. Hypotheses Testing

A bootstrapping algorithm was used with the resample size set to 500 to test the structural model. The path coefficients and model explanatory power are presented in Table 5 and Fig. 2, which show that H2 and H4 are not supported.

Table 5. Result of hypotheses testing.

Hypotheses	Path coefficients	t-values	Supported?
H1: SA → RP	0.21	2.56 *	Yes
H2: SR → RP	0.12	1.58	No
H3: I → RP	0.45	5.90 **	Yes
H4: NV → RP	0.03	0.50	No
H5: RP → RB	0.52	8.10 **	Yes
H6: RB → S	0.49	7.55 **	Yes
H7: RB → RC	0.17	2.51 *	Yes
H8: S → RC	0.60	8.56 **	Yes
H9: S → L	0.33	3.74 **	Yes
H10: RC → L	0.44	5.57 **	Yes

R^2 : RP=0.46; RB=0.27; S=0.24; RC=0.49; L=0.50.

I: involvement; L: loyalty; NV: need for variety; RB: relational benefits; RC: relationship commitment; RP: relationship proneness; S: satisfaction; SA: social affiliation; SR: social recognition.

*, $p < 0.05$; **, $p < 0.01$.

The results of structural model analysis confirmed positive effects of satisfaction ($\beta=0.33$; $p<0.01$) and relationship commitment ($\beta=0.44$; $p<0.01$) on loyalty, of satisfaction ($\beta=0.60$; $p<0.01$) and relational benefits ($\beta=0.17$; $p<0.05$) on relationship commitment, of relational benefits ($\beta=0.49$; $p<0.01$) on satisfaction, of relationship proneness ($\beta=0.52$; $p<0.01$) on relational benefits, and of social affiliation ($\beta=0.21$; $p<0.05$) and involvement ($\beta=0.45$; $p<0.01$) on relationship proneness. However, the effects of social recognition and need for variety on relationship proneness remained unconfirmed. The explained variances in relationship proneness, relational benefits, satisfaction, relationship commitment, and loyalty were 0.46, 0.27, 0.24, 0.49, and 0.50, respectively.

7. Discussion

The theoretical contribution of this study is that the effects of personality traits on loyalty were examined in the context of online communities. This inclusion enabled exploring the role of individual differences in the formation of online loyalty. In addition, although previous research has focused primarily on

the relationship between relationship proneness and satisfaction, the present study also examined the mediating role of relational benefits in the aforementioned relationship. This examination can elucidate the importance of relational benefits for relationship quality and loyalty.

The current findings indicated that both social affiliation and involvement are positively associated with relationship proneness. This suggests that people are prone to engage in a virtual relationship because they desire more social contact or because online communities fulfill their needs, interests, or values. However, the results of this study do not support the association of relationship proneness with social recognition and need for variety. A plausible explanation for this is that although online communities offer things of interest and a sense of belonging for members, they cannot provide the type of respect and recognition that members can experience in the real world. In addition, people with a higher need for variety likely demonstrate switch behavior [8]; therefore, they might not be particularly more involved in relationships that develop in the virtual world. Most previous studies have focused on the service industry in real-world settings and were conducted when online communities were not as prevalent as they are today. Hence, the current findings are inconsistent with those of previous studies.

Relationship proneness positively influences relational benefits, and relational benefits positively influence satisfaction and relationship commitment. This suggests that online community members with higher relationship proneness tend to perceive higher relational benefits, and in turn, they perceive higher relationship quality.

The current findings also indicate that satisfaction has a positive effect on relationship commitment and loyalty, and relationship commitment has a positive effect on loyalty. These findings accord with those documented in relationship marketing literature [22, 23, 24, 25]. In other words, the views of relationship marketing may be applicable to online communities.

Finally, this study suggests that online community operators must identify the needs and preferences of their members and provide facilitating tools to satisfy their members' needs for social contact and involvement. Consequently, their members will have higher relationship proneness, perceive higher relational benefits and quality, and further demonstrate higher loyalty to the community.

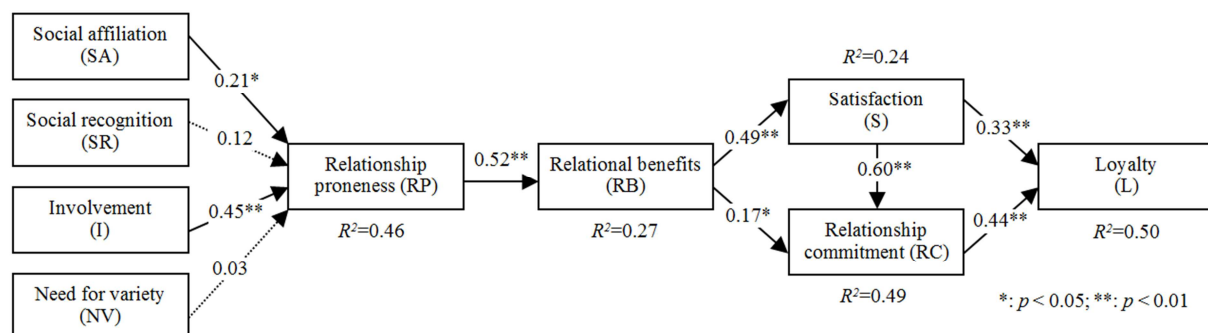


Figure 2. Path coefficients and R-squares.

8. Limitations and Suggestions

The following are the limitations of this study: (1) The samples were collected from online communities in Taiwan; hence, further research will be required to generalize the study results to other cultures and countries. (2) The study was limited by time, budget, and human resources, and convenience sampling may have biased the results.

This study suggests the following for future studies: (1) Research should be conducted considering other personality traits. (2) Research should be conducted on various types of online communities and the differences should be compared. (3) This study regarded relational benefits as a unitary construct; future studies should be directed at specific benefit types. (4) This study represented relationship quality by using satisfaction and relationship commitment; future research should include constructs concerning trust.

9. Conclusions

This study examined the effects of personality traits on member loyalty to online communities. The results indicated that social affiliation and involvement exert influence on loyalty through the mediation of relationship proneness, relational benefits, and relationship quality. The perspectives of individuality and relationship marketing were proved to be useful in explaining the mechanism for building and maintaining loyalty in the context of online communities. The findings suggest that those participants who have a high level of social affiliation and involvement are more likely to exhibit loyal behavior and, accordingly, are the target of online community operators' campaigns for attracting new and retaining existing members.

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