

# The influence of virtual brand community on consumer loyalty

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**Abstract:** This paper mainly studies the influence of community interaction dimension and community perceived value on consumer loyalty in virtual brand community. And the sense of community is introduced as a mediator variable to construct the theoretical model. A questionnaire survey was used to quantitatively analyze the model, and the main conclusions were drawn as follows: information interaction and interpersonal interaction in virtual brand community positively affect the sense of community; the four kinds of perceived value of customers in virtual brand community positively affect the sense of community. Community awareness positively influences consumers' loyalty; Community awareness plays a mediating role in the influence of community interaction and customer perceived value on consumer loyalty.

**Keywords:** Virtual brand community; Community interaction; Customer perceived value; Sense of community; Consumer loyalty.

## 1.Introduction

With the deepening of marketing theory research, the development goal of enterprises has also begun to shift from product sales to consumer-centered relationship marketing. This requires enterprises to pay more attention to building communication channels with consumers to promote the positive communication of brands. Virtual brand community is gradually adopted by enterprises as a cheap way to spread information and value. On the one hand, the construction of virtual brand community has successfully opened a two-way channel between consumers and enterprises, providing consumers and enterprises with equal dialogue opportunities, providing conditions for consumers and enterprises to achieve value co-creation; On the other hand, virtual brand community, as a virtual platform integrating the attributes of product sharing, entertainment communication and problem solving, also strengthens the communication perception between consumers, sharing the perception of product use and communicating about product problems, so as to form a lasting relationship and strong identity.

## 2.Related works

### 2.1 About virtual brand community

Virtual brand community is a special kind of community. It has the common characteristics of the two mentioned above. Kozinets named the virtual brand community as "online brand community". He believed that "this community is based on an online platform where members exchange brand experience through brand forums, blogs and other channels." [1] Jin Liyin believes that "virtual brand community is a special form of traditional community, which is a virtual community with brand as the main activity." [2] Chang Rong believes that virtual brand community is "an Internet-based social relationship group initiated by a company, brand enthusiasts or a third party, whose activity theme is closely related to the brand" [3].

### 2.2 About community interaction

Bauer believes that "network interaction is an interaction conducted by customers through searching and browsing target information on virtual websites" [4]. With the gradual popularization of network technology, the way of network interaction is no longer limited to network search and

active browsing, and the definition of network interaction appears new extension. Tang Jiageng defines network interaction as "three different interactive relationships between consumers and websites, brand enterprises and other users in the community based on the network." [5] Fan Jun subdivided the community interaction of virtual brand community, believing that "Network interaction is the interaction to establish social relations, and the performance of virtual brand community is mainly the interpersonal interaction between customers and community members and the information exchange between customers and community websites" [6].

### 2.3 About Customer perceived value

Customer perceived value is defined by Fan Xiucheng as "the subjective value cognition of customers when they enjoy the products and services provided by the enterprise" [7]. In the context of virtual brand community, customer perceived value can be basically divided into four categories: functional perceived value, hedonic perceived value, social perceived value and psychological perceived value [2].

### 2.4 About Sense of community

Blanchard & Markus believed that sense of community is an emotional type, including membership, influence, satisfaction of needs and emotional connection. [8] Gao Jianguo believes that community consciousness is the organic unity of community belonging, community identity, community satisfaction and community cohesion. [9]

### 2.5 About Consumer loyalty

Brand loyalty is "the organic unity of behavioral loyalty and emotional loyalty" [10]. Huo Yingbao believes that loyalty contains more content, such as behavior, emotion, cognition and future intention [11]. Yang Qiang defines consumer loyalty as "the psychology of dependence, under which consumers repeatedly purchase products or services in terms of behavior" [12].

## 3. Theoretical model and research hypothesis

### 3.1 Theoretical model construction

This paper constructs a model of the relationship between community interaction and customer perceived value of virtual brand community and consumer loyalty, as shown in Figure 1.

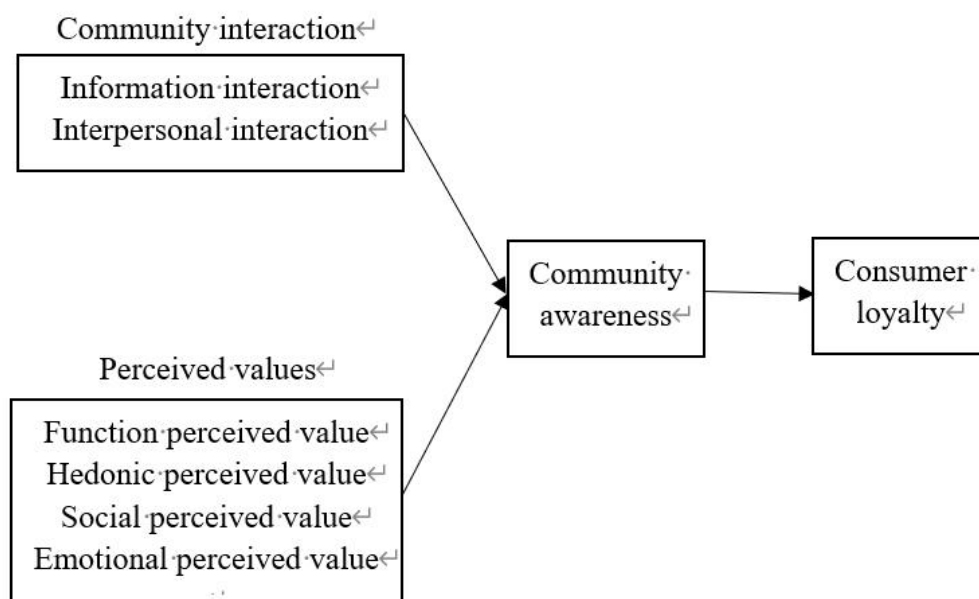


Figure 1 The influence model of study

### **3.2 Hypotheses about the impact of community interaction on community awareness**

The interaction between the members of the virtual brand community is not limited by time and space, and can meet the information acquisition needs of consumers anytime and anywhere. As a collection of people with common interests, members of virtual brand community can feel that they belong to this group in their information exchange. The interpersonal interaction among community members is one of the main motivations for members to join the community. Good interpersonal interaction among community members can promote members' sense of belonging to the virtual brand community.[13]

Based on the above analysis, we propose the following hypotheses:

H1: Community interaction has a positive impact on community awareness.

H1a: Information interaction positively affects community awareness.

H1b: Interpersonal interaction positively affects community awareness.

### **3.3 Hypothesis of the impact of customer perceived value on sense of community**

In the process of participating in community activities, the perceived value generated by members will generate a sense of trust in the community and affect the community consciousness of community members.[14] In daily activities of virtual brand community, users can establish long-term social connections with other members by participating in activities, sharing product information, sharing experience of using, etc., and obtain the satisfaction of needs. The prerequisite of demand satisfaction is the acquisition of value, so the perceived value is conducive to the formation of consumer community awareness.

Based on the above analysis, we propose the following hypotheses:

H2: Perceived value of customers has a positive impact on community awareness.

H2a: The perceived functional value has a positive impact on the sense of community.

H2b: The perceived hedonic value positively influences the sense of community.

H2c: The perceived social value of has a positive impact on community awareness.

H2d: The perceived emotional value positively influences the sense of community.

### **3.4 Hypotheses on the influence of sense of community on consumer loyalty**

The sense of community is the synthesis of community satisfaction, community belonging and community commitment generated by users when they use virtual brand community. In general, consumer satisfaction has a positive impact on consumer loyalty.[15] Customers' affective affiliation positively affects consumers' cognitive loyalty and behavioral loyalty. Members with a high sense of commitment to their community exhibit behavioral tendencies that conform to community standards, including frequent product purchases and oral spreading.

Based on the above analysis, we propose the following hypothesis:

H3: Community awareness of virtual brand community positively affects consumer loyalty.

## **4. Questionnaire survey and data analysis**

### **4.1 Data collection**

This data collection is mainly conducted in various virtual brand communities in the form of online questionnaire. The evidence to be investigated is the daily users and active groups of virtual brand communities, and the types of virtual brand communities include games, digital, beauty and other categories. A total of 213 questionnaires were collected, including 10 invalid answers, with an effective rate of 95.3%.

### **4.2 Correlation analysis**

Through the correlation analysis of all variables involved in the study, the direction and degree of correlation can be roughly understood. Pearson correlation analysis was used to preliminarily

verify the relationship between independent variables and dependent variables, and the results are shown in Table 1.

Table 1 correlations analysis for independent variables

Pearson correlations		
	CA	CL
Information interaction	0.379**	-
Interpersonal interaction	0.392**	-
Perceived functional value	0.530**	-
Perceived hedonic value	0.525**	-
Perceived social value	0.483**	-
Perceived emotional value	0.423**	-
Community awareness	1	-
Customer loyalty	0.549**	1
* p<0.05 ** p<0.01		

Form the table III, we can find that all the independent variables have significant positive correlation with the dependent variable community awareness (CA). Furthermore, community awareness also have significant positive correlation with customer loyalty(CL). Since CA is the only independent variable affecting CL, the significant positive correlation can make hypothesis H3 pass the test.

Then, we can combine information interaction and interpersonal interaction as community interaction(CI); combine perceived functional value, perceived hedonic value, perceived social value and perceived emotional value as customer perceived value(CPV), and analysis their correlation with community awareness. The results are shown in Table IV.

Table 2 correlations analysis for CI, CPV and CA

Pearson correlations					
	Mean	Std. Deviation	CI	CPV	CA
CI	3.446	0.724	1		
CPV	3.299	0.626		1	
CA	3.463	0.784	0.465**	0.630**	1
* p<0.05 ** p<0.01					

Table 2 shows CI and CPV also have significant positive correlation with CA.

### 4.3 regression analysis

Firstly, we use SPSS to conduct linear regression analysis on the impact of information interaction and interpersonal interaction on community sense. The results are shown in Table 3.

Table 3 Results of regression analysis of community awareness

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Std. Co.	t	Sig.
		B	Std. Error	Beta		
1	C	1.799	0.29		6.211	0.000
	I1	0.265	0.073	0.256	3.640	0.000
	I2	0.223	0.071	0.22	3.133	0.002
a. Dependent variable: Community awareness						

Both information interaction(I1) and interpersonal interaction(I2) have a positive impact on the sense of community. The influence coefficients are 0.25 and 0.22, respectively, which are positive numbers and have a positive impact on the sense of community. Sig values are 0.00 and 0.002, less

than 0.05, indicating that both information interaction and interpersonal interaction have a significant positive correlation with the sense of community. H1a and H1b pass the tests.

Secondly, ridge regression analysis was conducted on the effects of perceived functional value(PFV), perceived hedonic value(PHV), perceived social value(PSV), perceived emotional value(PEV) and sense of community. The results are shown in Table 4.

Table 4 Ridge regress analysis results

	Unstandardized Coefficients		Std. Co.	t	p
	B	Std. Error	Beta		
C	1.866	0.202		9.232	0.000**
PFV	0.182	0.032	0.178	5.779	0.000**
PHV	0.121	0.028	0.131	4.305	0.000**
PSV	0.095	0.033	0.086	2.886	0.004**
PEV	0.096	0.027	0.108	3.632	0.000**
Dependent variable: Community awareness					
* p<0.05 ** p<0.01					

As can be seen from Table V, functional perceived value, hedonic perceived value, social perceived value and emotional perceived value all have a positive impact on the sense of community, with the influence coefficients of 0.178, 0.131, 0.086 and 0.108, respectively, which are all positive numbers and have a positive impact on the sense of community. Sig values were 0.00, 0.00, 0.004 and 0.00 respectively, all less than 0.05, indicating a significant positive correlation between community interaction and community awareness. H2a, H2b, H2c, and H2d pass the tests.

Thirdly, we use simple regress analysis the effects of community interaction(CI), customer perceived value(CPV) and community awareness (CA). results are shown in Table 5 and Table 6.

Table 5 Linear regression analysis of community interaction and community awareness

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Beta	Beta		
1	C	1.855	0.283		6.549	0.000
	CI	0.479	0.08	0.389	5.948	0.000
a. Dependent variable: Community awareness						

Community interaction has a positive impact on the sense of community. The influence coefficients are 0.389, indicating a positive impact on the sense of community. Sig value is 0.000, less than 0.05, indicating a significant positive correlation between community interaction and sense of community. H1 is pass.

Table 6 Linear regression analysis of customer perceived value and sense of community

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	C	1.074	0.29		3.703	0.000
	CPV	0.737	0.086	0.518	8.531	0.000
a. Dependent variable: Community awareness						

The sense of community has a positive influence on consumer loyalty. The influence coefficients are 0.420, which is positive, and the sense of community has a positive influence. The SIG value is 0.000, which is less than 0.05, indicating that the sense of community has a significant positive correlation with consumer loyalty. H2 is pass.

#### 4.4 Summary of hypothesis testing results

Based on the above empirical results, we summarized the results of hypothesis tests, as shown in Table 7.

Table 7 Hypothesis tests summary table

Item	Content	Test result
H1	Community interaction has a positive impact on community awareness.	Pass
H1a	Information interaction positively affects community awareness.	Pass
H1b	Interpersonal interaction positively affects community awareness.	Pass
H2	Perceived value of customers has a positive impact on community awareness.	Pass
H2a	The perceived functional value has a positive impact on the sense of community.	Pass
H2b	The perceived hedonic value positively influences the sense of community.	Pass
H2c	The perceived social value of has a positive impact on community awareness.	Pass
H2d	The perceived emotional value positively influences the sense of community.	Pass
H3	Community awareness of virtual brand community positively affects consumer loyalty.	Pass

## 5. Conclusions and suggestions

### 5.1 Research conclusions

Community interaction of virtual brand community positively affects users' sense of community. The sense of connection generated by users in the virtual brand community when they use the community functions will form a certain emotional connection over time. The interaction between users in the community can increase the formation of user group consciousness and make users feel that they are a member of the community.

The perceived value of customers in virtual brand community positively affects users' sense of community. Virtual brand community of users in the community of the function of the perceived value in the course of everyday use, in the work of hedonic value of entertainment to relax, within the community friends to establish the social value of social contact and within the community experience common experience emotional value are virtually deepened the connection between the user and the community, to form a sense of community.

The community awareness of virtual brand community positively influences consumer brand loyalty. Consumers with a sense of community will more intuitively maintain the brand image, carry out brand publicity, repeat the purchase of brand products, form a brand attachment, brand loyalty.

### 5.2 Enterprise Management Suggestions

Enterprise community managers should pay attention to the influence of community interaction on consumer loyalty. Enterprise community managers must ensure the richness and completeness of community product information. Update product information timely to ensure accuracy. Optimize community functions to ensure simple and effective user information retrieval. To review the information published by community members, to ensure that the information is true and reliable.

Active atmosphere, maintain community interaction atmosphere, form a positive and active collective atmosphere.

Enterprise managers must improve the understanding of customer perceived value and pay attention to the important role of consumer community awareness in the formation of consumer loyalty. Community managers need to improve the community function, enhance the value of community function, maintain equal community exchanges, relaxed and happy atmosphere, strive to maintain the community atmosphere, and community members to establish a good social connection, so that community users have a sense of belonging. In this way, consumers can make a psychological commitment to the community, repeat purchase and actively promote the brand in behavior.

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