

Creating Brand Value for Knowledge Sharing Social Network Sites

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Abstract

Prosumers are empowered to exert influence on brands through social networking sites (SNSs), which make it possible for prosumers to become active content creators in their relationship with brands. The purpose of this article is to study the influence of prosumption activities on brand equity, brand extension, and payment intention. We apply a service-dominant logic approach and CBBE theory to build a model of brand value with key antecedents---prosumption activities and prosumer value, with brand extension as a mediator. Through an empirical study, we found that prosumption quality clues, reputation enhancement consequences, cognitive-lock in, and knowledge-sharing pleasure positively affect prosumer value directly/indirectly, and prosumer value positively affects brand value. Brand extension has a mediating effect between prosumer value and new product payment intention. This article contributes to the literature on the brand value co-creation and prosumption by 1) developing the concept of prosumption in SNSs; 2) explaining how prosumers engage in co-creation activities; 3) prosumer value cannot affect payment intention, where brand extension as a mediator directly. Our study provides an innovative approach to brand value practices in today's marketplace.

Keywords

Prosumption; Prosumer; SNS; Brand value; Brand equity.

1. INTRODUCTION

With the advent of the information era, social networking sites combine information technologies and new social & commercial characters. It has dramatically impacted social media (Huang & Benyoucef, 2013). The knowledge sharing SNS has a few characteristics, same as social commerce: (1) A virtual communication center that encourages consumers to use social platforms to get more information to create real value and interactions. (Stephen & Toubia, 2010); and (2) an internet network-mediated social environment, social interaction has always existed between prosumers. SNS creates a situation in which companies can leverage their brands to provide added value to prosumers. (Gensler, Volckner, Liu-Thompkins, & Wiertz, 2013; Haiji, Sims, Zadeh, & Richard, 2017; Ramaswamy, Ozcan, 2018) and turn prosumers into brand spokesperson by exploiting collaboration, co-creation processes with other prosumers (Cayla & Arnould, 2008; Holt, 2003). In such situations, prosumer can influence brands through social media. Thus, prosumers' actions could accelerate significant brand values (Naylor, Lamberton, & West, 2012). Prosumers' actions influence brand equity and intentions through social interactions and serve as a commercial vehicle for sales and brand value growth. (Gensler et al., 2013; Pentina, Gammoh, Zhang, & Mallin, 2013).

To understand how brand values are co-created by prosumers, studies are intending to craft brand relationships and prosumers' activities through prosumption processes (Hajli, 2017). These articles indicate the essence, process, and practices of brand value co-creation (Hatch & Schultz, 2010; Ramaswamy & Ozcan, 2016;). Published reports have discussed the motivations to participate in value co-creation processes (Roberts, Hughes, & Kertbo, 2014). Xie et al. (2008) demonstrated how motivational mechanisms influence intentions to value co-create, and Payne et al. (2009) researched the short car reservation system to figure out how customers can get additional benefits, enhance and improve to prosumption results. Although these researches indicated their thoughts of brand co-creation and provided some practical insights about prosumption and brand value (Hatch & Schultz, 2010; Ramaswamy & Ozcan, 2016), their findings are not empirical on a broader basis. As online brand websites members, prosumers might be involved in the prosumption process with others. They can use their time and energy to provide information about other brands or products and influence others to buy (Gensler et al., 2013; Ramaswamy & Ozcan, 2016; Schau et al., 2009). Therefore companies must identify the key prosumers and understand the motivation of the brand value co-creation process by them (Iglesias et al., 2013). In the literature, few people understand the motivation of prosumers to participate in co-creation activities and the formation mechanism of brand value.

This article addresses the need to analyze the brand value, and explore its antecedents concerning the prosumer and prosumption activities of SNSs. Besides, we demonstrated the construct of prosumption quality clues and prosumer value through the deductive approach and inductive approach, expanding the internal mechanism of prosumption activities (Hinkin, 1998). This article provides contributions to the brand research stream by (1) proposing the construct of prosumption and brand value, and providing an understanding of motivation between them from a prosumer perspective; (2) showing the mechanism of prosumption value and brand value; (3) highlighting the mediating effect of brand extension.

The article starts with a discussion of the literature on prosumption and brand value. It then discusses the critical constructs of our model, followed by hypotheses. The methodology is described, supported by the findings. Finally, we conclude with a discussion and future research for theory and practice.

2. MATERIALS AND METHODS

2.1. Hypotheses

As Figure 1 shows, we first introduce a model of how brand value is co-created in knowledge sharing SNSs and explore its antecedents, including prosumption activities and prosumer value, and brand extension as a mediator.

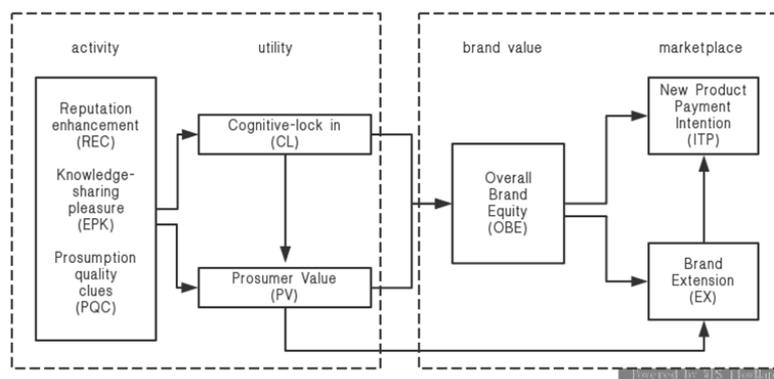


Figure 1. Theoretical Model

In the B2C Web site, the use of product clues generated valuable information for prosumers and influenced their intentions and cognitive-lock in. (Shih H P, 2012; Hajli, Sims, et al, 2017). By providing an overviewing of managing a brand in SNS, Gensler et al. (2013) indicate that presumption quality clues strengthen the dynamic interactions within online communities, making it possible for prosumers to reduce their learning costs (Murray, K B, Häubl G,2007). For instance, Airbnb posts all of the user reviews and rating for each host family, along with its ranking on "Super landlord", following a star evaluation that rank orders all hotels within an optimum location, based on user creation (Shah, Lei Shen, 2019; Ramaswamy, K. Ozcan, 2018; Orlikowski and Scott, 2015), and the consumers can choose the hotel which they want to check-in. Thus, the construction of cognitive-lock incan be accelerated through frequent interactions with prosumers (Pentina et al., 2013; Vargo & Lusch, 2004). The cognitive-lock in are formed through sharing information about presumption clues. The above arguments lead to our first hypothesis:

H1. Prosumption Quality clues have a positive influence on the cognitive-lock in.

Prosumers' participation and knowledge information sharing behavior in SNS are characteristics distinguished it from social media. Prior studies examined that reputation, safety, and knowledge concerns might be significant factors in sharing economy about social media (Wang & Herrando, 2019; T. Zhang, Bufquin, & Lu, 2019). Through intensive engagement, prosumers who provide high-quality content with their peers on SNS platform can gain more reputation enhancement which is a perception that consumers gain status and respect, more often than in traditional social media (Park, Lee, & Han, 2017; Jin X L, & Zhou Z, & Lee MKO, & CMK Cheung,2013). According to the Caledonian perspective (Cochoy, 2014), one of the primary interaction, also called lock-in, in the organization is that of networking, since the unbeaten reputation of an organization rests on selecting appropriate elements, building strong connections between them along with a shared objective (Orlikowski and Scott, 2015; Ramaswamy and Ozcan, 2018).

Moreover, unlike traditional non-interactive websites, Wei K, Lin F, and Huang H (2013) have shown that sharing knowledge can help reach a mutual pleasure on a brand 's meaning and cognitive lock through social networking features. Through improving cognitive-lock in, prosumers share brand experiences, create brand stories, and deliver the sensory, emotional, cognitive, behavioral, and relational values to peers (Mina et al., 2018). Thus promoting the generation of brand equity (Murray, K B, Häubl G,2007; Keller K L,2013). We hypothesize the following:

H2. Reputation enhancement consequence has a positive influence on the cognitive-lock in.

H3. Sharing knowledge pleasure has a positive influence on the cognitive-lock in.

H4. Cognitive-lock inhas a positive influence on overall brand equity.

Literature highlight that SNSs are online tools for prosumers to provide and receive prosumer value, which can be encouraged by cognitive-lock in and presumption clues (Shih H P,2012). This may include both prosumers' costs and income, and prosumers influence and help each other in content evaluations and purchase decisions (Ridings & Gefen, 2004). Some SNSs embed quality inferences functions such as "like", "share", and "follow" buttons, which tell prosumers how many times the objects have been bookmarked (Gerlitz & Helmod, 2013). These buttons and counters provide cognitive-lock and presumption clues. Previous studies showed the relationship between cognitive-lock, presumption clues, and prosumers value in SNSs. Previous studies proved that trust would positively influence prosumers' intentions to interact with sharing economy platforms (Ert & Hebrew, 2015; Hofmann, Hartl, & Penz, 2017; Minami & Ushiana, 2017). Trust is also from cognitive lock-in and presumption clues. Therefore, both cognitive locking and quality cues of production and consumption have positive contributions to the value of prosumers. Thus, we hypothesize the following:

H5. Cognitive-lock in has a positive influence on prosumer value.

H6. Prosumption quality clues have a positive influence on the prosumer value

Research shows that people in online environments prefer to perceive value through high-level abstraction with other community members (Gefen & Straub, 2004). There is a need for different levels of abstraction to make it possible for prosumers to bring direct value. Cognitive-lock in and sharing knowledge pleasure are a high-level abstraction (Hajli, Sims, et al., 2017). When prosumers gain reputation enhancement, they evaluate content highly, and similarly, prosumers who get sharing pleasure perceived the value of the material more positively. In Zeithaml' 's model, perceived value ultimately points to purchase behavior. Consumers who understand higher product value will be more loyal to the brand they choose. Pieces of literature highly have confirmed that perceived value, which is same with reputation and sharing pleasure, is an essential factor influencing customer engagement (Ge et al., 2019; Lin, Yang, Ma, & Huang, 2018; Piligrimiene, Dovaliene, & Virvilaite, 2015), and can make consumers produce more positive behavioral responses (Netemeyer R G, Krishnan B, Pullig C, Wang G, Yagci M, Dean D, Ricks J, Wirth F,2004). Thus, the general interest in SNS can explain why these can influence prosumers' value. We hypothesize that as follow:

H7. Reputation enhancement consequence has a positive influence on prosumers' value.

H8. Sharing knowledge pleasure has a positive influence on prosumers' value.

H9. Prosumers value has a positive influence on overall brand equity.

Research on brand equity focused on the formation of partnerships between brand choice and purchase behaviors (Keller,1993). High brand equity raises the likelihood of positive brand extension and fosters the creation of new product payment (Netemeyer R G, Krishnan B, Pullig C, Wang G, Yagci M, Dean D, Ricks J, Wirth F, 2004). Aaker and Keller stated that the extension is facilitated by overall brand equity, and emphasized the prosumers with a high level of extension most likely dedicate themselves to a brand that fosters new product payment intention. Specific to SNSs, where prosumers perceived more value from brand, prosumers are more willing to agree with the extension of the brand and participate the forums and communities, share their experiences and knowledge, even purchase the new product (Hajli, Sims, et al., 2017; Liang et al., 2011; Pentina et al., 2013). If prosumers are committed to ongoing extension with the brand, they try to maintain that brand, which may turn them into creating brand value as SNSs prosumers (Chen & Shen, 2015). Thus, we hypothesize the following:

H10. Overall brand equity has a positive influence on brand extension.

H11. Overall brand equity has a positive influence on new product payment intentions.

H12. Prosumers value has a positive influence on brand extension.

H13. Brand extension has a positive influence on new product payment intentions.

2.2. Research Methodology

In this chapter, a total of two studies are designed. Study 1 is a qualitative research on prosumption quality clues and prosumers value and put forward corresponding scale items. The qualitative data of study 1 are collected through semi-structured interviews and an open-ended survey. The analysis will also focus on the text content obtained from the survey, to develop the measurement questions of prosumption quality clues and prosumers value and indicates that prosumption quality clues and prosumers value has practical effect evaluation on scientific nature. Study 2 is empirical analysis, that is, the formation mechanism of social networking website brand value and brand late effect.

Study 1

Qualitative research procedure

Our study is designed according to Hinkin's (1998) "up to down" scale development approach, which seems to us particularly suitable to catch the complex, problematic, and relativist nature of prosumer.

Data were collected through semi-structured interviews on a sample of SNS users, such as Zhihu and Guoke, and communication professionals purposely selected according to the criteria of theoretical sampling (Glaser 1978; Charmaz 2006). The questionnaire is composed of two parts. The first part is the central part of the questionnaire, requiring respondents to speak freely on some open questions. The second part is the basic information.

We set up an online interview page on the network platform and sent a total of 80 survey invitations to Zhihu/Guoke users randomly. The final example (N=31) consists of 19 men (61%) and 12 women (39%); the average age of respondents are 24.06; the distribution of education level is as follows: 81% bachelor's degree or above. Also, 32% of participants are Guoke's permanent users, 68% are Zhihu's permanent users, and respondents spent an average of 1.90 years on their permanent sites.

Item Generation

Based on the theoretical framework, the measure questions are obtained by coding the qualitative interview text of consumers through the deductive approach and inductive approach. In this paper, as we can see in Table 1, the responses read and coded the interview text content, classified it based on the concept of prosumers value and prosumption quality clues, and named these categories. We invited marketing experts to review the results of the subject classification and finally summarized and presented them in the form of tables.

Table 1. Content analysis results

Construct	Sub-construct	Sub-construct definition	Theme	Item generation approach
Prosumer Value	Content consumption value	Content reading value	1. profession: those professional answers	Inductive approach
			2. interest: what I most want to know	
	3. special: Original articles promoting the latest scientific achievements and knowledge			
Prosumer ability	Content regeneration value	Content reuse value	1.solution: Use what you've learned here to solve the problem	Inductive approach
			2.proof: Cite something when discussing a problem with someone else	
	3.communication: enrich the conversation			
Prosumption quality clues	discussion environment	Good discussion environment	1. knowledge: the individual level of knowledge	Deductive approach & inductive approach
			2. background: The professionals are highly qualified	
			1. seek: The overall scientific atmosphere	Deductive approach & inductive approach
			2. contain: can accommodate different opinions	
		3. objective: can treat user responses objectively		
			4. level: can discuss different topics	

According to text content, prosumer value is divided into content consumption value and content regeneration value; prosumer quality clue is divided into prosumer ability and discussion environment. Based on the results of text analysis, 8 items are designed to measure prosumer value, and 10 items are designed to measure the prosumer quality clues.

We invited 4 brand research experts to make the final discussion on the measurement items, and decided to delete 2 items of the prosumer value and 2 items of the prosumer quality clues, and modify some sentences.

2.1. Item Test

Actual measurement data have not tested the measurement items obtained above. Then, we use factor analysis to examine its internal structure, and through convergent validity and nomological validity (Anderson J C, Gerbing D W, 1988).

According to Churchill's scale development approach, 70 samples that had been used by ZHIHU or GUOKE in the last month were selected for the initial questionnaire test. Sixty-four valid samples were obtained after 4 unqualified questionnaires were removed. The final (N=64) consists of 30 men (47%) and 34 women (53%); the average age of respondents is 22.33; the distribution of education level is as follows: 87% bachelor's degree or above.

Internal Structure Test

The psychometric properties of the constructs were evaluated by conducting exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) with AMOS19.0. First, Cronbach's $\alpha=0.869$ of the items of prosumer value and prosumer quality clues. According to EFA results, the factor loading of 5 items about prosumer value is all above 0.7 except the sixth item; the factor loading of 7 items about prosumer quality clues is all above 0.5 except the seventh item so that we delete this item. The results of EFA indicate that two constructs are unidimensional, but we need to be verified by confirmatory factor analysis (Gerbing & Anderson, 1988).

According to CFA results, the standardized path coefficients of two constructs are significant. Then, the model was set up in the form of sub-construct as follows: prosumer value (content consumption value, content regeneration value) and prosumer quality clues (prosumer ability, discussion environment). The results show that the model fit of the two constructs has hardly changed ($\Delta\chi^2=0.015$, $p>0.1$; $\Delta\chi^2=2.287$, $p>0.1$). Thus, we can confirm that prosumer value and prosumer quality clues are unidimensional.

Convergent Validity and Nomological Validity

We can confirm that prosumer value and prosumer quality clues are unidimensional through the results of CFA. Then, we should test the validity of the two constructs. The standardized path coefficients (factor loading) are significant so that all the items have high convergent validity. Next, the research test the nomological validity of two new constructs. Model fitting results showed good (SRMR<0.08, CFI>0.9, RMSEA=0.089).

Through the above analysis, we determined that prosumer value and prosumer quality clues are unidimensional and confirmed the validity of the measurement scale. However, due to the limited number of samples and sample sources in the pre-study, it is still necessary to verify the measurement items again in the main study.

Study 2

Participants were recruited through an online survey sent from the ZHIHU and GUOKE. Strict guidelines were given to ensure a diverse sample of respondents for age, gender, and education level. The data collection was done from January to March 2018. The data of users (likes, comments, posts, number of friends) that were extracted and aggregated spanned from the

moment they answered the survey back to the creation of their account. Finally, we collected 205 valid questionnaires from 306 responses.

The final sample (N=205) consists of 82 men (40%) and 123 women (60%); the average age of respondents are 24.29; the distribution of education level is as follows: 90.24% bachelor's degree or above. In addition, 51% of participants are Guoke 's permanent users, 76% are Zhihu 's permanent users, and respondents spent an average of 1 year on their permanent sites, similar to the target for the SNS.

Measures

The model includes eight constructs: reputation enhancement, sharing knowledge pleasure, prosumption clues as an independent variable, cognitive-lock in, prosumers value as independent variable, overall brand equity, brand extension, new product payment intention as dependent variable. All items were adapted from the literature and modified to fit the study. A pilot study with 10 postgraduate students and marketing researchers was used to ensure that questions and wording were understood (Bell, 2010). All constructs were measured with 7-point Likert scales (1 = "strongly disagree" to 7 = "strongly agree"). Reputation enhancement was measured based on three items used by Jin (Jin X L, Zhou Z, Lee M K O, C M K Cheung, 2013); Sharing knowledge pleasure was measured based on four items used by Davis and Thong capturing the beliefs of technology usage (Davis F D, Bagozzi R P, Warshaw P R.,1999; Thong J Y L, Hong S J, Tam K Y,2006); Also, three items from Shih (Shih H P,2012) were included to measure cognitive-lock in; Overall brand equity was measured by four items focusing relational brand constructs (Yoo B, Donthu N,2001). Brand extension and new product payment intention were measured based on the items from Wang Haizhong's (2006) scale designed in the context of brand management in China and Netemeyer (Netemeyer R G, Krishnan B, Pullig C, Wang G, Yagci M, Dean D, Ricks J, Wirth F, 2004) focusing on purchasing intention. The prosumers' value and prosumption quality clues were measures by the generation of the item from the pre-test.

To reduce common method bias, we use structure procedures during the design and data collection processes (Podsakoff, 2003). We promised respondent-researcher anonymity, provided clear directions, and proximally separated independent and dependent variables. First, we applied one of the principles for testing common method bias and found no single factor accounting for more than 50% of the variance (Harmon test). Second, we established a partial correlation technique using a marker variable to test common method bias. The results show no constructs with correlations over 0.9, where evidence of common method bias should have produced a higher correlation (Pavlou, Liang, and Xue, 2007). Thus, a common method is not a major concern.

Confirmatory factor analysis of the measurement model of the independent, mediating, and dependent variables showed reasonably good fit (CFI=0.921, TLI=0.907, RMSEA=0.065, SRMR=0.058) and factor loadings for all items are shown in Table 2. The construct validity of the measurement model was considered acceptable. The acceptable levels further support this of Cronbach's alpha ($\alpha > 0.7$) and constructs reliability (CR > 0.6) and average variance extracted (AVE > 0.5) for all constructs. Further analysis of the measurement model showed acceptable discriminant validity for all constructs.

3. RESULTS AND DISCUSSION

Hypotheses were tested with structural equation modeling using AMOS19. We estimated a structural model investigating the relationship between prosumer activities and overall brand equity. The model also included relationships between prosumers and overall brand equity and related brand constructs. The figure shows the results of this analysis, along with a model fit summary. As expected from the measurement model fit results, the structural model also showed a good fit ($\chi^2/df=1.977$, CFI=0.909, RMSEA=0.069, SRMR=0.069).

Table 2. Empirical results of CFA

	Factor loading	Standard error	t-value
	REC (Cronbach's α =0.868 AVE=0.695 CR=0.872)		
REC1	0.829	0.085	13.866***
REC2	0.891	0.083	15.405***
REC3	0.777	0.089	12.639***
	EPK (Cronbach's α =0.793 AVE=0.567 CR=0.797)		
EPK1	0.750	0.076	11.754***
EPK2	0.795	0.070	12.720***
EPK3	0.711	0.077	10.946***
	PQC (Cronbach's α =0.858 AVE=0.615 CR=0.864)		
PQC1	0.715	0.071	11.349***
PQC2	0.848	0.071	14.540***
PQC3	0.852	0.066	14.654***
PQC4	0.710	0.073	11.250***
	CL (Cronbach's α =0.793 AVE=0.572 CR=0.799)		
CL1	0.785	0.077	12.668***
CL2	0.806	0.069	13.144***
CL3	0.670	0.081	10.224***
	VP (Cronbach's α =0.852 AVE=0.545 CR=0.856)		
VP1	0.755	0.073	12.263***
VP2	0.805	0.073	13.456***
VP3	0.644	0.093	9.911***
VP4	0.760	0.073	12.368***
VP5	0.717	0.073	11.409***
	OBE (Cronbach's α =0.846 AVE=0.589 CR=0.850)		
OBE1	0.656	0.084	10.034***
OBE2	0.844	0.079	14.234***
OBE3	0.799	0.083	13.146***
OBE4	0.758	0.083	12.186***
	ITP (Cronbach's α =0.911 AVE=0.775 CR=0.912)		
ITP1	0.891	0.084	15.828***
ITP2	0.890	0.089	15.790***
ITP3	0.860	0.084	14.985***
	EX (Cronbach's α =0.844 AVE=0.655 CR=0.849)		
EX1	0.779	0.075	12.786***
EX2	0.927	0.074	16.541***
EX3	0.706	0.080	11.177***
Model fit	$\chi^2=603.528(df=322, p<0.001)$, $\chi^2/df=1.874$, CFI=0.921, TLI=0.907, RMSEA=0.065, SRMR=0.058		

*** $p<0.001$

As can be seen from Figure 2, presumption quality clues have a significant positive influence on cognitive-lock in ($\beta_1=0.626, p<0.001$), supporting H1. However, reputation enhancement ($\beta_2=0.114, p>0.05$) and sharing knowledge pleasure ($\beta_3=0.162, p>0.05$) has no influence on cognitive-lock in, not supporting H2 and H3. The result about H4 showed that cognitive-lock has a significant positive influence on overall brand equity ($\beta_4=0.277, p<0.05$).

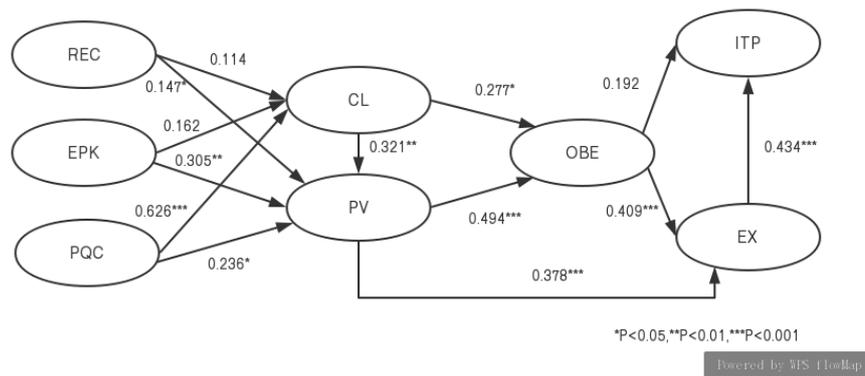


Figure 2. Empirical results

On the other hand, cognitive-lock in ($\beta_5=0.321, p<0.01$), presumption quality clues ($\beta_6=0.236, p<0.05$), reputation enhancement consequences ($\beta_7=0.147, p<0.05$) and EPK ($\beta_8=0.305, p<0.01$) all have a significant favorable influence on prosumer value, supporting H5-H8. H9 showed that prosumers value also has a significant positive influence on overall brand equity ($\beta_9=0.494, p<0.001$).

Finally, overall brand equity has a positive influence on brand extension ($\beta_{10}=0.409, p<0.001$), but it cannot directly influence new product payment intention. Thus, H10 was supported instead of H11. Prosumers value has a positive influence on brand extension ($\beta_{12}=0.378, p<0.001$), supporting H12. Besides, when prosumers have a higher extension about the brands, they are more willing to pay for the new product ($\beta_{13}=0.434, p<0.05$), which supports H13. However, exciting, and somewhat surprising results appear when we look at the influences of the payment intention. When we controlled the income level, the direct effect of overall brand equity on payment intention becomes even less significant ($\beta'_{11}=0.183, p>0.05$) while brand extension still has a positive influence on payment intention ($\beta'_{13}=0.423, p<0.001$). We can confirm that brand extension plays a full mediating effect role in the relationship between the overall brand equity and new product payment intention (Baron R M, Kenny D A, 1986).

Our results show that presumption quality clues, sharing knowledge pleasure and reputation enhancement have positive influences on prosumers value. Prosumer's cognitive lock and perceived prosumers value are essential sources of the brand value of SNS website, and prosumers value and overall brand equity can become the decisive factors of brand extension and profitability of the site. But surprisingly, as a social factor, the results of reputation enhancement did not significantly improve users' cognitive-lock in; Meanwhile, as the satisfaction of individual pleasure, the pleasure of providing knowledge does not enhance cognitive-lock in, which is inconsistent with the conclusion of previous studies (Murray K B, Bellman S, 2011). One possible explanation is that the two SNS application selected in the survey do not pay much attention to social factors, so users' perception of the cognitive costs caused by social outcomes is not strong. Another possible explanation is that prosumers with different user experiences have different psychological needs in terms of social prestige and the pleasure of providing knowledge.

4. CONCLUSIONS

First, one contribution is to refine prosumers' value through qualitative investigation and quantitative analysis and provided an understanding of its motivations from a prosumer's

perspective. We delineate prosumers in SNSs not only expect to get the topics and answers but also attain the propagable contents which can provide the resources of presumption. Therefore, it may serve as a foundation model for studying prosumer behavior and exploring its strategic benefits in digital marketplace.

Second, our findings reveal that presumption clues, reputation enhancement, and sharing knowledge pleasure positively affect prosumers value. As prior studies argued that value is located in customers' minds, opinion makers, and stakeholders (Ballantyne & Aitken, 2007; Merz et al., 2009), our study provides empirical evidence that presumption driven by these motivations can increase prosumers value. Thus, when prosumers attained spiritual satisfaction by delivering content, they will more highly evaluate the value from the SNS.

Third, prosumers value and cognitive-lock in can have a positive influence on the brand value of SNS, and prosumers value plays a more prominent role. It is important to understand prosumer behavior in brand communities since prosumers value and cognitive-lock in are the catalysts of brand value. Such users gradually accumulate the cognitive of content quality and prosumers value, and these behaviors most likely enhance the value that users perceive and the formation of brand value. Therefore, this finding shows the linkages between brand co-creation and presumption in SNS and provides further evidence that presumption activities trigger brand value. Our study contributes to understanding the impact of prosumer on brand value in SNSs and explains the important role of presumption.

Fourth, our study confirmed the mediating effects of brand extension. The overall brand equity and prosumers value can effectively improve brand extension of SNS, and the extension ability can enhance the intention of users to pay for new products. Surprisingly, the overall brand equity does not directly promote the payment intention of new products. Internet prosumers need to create value to improve the recognition of their brand extension, which will generate the intention to pay for new products. This implies that, in the economy of Internet presumption, the brand becomes more important, and only brand extension is active, which can finally bring value to enterprises.

Presumption may serve as a brand management strategy. Following our findings, managers may better engage their prosumers in SNSs, and increase their reputation and motivation of sharing. An example of presumption as a business strategy through sharing and providing knowledge is L'Oreal on ZHIHU. The page managers post new products on pages, such as introduction, benefits, and applicable occasions. Meanwhile, they encourage members to share their user experience and innovate the way of using new products and post their photos, emotional feedback, and so on. Through this two-way information sharing, L'Oreal can use this feedback to take appropriate actions, which may lead to cognitive-lock and prosumer perceives value, and members acquire useful information contributed by peers, giving them a sense of belonging to this community, enhancing the brand value in prosumer's mind.

By contrast, prosumer feedback posted on SNSs can be a double-edged sword, and pose threats to the brand when negative evaluations are displayed, especially in professionally-oriented SNSs. Managers need to involve prosumers in online knowledge sharing activities and manage brands, and should "put prosumers to work" for the brand through high degrees of presumption motivations.

Through an understanding of motivations of prosumers, managers can better manage their relationships with their prosumers and provide sufficient support on SNSs to improve the brand value. For example, managers may organize social events and create a more collaborative and supportive environment for prosumers to share brand-oriented information. The mediating effect of brand extension concerns provides meaningful, practical implications. Managers should strengthen their brand extension to influence the new product payment.

First, there is a need to improve data collection to increase generalizability. Limited by the conditions, the study only obtained a relatively small sample size in terms of the sample size. Future studies can try to expand the sample size to test the robustness of the research conclusions.

Second, the background was fixed in two typical SNS in China, which controlled the influence of unobservable heterogeneity and enhanced the internal validity of the research design, but weakened the external validity of the research conclusion to some extent. More significant and varied samples that collect sufficient data from different online communities and cultural backgrounds may offer more insights into how different communities and social media tools affect brand value.

Finally, the research only takes information presumption behavior as the typical behavior of prosumers, but the Internet presumption behavior is far more than this. Prosumer capitalism is on the rise, which may lead to a new stage in the operation of the capitalist economy. In the era of value co-creation and sharing, how to share the value brought by co-creation with prosumer will be an economic and social problem of great significance. In the future, when the Internet and Internet of things technologies gradually mature, there are more topics about the economic activities of prosumers worthy of in-depth discussion, which will actively push the society to develop in a more efficient and green direction.

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