

Marketer-Generated Content Sharing Among Social Broadcasting Users: Effects of Intrinsic Motivations, Social Capital and the Moderating Role of Prevention Focus

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ABSTRACT

Social networking services provide individuals with an easy approach for exchanging messages with others based on interpersonal relationships. However, why individuals spread marketer-generated content (MGC) in their online social circles remains unclear. Therefore, we develop a theoretical model to examine how social capital, intrinsic motivations, personal perceptions, past behavior, and personal traits influence MGC sharing behavior of social media users in micro-blogging context. Data collected from 319 social networking users support the proposed model. The results from partial least squares analyses show that enjoyment, perceived control, and outcome expectations are significant indicators of individual's MGC sharing intention in the social broadcasting environment. Results also suggest that social capital, users' intention, and past behavior positively influence the MGC sharing behavior of users. Moreover, individual prevention pride exhibits a significant interaction effect on the relationships between users' MGC sharing and its antecedents. Implications for research and practice are discussed.

Keywords: Marketer-Generated Content, Content Sharing, Micro-Blogging, Information Diffusion, Social Broadcasting

I . Introduction

Social networking services have changed the means through which people communicate with each other, and redefined the channel through which enterprises effectively connect with potential consumers (Aral

et al., 2013). Specifically, these rising platforms such as Twitter and Flickr focus on peer-to-peer and target marketing techniques (Aral et al., 2012; Zeng et al., 2013). More than 1.5 million enterprises and organizations have established their brand communities to promote their products and services by using social

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networking technologies, and most enterprises pay substantial attention to the interactions among social networking users to engage consumers actively (Goh et al., 2013). Although Twitter and other similar applications such as Sina Weibo are social networking services with the function of broadcasting, they are distinguishable from traditional mass media in their decentralized structure and multilevel relationships (Shi et al., 2014). People use social broadcasting communities according to factors such as their hobbies, education, work, and travels. They initiate and participate in conversations and exchange information through message sharing. Multimedia enhances the informativeness and entertainment value of advertisements in new mediums (Xu et al., 2009), and content sharing behavior such as by “retweeting” on Twitter becomes easier. Advertising via social broadcasting rapidly spreads information among users with unprecedented speed. Since social broadcasting users are motivated to spontaneously connect with others and compose a significant influence on real-time affairs, marketers must fully consider who they should connect with socially in their online practice (Zeng et al., 2013).

People often share with friends to help them obtain useful information. The mechanism underlying the diffusion of content among social broadcasting users remains unclear. In this study, we attempt to answer three questions. First, how do individuals’ intrinsic motivations, social relation and past behavior influence their sharing behaviour for marketers-generated content (MGC) in social broadcasting communities such as micro-blogging service? Second, how do users’ sense of control and perception of others influence their MGC sharing? Third, do different consumer traits lead to different content sharing behavior in social broadcasting communities? To answer these questions, we use the concept of social capital from

social capital theory to examine the role of users’ online social capital in the MGC diffusion process. We also estimate the effects of intrinsic motivations, namely enjoyment and outcome expectations, on users’ MGC sharing intention and behavior. In addition, we adopt regulatory focus theory (RFT) in validating the influence of individuals’ prevention pride (the focus on safety and responsibilities) through a survey of social broadcasting users.

This study has several major contributions. First, by conceptualizing the diffusion of MGC as a process influenced by social factors, environmental perception and individual characteristics, this study adds to the existing literature on the content sharing behavior among users in an online social broadcasting context. Second, according to a review of relevant literature, although many studies have investigated the voluntary information broadcasting process in the virtual community, few empirical studies have reported the influence mechanism of the voluntary information diffusion processes (Shi et al., 2014). The present study examines the characteristics of the process in the context of MGC. Third, this study investigates the integration effect of individuals’ regulatory focus, social relations, intrinsic motivations (enjoyment and outcome expectations) and environmental perceptions (perceived control and perceived quality of recommendation from others) and their potential associations in the context of social broadcasting communities. The current study adopts various theoretical perspectives on social cognitive theory, social capital theory, regulatory focus theory, habitual influence, intrinsic motivation, perceived control and peer influence to explain MGC diffusion focusing on antecedents to users’ MGC sharing intentions. Since each theory has its unique motif, this study can contribute to the empirical understanding of MGC sharing by estimating the possible

synergies of these theories under a common measurement scale.

This study is organized as follows: The next sections provide an overview of the main constructs in our research, and introduce new insights gained through the formulation hypotheses. Subsequently, the questionnaire scale development is summarized, and the data collection process and our research methodology are explained. Finally, a data analysis, discussion and conclusion are provided.

II. Marketer-generated Content

In our research, MGC is defined as a creation to engage users' attention and participation in micro-blogging and other social networking websites on the behalf of enterprises (Goh et al., 2013). The advantage of social broadcasting communities such as Twitter or Sina weibo in disseminating information is attributable to their distinct flexibility and interactivity, and they are particularly effective in tracking real-time events (Shi et al., 2014), evidencing their marketing capacity of social broadcasting technologies. The extent of the MGC diffusion determines whether firms and their marketers can benefit from using social broadcasting platforms to reach their potential customers efficiently. Companies including nonprofit organizations have reached a consensus on the relevance of social media to their online influence. However, effective exploitation for potential gains requires creative thinking (Kaplan et al., 2010). Consumers can freely communicate with each other through social broadcasting technologies; this dilutes the control of businesses over their available information. Although many users and firms are continually active in using micro-blogging services, a fast-growing media, the business explorations in the social broadcasting context

are still at the initial stage (Kane et al., 2014).

Previous studies have indicated that viewers have a unique manner of responding to commercials in social media (Chi, 2011). Early research has focused on a series of results caused by the participation of users, such as in the context of advertising tactics (Naik et al., 1998; Van-Tien Dao et al., 2014), user-generated content (UGC) (Tang et al., 2014), and customer equity (Kim et al., 2012). These studies suggested that users engagement positively influences their brand recognition, content evaluation, and purchase intention. Other studies have focused on the spread of MGC through channels such as advertising, the distribution of promotion messages, and word-of-mouth marketing in the context of online social websites (Chu, 2011; Chu et al., 2011). Users can exchange comment on messages with their friends and acquaintances to connect them to the marketers. For instance, users' positive responses to specific commercial on social websites such as micro-blogging platforms (an example of social broadcasting communities) could arouse a demonstration effect among their followers. Management-oriented studies on MGC diffusion have been largely descriptive. Consequently, their results lack substantial theoretical foundations and formal tests. For example, some such studies have suggested that different ad seeding strategies lead to a large difference in spread effectiveness (Hinz et al., 2011). Overall, insights have been limited to ascertaining antecedents for users' MGC sharing behavior in social networking context (Goh et al., 2013; Shi et al., 2014) further exploration is warranted to reveal user motivation in the information transfer process.

The aforementioned isolated findings on advertising and UGC can not accurately portray the conclusiveness of MGC diffusion as managers increasingly invest in and maintain relationships in current

social platforms. For instance, some research has revealed that high closeness of social relationships in social network is conducive to the success of message propagation (Li et al., 2012). Studies also have been conducted on altruistic motivations in information sharing, such as helping others on in a virtual environment (Wasko et al., 2005). Although numerous studies have indicated that people tend to send messages and share knowledge when they realize that they are part of the network, little is known about the process of spontaneous information diffusion in online social broadcasting communities (Shi et al., 2014). Researchers have recognized the importance of personal cognitive style in predicting online behavior (McElroy et al., 2007). For example, some studies introduce personal traits for predicting sharing behavior in a virtual open-content community (Jadin et al., 2013), and have found that individual differences moderate the relation between users' stable personality characteristics and online authorship. However, few studies have focused on the influence of personality and cognitive style in the context of information sharing (McElroy et al., 2007). Our research is different from the aforementioned studies because we quantify social capital, personality tendencies (prevention focus pride), altruistic motivations and personal perceptions (perceived control and perceived recommendation quality). Specifically, our study evaluates the synthesized influence of these factors on MGC sharing behavior in the context of micro-blogging service.

III. Theoretical Development

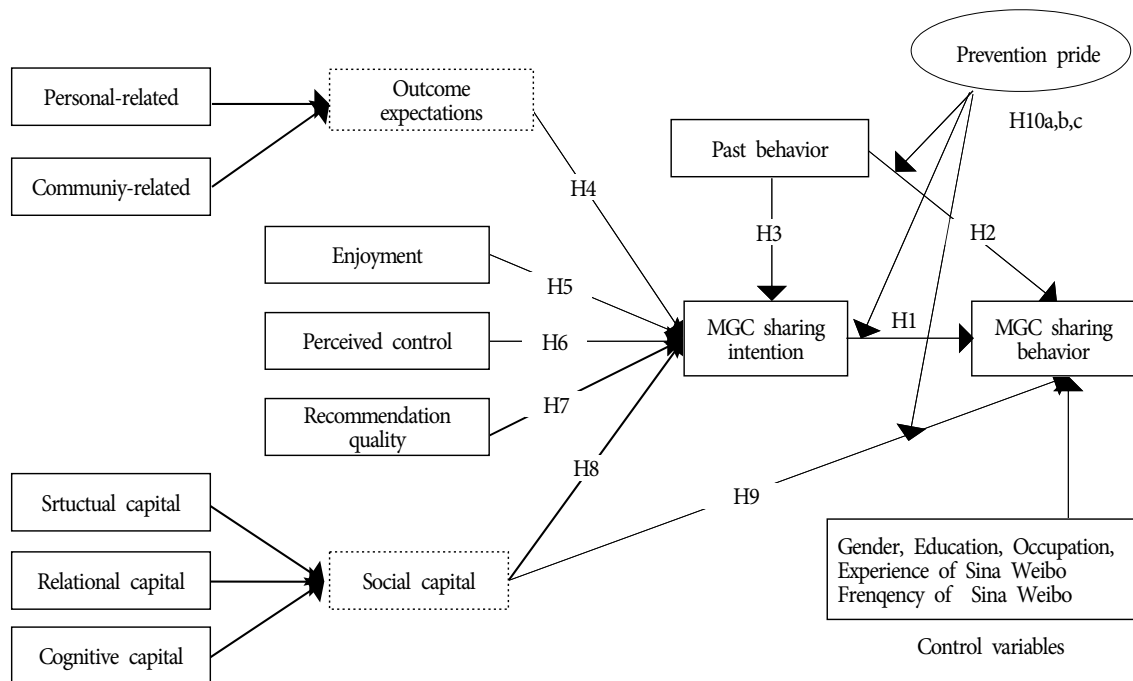
In this section, we propose hypotheses about how users make decisions in transmitting MGC in the social media context. The transfer of commercial mes-

sages in online communities is a social exchange process (Shi et al., 2014), and it also involves the information sharer and information consumer in the advertising and promotion in new mediums such as Twitter and Sina Weibo (Hinz et al., 2011). Although the micro-blogging is mentioned as the context in the process of assumption development, our theoretical argument should be also relevant to similar websites. We propose that outcome expectations, enjoyment, perceived control, recommendation quality, social capital, and past behavior directly influence user intention to share MGC. We propose that past behavior, sharing intention, and social capital in social broadcasting communities are significant predictors for the diffusion of MGC in micro-blogging platforms such as Sina Weibo. We further posit that users' prevention focus moderates the relationships between aforementioned antecedents and users' MGC sharing behavior. <Figure 1> shows a profile of our research model.

3.1. Main Model

Abundant studies have shown the intention-behavior relationship, which emphasize the significant correlation between measures of intention and overt behaviour (Ajzen et al., 1974). Social broadcasting users' behavioral intention is critical to efficient information acquisition because it significantly determines behavior in the online marketing context (Pavlou et al., 2006). Virtual community members who have a more positive intention would more likely engage in information sharing, purchasing behaviors, and the MGC transfer in our case. Hence, we hypothesize the following:

H1: The greater the intention is to share MGC, the more MGC sharing occurs in micro-blogging service.



<Figure 1> Research Model for MGC Sharing in Social Broadcasting Communities

Past behavior was recognized as the conceptualization of people's habit (Bagozzi et al., 1990), and described as the frequency of the act in users' behavioral history in the IS context (Limayem et al., 2007). Previous studies indicated that users' past behavior should be recognized as a special kind of mind set (Limayem et al., 2007) and behavioral tendency (Verplanken et al., 1997). Prior studies have found that virtual community users' past behavior as proxy of habit has a crucial influence on their online behaviors and intentions (Pavlou et al., 2006; Perugini et al., 2000). People can become anatomically involved in a stable cognitive process if they repeatedly perform a behavior. Base on habitual experience, online users promote their proficiency to a behavior and even could repeat it without effort (Limayem et al., 2007). For example, users may enjoy to be a message sharer automatically if they repeatedly

share MGC such as promotion messages, videos and image advertising several times to satisfy their online peers. Thus, it leads to a higher positive willingness about MGC sharing. Therefore, the more often users share information, the more likely they are to exhibit high MGC sharing intention and behavior. Thus, we hypothesize the following:

H2: Users' past behaviors on MGC sharing positively influence users' MGC sharing in micro-blogging service.

H3: Users' past behaviors on MGC sharing positively influence users' MGC sharing intention in micro-blogging service.

According to social cognitive theory, outcome expectations were identified as the expected consequence of an individual's behaviour (Bandura, 2012). In this paper, community-related outcome expectations re-

fers to the judgment of possible consequences that MGC sharing behavior will produce to the online social circle such as enriching information and seeking common topics (Chiu, 2006). Personal-related outcome expectations refers to the judgment of possible consequence that MGC sharing behavior will produce to the sharer himself such as being seen as knowledgeable or well-informed. MGC sharing means that users disseminate information from firms and marketers to their friends on social broadcasting websites (Alavi et al., 2001; Zeng et al., 2013). This suggests that outcome expectations play a crucial role in predicting users' online perceptions and behaviors about MGC (Bandura 2012; Chiu, 2006). Individuals share knowledge and information to learn, seek help, and make friends. Therefore, users who share valuable or interesting content among peers would be regarded as skilled, knowledgeable, and respectable (Chiu, 2006). Furthermore, individuals who are willing to share useful messages could help the social community on a SNS to increase knowledge and sustain the community with increased cohesiveness (Bock et al., 2005). Thus, we hypothesize the following:

H4: Outcome expectations positively influence MGC sharing intention in micro-blogging service.

According to prior studies, enjoyment in current study is defined as an intrinsic motivation. Enjoyment reveals that individuals are willing to volunteer themselves to contribute information to their peers without expecting rewards (Cheung et al., 2012; Wasko et al., 2005). Enjoyment measures the extent to which people feel good to help others and provide information in the MGC context. People's self-evaluation of their competence and acceptance was reported to be a crucial predictor for intrinsic motivation that causes them to participate in online activities (Wasko

et al., 2005). Prior studies have indicated that intrinsic motivation is one of the most crucial factors in helping others online (Chenamane et al., 2012; Wasko et al., 2005). Users of social broadcasting networks such as micro-blogging services might find pleasure in posting useful messages because they feel that helping other people obtain information is meaningful. According to the literature, enjoyment has been recognized as a crucial motivator that promotes users' information sharing behavior in virtual communities. Therefore, users with higher intrinsic motivation (users who enjoy providing useful information to other people) are more likely to have a higher MGC sharing intention. Hence, we hypothesize the following:

H5: Enjoyment positively influences MGC sharing intention in micro-blogging service.

Perceived control was identified as the difficulty that individuals perceived when engaging in a specific behavior (Ajzen, 1991). In our research, perceived control refers to users' evaluation that their resources, skills, and opportunities are adequate for content sharing in the social broadcasting context. These external factors are essential when people attempt to exhibit sharing behavior in an uncontrolled environment. Some studies have asserted that perceived control plays a more important role in the virtual environment than in a traditional environment (Kang et al., 2006). Specifically, MGC in social media may cause a feeling of spamming because numerous promotional messages are sent, and large amounts of information can overwhelm users. Thus, when users' perceived control over MGC is damaged by their uncertain perception, their sharing intention is reduced. We therefore hypothesize the following:

H6: Perceived control positively influences MGC sharing

intention in micro-blogging service.

In order to assess the peer influence in the MGC diffusion context (Aral, 2012), perceived recommendation quality was used to measure the five attributes of the MGC sharing: relevance, accuracy, completeness, reliability, and timeliness (Wasko et al., 2005). In this study, perceived recommendation quality refers to users' perceived helpfulness (Chiu, 2006; Delone et al., 2003). When users feel that their peers provide the information they want in their online community, they perceive high recommendation quality. Previous studies have suggested that when individuals recognize their peers provide valuable information and knowledge, they are more likely to engage in the cooperative interaction (Nahapiet et al., 1998). Therefore, other peers' high-quality sharing behavior might lead to users' intentions to establish more exchange relationships in social broadcasting environment. Thus, we hypothesize the following:

H7: Perceived recommendation quality is positively related to MGC sharing intention in micro-blogging service.

Social capital refers to the resources derived from social relationships, which could influence individuals' social actions (Newman et al., 2003) and value creation (Tsai et al., 1998). Social capital is "the sum of actual and potential resources embedded within and derived from the network of relationships possessed by an individual or social unit (p. 243)" (Nahapiet et al., 1998). Structural capital refers to the overall pattern of connections between an individual and other members (Sun et al., 2012), and it varies depending on the density and centralization of one's social network (Wasko et al., 2005). Relational capital is intangible assets such as trust, norms, and

identification, which are generated and retained through social relationships (Nahapiet et al., 1998). Cognitive capital emphasizes those members of a social network who share a common understanding and language are likely to interact and communicate with each other (Sun et al., 2012; Wasko et al., 2005).

In our research, the social capital of social broadcasting users refers to the amount of time spent on, and the frequency of peer communication in social broadcasting communities (Tsai et al., 1998). Structural capital indicates the number of direct audiences for users to act as a role of information source in social broadcasting context, and it can influence both the information obtainer and exchanger in the community. Cognitive capital is reflected by shared language, which facilitates a common understanding of group goals and behavior types (Chiu, 2006). Accordingly, cognitive capital causes the members to be actively involved in sharing behaviors, and it enhances the perceived quality of the MGC they received from others. Relational capital, combining trust, reciprocity, and respect, plays a critical role of cooperative behavior among members by reinforcing the sense of community and belonging (Sun et al., 2012). Previous knowledge sharing studies identified that social capital is an appreciable factor in facilitating perception and behavior in information sharing (Chow et al., 2008; Wasko et al., 2005). People with characteristics such as high inter-dependence, frequent interaction and a common understanding are more likely to share useful MGC and engage in related interactions in the online broadcasting context. Thus, we hypothesize the following.

H8: Social capital positively influences MGC sharing intention in micro-blogging service.

H9: Social capital positively influences MGC sharing behavior in micro-blogging service.

3.2. Moderating Effects of Prevention Focus

Regulatory focus theory was proposed to describe people's status of approaching aggressive goal and avoiding negative target (Higgins, 1997). The aggressive status, "promotion focus", is concerned with pleasurable presence and the painful absence of positive outcomes. In contrast, the avoiding status, "prevention focus", is related to the pleasurable absence and painful presence of negative outcomes. Prior studies have demonstrated that different regulatory focuses denote significant differences in emotional experiences and concerns (Higgins et al., 2003; Kirmani et al., 2007). In the current study, prevention pride examines the extent to which people care about obtaining security and fulfilling responsibilities (Higgins et al., 2001). Higher prevention scores mean that an individual has high prevention pride and is inclined to choose alternatives that have a low probability of negative consequences. A regulatory focus questionnaire (RFQ) was used to test the feeling of prevention pride based subjective history of individuals (Higgins et al., 2003). Although social broadcasting platforms have strong promotion capabilities, user's MGC sharing behavior would be affected by MGC's commercial properties (Dickinger et al., 2008). For instance, individuals with low prevention pride tend to provide advice on the basis of their first-hand experience (Sia et al., 2009); however, information overload and the fear of spamming might cause individuals with high prevention pride to lose their sense of control, and they would be worried about the loss of reputation if the MGC that they share contradicts the group's purpose. The vigilance approach for users with high and low prevention pride can result in obvious differences for the same target behavior, such as sharing MGC.

For instance, users' habits entail a controllable

level of potential risks and an acceptable level of potential benefits. Changing the existing behavior pattern means increasing the probability of unknown risks for users with high prevention pride. Individuals with low prevention have a low sensitivity for risk, suggesting that constraints imposed by habits may be relatively low. Hence, a significant interaction effect is expected on the relationship between past behavior and MGC sharing behavior through users' prevention pride. Thus, we hypothesize the following.

H10a: The relationships between past behavior and MGC sharing behavior for the individuals with high prevention pride are stronger than the same relationships for individuals with low prevention pride.

People can comprehensively estimate their perception of a specific activity, and in most cases, these pre-considerations might underestimate probable barriers and risks (Lieberman et al., 2008). According to construal level theory, people tend to give less weight to incidental noise and peripheral factors as psychological distance increases. When users recognize their willingness for the MGC sharing, they may over-estimate the feasibility of their actual MGC sharing behavior. Peripheral risks and unexpected obstacles are more likely to affect users with high prevention pride because they care more about potential losses such as spamming and privacy concerns. Therefore, we infer that the relationship between intention and behavior is stronger for users with low prevention pride than for those with high prevention pride. Thus, we hypothesize the following.

H10b: The relationship between MGC sharing intention and MGC sharing behavior for individuals with low prevention pride is stronger than that for individuals

with high prevention pride in micro-blogging service.

Individuals who have more social capital in a virtual community have relatively stronger direct ties to other members and a strong identification with the community, and are more likely to cooperate with others. Members with high social capital probably have a common language and are able to understand each other, leading a high possibility of exchanging resources and avoiding misunderstandings. However, high social capital entails a larger risk of disclosure and embarrassment. For individuals with high prevention pride, the possible loss of reputation likely causes them to be cautious in sharing messages. Sharing marketing messages can yield the desired results if it remains focused on the goal of a community. However, it is likely to deviate from the community's goal because the purpose of marketing messages is to earn profits. It also leads to the possibility of discussion, questions, and even objections, and this risk could reduce the sharing intention and behavior of individuals with high prevention pride. According to social cognitive theory, individuals are willing to participate in sharing behaviors that lead to favorable consequences (Chiu, 2006). Despite the potential benefits of MGC sharing behavior, individuals with high prevention pride are more worried about the possible negative results because "consumers generally have negative attitudes toward mobile advertising unless they have specifically consented to it (p. 65)" (Tsang et al., 2004). Thus, we hypothesize the following.

H10c: The relationship between social capital and MGC sharing behavior for the individuals with low prevention pride is stronger than that for individuals with high prevention pride.

IV. Method

The measurement items were adopted from prior studies, and some items were adjusted to fit the specific study context. Structural capital was measured using items on social interaction ties (Chiu, 2006; Sun et al., 2012), and the scale of relational capital was obtained from a previous study to estimate the trust and norms that persist in the relationships (Kale et al., 2000). User enjoyment was measured using three items for access the feelings of people who share MGC in the social broadcasting context (Chennamani et al., 2012; Wasko et al., 2005). Perceived control was estimated using three items for identifying the difficulty that individuals perceive in context of MGC sharing (Ajzen, 1991). Cognitive capital was quantified using shared language items for measuring the common understanding in online communities (Chiu, 2006). Perceived recommendation quality was assessed using five items for quantifying users' perceived helpfulness of their peers (Delone et al., 2003). MGC sharing behavior was assessed using a scale modified from a prior study for obtaining users' self-report for spontaneous dissemination behavior (Davenport et al., 1998). Personal outcome expectations were measured using six items for assessing personal expected consequences (Compeau et al., 1999), and community-related outcome expectations were measured using a scale for accessing users' expected consequences of community goals (Chiu, 2006). Users' prevention pride was measured using the items from the regulatory focus questionnaire (Higgins et al., 2003).

A pilot study involving 36 graduate students was conducted to test the effectiveness of the manipulations and instructions in the questionnaire. Feedback was collected in person to assess and improve the clarity and conciseness of the items. On

the basis of the feedback, the terminologies in the items were explained and clarified, and some items were reworded (i.e., three items in the regulatory focus questionnaire was revised). By using factor analyses and Cronbach's alpha, the validity and stability of the constructs were confirmed to be acceptable according to the standard of previous studies (Falk et al., 1992).

The research model was estimated using data from Sina Weibo users, and the participants were recruited from local universities. All the participants owned a smart phone and computer, and they all had the experience in using Sina Weibo more than half a year. They were informed that the survey data would be anonymously processed, and used only for research purposes. Because social broadcasting websites have become indispensable in young adults' lives (Kwak et al., 2010), it was acceptable to use undergraduate students as the sample in this study.

Then the participants' contact details were registered for distributing remuneration. A lottery prize

with a total value of US\$ 300 was offered as a reward for participation. Arranging raffle prize was proven to be effective in the survey and experiment methodology (Wang et al., 2009). A total of 350 participants completed the questionnaire, and a total of 319 valid responses and a total of 319 valid responses were received, as summarized in <Table 1>.

A second-generation causal modeling statistical technique, partial least squares (PLS) was used to test the research model because it has several advantages. First, PLS can easily estimate the measurement model and structural model as well as evaluate construct validity and the causal relationships in the model (Fornell et al., 1982). Second, PLS is the most suitable for models with an original scale and manipulated constructs, which was the case in this study (Fornell et al., 1982). Third, PLS is appropriate for models with formative constructs and a small sample, and it is considered to be a feasible tool for confirmation analysis in the early stages of theory development (Hair et al., 2011).

<Table 1> Demographic Information of Participants

Measure	Items	Freq.	percent	Measure	Items	Freq.	percent
Gender	Male	183	57.4%	Education	University	276	86.4%
	Female	136	42.6%		Graduate	35	11.1%
Age	~20	149	46.7%		Others	5	1.6%
	20~25	164	51.4%	Experience with Sina Weibo (Year)	0~1	27	8.5%
	25~30	5	1.6%		1~3	136	42.6%
	30~	1	0.3%		3~6	112	35.1%
Occupation	Student	284	89.0%		6~	44	13.8%
	Teacher	11	3.5%	Frequency of Sina Weibo (Week)	1~3	194	60.8%
	Employee	21	6.6%		3~5	85	26.6%
	Others	3	0.9%		5~10	34	10.7%
Education	College	3	0.9%		10~	6	1.9%

<Table 2> Psychometric Properties of the Measurement Model

Constructs	Items	Items loading	Composite reliability	Cronbach' alpha	AVE
Structural capital (STR)	STR1	0.766	0.878	0.817	0.646
	STR2	0.784			
	STR3	0.871			
	STR4	0.789			
Relational capital (REL)	REL1	0.770	0.847	0.766	0.577
	REL2	0.764			
	REL3	0.790			
	REL4	0.701			
	REL5	0.678			
Cognitive capital (COG)	COG1	0.867	0.917	0.864	0.787
	COG2	0.888			
	COG3	0.905			
Enjoyment (ENJ)	ENJ1	0.884	0.921	0.871	0.795
	ENJ2	0.915			
	ENJ3	0.874			
Perceived control(CON)	CON1	0.877	0.936	0.863	0.879
	CON2	0.945			
	CON3	0.930			
Personal outcome expectations (POE)	POE1	0.789	0.924	0.904	0.677
	POE2	0.845			
	POE3	0.762			
	POE4	0.834			
	POE5	0.853			
	POE6	0.849			
Community-related outcome expectations (COE)	COE1	0.880	0.936	0.909	0.786
	COE2	0.922			
	COE3	0.876			
	COE4	0.862			
Past behavior(PB)	PB1	0.944	0.948	0.890	0.901
	PB2	0.954			
Recommendations quality (RQ)	PRQ1	0.696	0.850	0.817	0.645
	PRQ2	0.723			
	PRQ3	0.712			
	PRQ4	0.786			
	PRQ5	0.733			

<Table 2> Psychometric Properties of the Measurement Model (Cont.)

Constructs		Items loading	Composite reliability	Cronbach' alpha	AVE
MGC sharing intention(MSI)	MSI1	0.894	0.950	0.928	0.823
	MSI2	0.924			
	MSI3	0.924			
	MSI4	0.886			
MGC sharing behavior (MSB)	MSB1	0.767	0.849	0.780	0.583
	MSB2	0.828			
	MSB3	0.693			
	MSB4	0.799			
	MSB5	0.713			

V. Data Analysis

5.1. Common Method Bias

To alleviate common method bias, the order of the items and the manipulation settings (for instance, anonymity and filter items) were adjusted and balanced (Podsakoff et al., 2003). In addition, statistical analyses were performed to evaluate the influence of common method bias. A Harmon one-factor test was applied to the main conceptual variables in our theoretical model. The test results showed that the highest variance percentage explained by one factor was 24.043%. This indicated that the majority of the variance cannot be accounted for by one general factor. Consequently, the developed model passed the Harmon one-factor test. In addition, we included a common method factor that is linked to all principal constructs' indicators to evaluate the path coefficients (Liang et al., 2007; Williams et al., 2003). The result indicated that the average substantively explained variance of the indicators was .708. By contrast, the average method-based variance was .007 (the ratio of substantive variance to method variance was 101:1). In addition, 35 of 44 method factor loadings were not

significant at the 5% level. This revealed that common method bias does not have a significant effect on the expected relationships in our theoretical model.

5.2. Measurement Validation

Our research examined both the item weights and loadings to assess the construct validity of formative constructs (<Table 2>). The results indicate the relative importance and absolute importance of the items (Cenfetelli et al., 2009). The multicollinearity among indicators was examined to ensure the reliability of the formative constructs. The analysis results confirm that the research formative constructs meet the standards. Composite reliability and average variance extracted (AVE) were used to assess the reliability of the constructs. Convergent and discriminant validity were examined through confirmatory factor analysis. The results show that the items correlated highly among the same constructs, and item loadings were higher on the original constructs than on other constructs (<Table 3>). Thus, the constructs passed the reliability and validity tests (Kankanhalli et al., 2005). The AVE and correlations of all the variables are shown in <Table 3>; the values on the diagonal are the square root of the AVE.

<Table 3> Correlation between Constructs

	Mean	Std.dev	STR	REL	COG	ENJ	CON	POE	COE	PB	PRQ	MSI	MSB	GEN	AGE	EDU	OCC	EXP	FRE
STR	3.357	1.722	0.804																
REL	4.163	1.611	0.106	0.760															
COG	4.197	1.793	0.670	0.099	0.887														
ENJ	2.119	1.326	0.266	-0.002	0.157	0.892													
CON	3.576	1.806	0.117	0.014	0.111	0.157	0.938												
POE	3.561	1.725	0.329	-0.003	0.192	0.525	0.233	0.823											
COE	3.210	1.799	0.260	0.260	0.182	0.601	0.173	0.603	0.887										
PB	2.310	1.401	0.044	-0.042	-0.064	0.320	0.066	0.308	0.252	0.949									
RQ	3.432	2.427	0.113	-0.110	0.119	0.139	0.059	0.073	0.049	0.006	0.803								
MSI	3.021	1.690	0.258	0.045	0.150	0.663	0.340	0.682	0.590	0.367	0.102	0.907							
MSB	2.358	1.566	0.253	-0.033	0.143	0.467	0.219	0.459	0.364	0.442	0.126	0.476	0.764						
GEN	1.272	0.487	0.023	-0.013	0.019	-0.063	-0.031	-0.037	0.011	0.057	0.026	-0.044	0.042	1					
AGE	1.558	0.562	-0.054	-0.066	-0.075	0.021	0.005	-0.063	0.003	-0.054	-0.024	-0.020	-0.115	0.085	1				
EDU	2.141	0.391	0.023	0.145	0.001	0.050	0.069	0.009	0.034	-0.039	-0.042	0.069	-0.016	0.177	0.227	1			
OCC	1.037	0.315	-0.026	-0.037	-0.023	-0.103	0.020	-0.086	-0.074	0.043	-0.049	-0.098	-0.084	0.241	0.254	0.059	1		
EXP	2.542	0.834	0.075	-0.009	0.069	0.090	0.070	0.020	0.125	0.012	0.045	0.094	0.110	0.138	0.153	0.083	0.138	1	
FRE	1.530	0.798	0.062	-0.003	0.028	0.038	0.066	0.009	0.060	0.054	0.037	0.098	0.123	-0.063	0.275	0.141	0.142	0.280	1

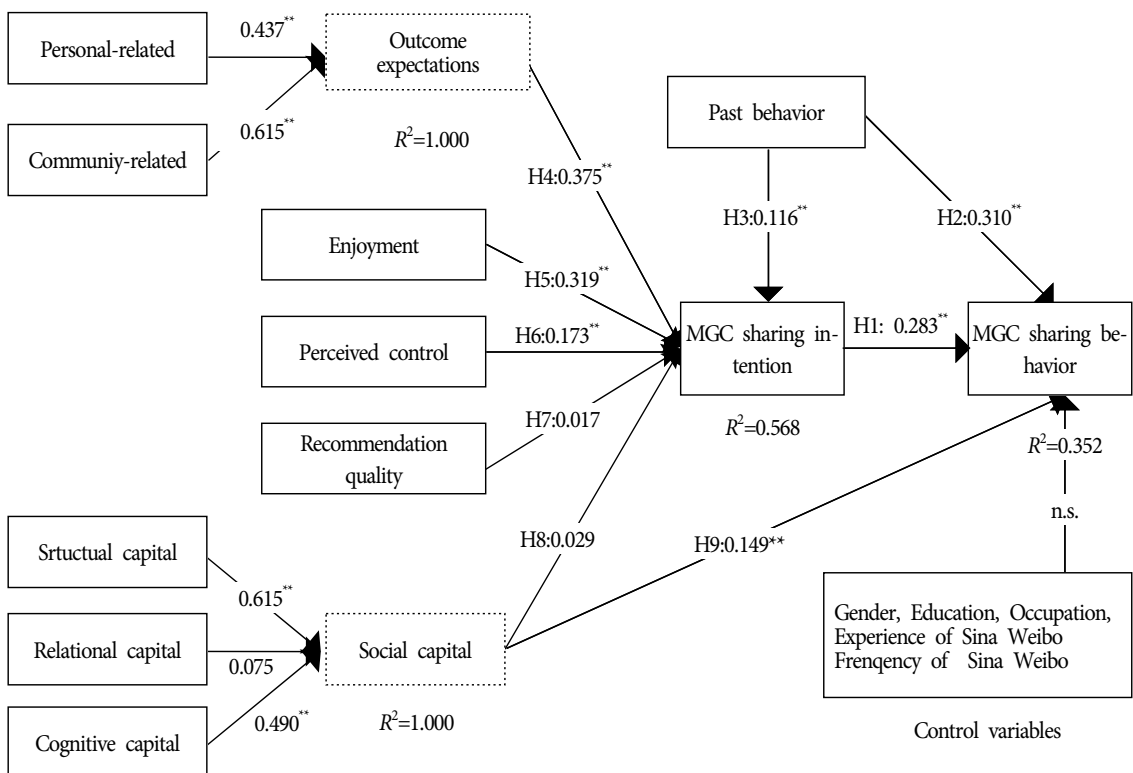
Note: STR (structural capital); REL (relational capital); COG (cognitive capital); ENJ (enjoyment); CON (perceived control); PB(Past behavior); RQ (perceived recommend quality); POE (personal outcome expectations); COE (community-related outcome expectations); MSI (MGC sharing intention); MSB (MGC sharing behaviors);GEN (gender, "male"; "female"); AGE (indicates, "≤20"; "20 - 25"; "25 - 30"; "≥30"); EDU (education indicates, "college or lower"; "bachelor"; "graduate" and "postgraduate or higher"); EXP (experience of Weibo usage indicates, "<1 year"; "1 - 3year"; "3 - 6 year" and ">6 year"). FRE (frequency of Weibo usage indicates, "<3 per week"; "3 - 5 per week"; "5 - 10 per week" and ">10 per week").

5.3. Structural Model

<Figure 2> shows the PLS main effect of the hypotheses tests. Control values such as age ($\beta = -0.091$, $p > 0.1$), gender ($\beta = 0.048$, $p > 0.1$), education ($\beta = -0.027$, $p > 0.1$), experience with Sina Weibo ($\beta = 0.033$, $p > 0.1$) and frequency of Sina Weibo usage ($\beta = 0.081$, $p > 0.1$) were found to be nonsignificant. Seven of the nine paths exhibited a P value less than 0.05, whereas the remaining two did not meet requirements of the 0.05 level of significance. The results show that users' willingness had a significant influence on their M0GC sharing behavior ($\beta = 0.283$, $p < 0.01$). Thus, H1 was supported.

In addition, past behavior had a positive influence on users' MGC sharing behavior ($\beta = 0.310$, $p < 0.01$). Therefore, H2 was supported. Past behavior had a significant effect on users' MGC sharing intention ($\beta = 0.116$, $p < 0.01$). Hence, H3 was supported. A significant effect of outcome expectations on users' MGC sharing intention was observed, and outcome expectations exhibited a positive effect on the willingness to disseminate MGC in the context of online social broadcasting communities ($\beta = 0.375$, $p < 0.01$). Consequently, H4 was supported.

Significant effects of enjoyment and perceived control were also observed. Enjoyment had significant influences on users' willingness to share MGC (β



Note: *Significant at the 5% level; **Significant at the 1% level

<Figure 2> Structural Equation Model Analysis of Research Model

= 0.319, $p < 0.01$) and on MGC sharing behavior. Therefore, H5 was supported. The path from perceived control to users' MGC sharing intention was positive and significant; thus H6 was supported. Contrary to our expectation, perceived recommendation quality exhibited a nonsignificant effect on users' sharing intention. Hence, H7 was not supported. Social capital was found to be a nonsignificant predictor for users' MGC sharing intention ($\beta = 0.029, p > 0.1$). However, the results show that social capital had a positive influence on users' sharing behavior ($\beta = 0.149, p < 0.01$). Consequently, H8 was not supported, but H9 was supported.

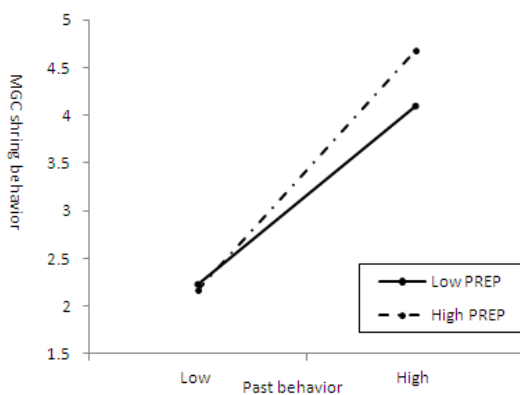
5.4. The Moderating Effect of Prevention Pride

After the value of individual prevention pride was transformed (Higgins et al., 2003), the interaction variable as the cross result could be calculated using the modeling approach for interaction effects (Chin et al., 2003). To test the moderation effects on the relationship between users' MGC sharing behavior and three determinants (social capital, intention, and past behavior), a hierarchical analysis with six models was

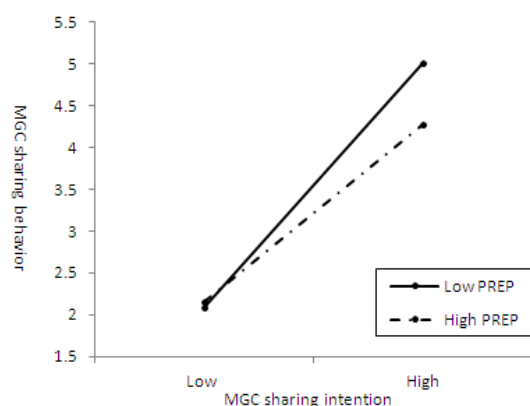
conducted, and all results are shown in <Table 4>.

Control variables were included in Model 1. In Model 2, users' social capital, past behavior and intention were added, and the empirical results show that these antecedents increased R^2 from 0.061 to 0.335, indicating that users' social capital, past behavior, and intention can explain the considerable effect size of users' MGC sharing behavior. In Model 3, users' prevention pride was considered. The results show that users' prevention pride might not be a significant direct indicator for their MGC sharing behavior in social media ($T = 1.351, p > 0.1$). Model 4, 5, and 6 introduced the moderating effects of users' prevention pride. The results show that the path coefficients for moderating effects on users' intention and past behavior were significant with betas of -0.117 ($T = 2.213, p < 0.05$) and 0.165 ($T = 2.865, p < 0.01$). However, the path coefficient for the moderating effect of prevention pride on the relationship between social capital and MGC sharing was positive but nonsignificant ($T = 0.836, p > 0.1$). Thus, H10a and H10b were supported, but H10c was not.

The interaction effect among users' MGC past behavior, sharing intention, and prevention pride is shown in <Figure 3> and <Figure 4>. Users' pre-



<Figure 3> Interaction Effect of Past Behavior and MGC Sharing Behavior



<Figure 4> Interaction Effect of MGC Sharing Intention and MGC Sharing Behavior

vention pride was proved to have a significant effect on users' MGC sharing behavior under different conditions of users' sharing intention. The influence of users' intention is stronger for users with a lower prevention pride and weaker for users with a higher prevention pride, revealing a negative moderating effect of prevention pride. However, the results show that the influence of users' past behavior is stronger with higher prevention pride, confirming a positive moderating effect of prevention pride.

VI. Discussion and Conclusion

This study explores the antecedents of users' MGC sharing in social media by integrating intrinsic motivations (enjoyment), outcome expectations, peer influence (perceived quality recommendation), perceived control, social capital and personal traits (individual prevention pride). Previous efforts have studied extensively motivations of sharing information in online environment, the commercial background are often absent (Shi et al., 2014). The effectiveness of the explanation for proposition about MGC might be restricted if we stay within the confines of a dominant paradigm (Benbasat et al., 2007). Although a big theoretical framework such as social capital-based and TPB-based frameworks has been used to explain a variety of interpersonal behaviors, important limitation of single theoretical framework should not be ignored, namely, one big theoretical framework is difficult to take into account antecedents over and above attitudinal, normative, and control judgments (Tsai et al., 2014).

A diverse theoretical perspective makes our research close to the specific situation of MGC and provides useful complement to our theoretical understanding of the antecedents to users' MGC sharing

behaviour (Cheung et al., 2012; Moon et al., 2014; Tsai et al., 2014; Wasko et al., 2005). The empirical results provide support for our theoretical model and confirm most of the hypothesized relationships. Our results first indicate that users' social capital in micro-blogging, particularly structural capital and relational capital, are crucial indicators for their MGC sharing behavior. Second, our results suggest that enjoyment and users' outcome expectations are critical determinants for users' intention to share MGC in the context of social broadcasting environment. Third, our results show that past behavior is a crucial predictor for both users' intention to share promotion messages and message-sharing behavior in social media. Finally, our results indicate that the relationships between antecedents and MGC sharing behavior are significantly moderated by users' prevention pride, demonstrating that personal cognitive style has substantial influence in predicting micro-blogging users' behavior (McElroy et al., 2007).

Evidence should be provided to confirm that these antecedents play critical roles in the context of MGC sharing in social broadcasting communities. Although prior studies have investigated the effects of factors such as social capital in knowledge sharing, exploring consumer participation would undoubtedly further our understanding of successful marketing strategies in new media such as online social broadcasting communities. One potential explanation for the weak influence of relational capital might be the electronic nature of networks and the implications of private relationships in information sharing. Information sharing behavior involves more multilateral than bilateral; thus, intangible assets such as commitment, norms and trust are not necessary for eliciting users' contribution behavior (Wasko et al., 2005). Contrary to our expectations, the results suggest that high social capital does not predict MGC sharing intention,

even though the trends are consistent with our expectations. This finding is different from those of prior studies in knowledge sharing environment (Chow et al., 2008; Hau et al., 2013). One possible explanation is that shared commercial messages are trusted only in close relationships, and thus higher social capital does not lead to a higher willingness to share, although greater social linkage increases the probability of content sharing. MGC sharers' interaction in social broadcasting might also be explained by the indistinctive relationship between perceived recommendation quality and MGC sharing intention, which indicates that others people's help will not be reciprocated and may not be necessary for users' sharing behavior and willingness. Another unexpected result is the nonsignificant moderating effect on the relationship between social capital and MGC sharing behavior. One possible explanation is that different prevention focuses make little difference in MGC sharing when users only consider the influence from the aspects of social capital. From the perspective of personal relationships, individuals with high prevention pride would probably be the same as individuals with low prevention pride if they attempt to share commercial messages such as MGC.

6.1. Theoretical Implications

This research offers several theoretical insights in the disclosure on social broadcasting communities. First, previous studies have linked consumer engagement to an online commercial influence in virtual media (Goh et al., 2013; Lyons et al., 2005; Porter et al., 2008), but their overarching concern on economic impact might have a universal passive response in social media. The existing arguments are far from perfect to understand the information diffusion process for guiding marketers' effective manipulation in

the context of online social networks. By emphasizing the role of MGC, we advance the understanding of information transfer process in the social broadcasting communities among individuals. Furthermore, the current study reveals that enterprises can take initiatives rather than play a passive and reactive role.

Second, as one of the first efforts to validate a theoretical understanding by conceptualizing the process of commercial information diffusion in social broadcasting context, our research provides new insights into users' content sharing behavior. Understanding the information dissemination process in online communities is crucial, and numerous studies have been challenged because of the lack of micro-level data (Shi et al., 2014). Our conceptualization shifts the focus of content sharing from econometric analysis, a largely descriptive perspective, to the viewpoint of individual motivation among actual users.

Third, our research is also among the first to validate the combined influence of factors for users' content sharing behavior in an integrated view by using a common measurement scale. In the current study, we introduced factors such as social capital, outcome expectations, enjoyment, perceived control, past behavior, and recommendation quality to establish the predictive frame of MGC sharing. Each factor has its own theoretical basis and motif, and no previous research has examined the associated influence of these antecedents. Our research findings contribute to the understanding of spontaneous advertising and commercial message sharing behavior among users in the social broadcasting context.

Fourth, our research provides nuanced insights into the influence of individuals' regulatory focus in the context of online communities. This study shows that individuals' prevention pride predicts aspects of users' MGC sharing behavior, and it provides new understanding for evaluating the effects of in-

dividuals' personalities on the basis of a specific type of information diffusion, namely MGC sharing (McElroy et al., 2007). We hope that this research can increase attention to the effects of individuals' regulatory focus, a specific dichotomous dimension in individuals' personalities, in the context of virtual communities.

6.2. Managerial Implications

Our study provides several crucial practical implications. MGC plays persuasive roles in social broadcasting platforms, and it is a major complement to the suboptimal reliance on user-generated publicity (Goh et al., 2013). Our results suggest that managers should attach importance to users' enthusiasm and instinctive motivation, and create an atmosphere that influences users' outcome expectations. An appropriate strategy for marketers is to create influence in their marketing activities through the interaction among users; thus, they should attentively design unique marketing content. Creatively designed content with unique ideas is more likely to spread because users' acceptance evaluation increases their instinctive motivations (Wasko et al., 2005).

Centralized users with strong direct interpersonal relationships in social media might be marketers' target group; however, this does not mean that users with high social capital would have a strong motivation to share MGC. Marketers can enhance their marketing influence through users with high structural capital and cognitive capital. But this result might only be caused by the influence of high coverage rate of central users in social networks. Hence, when persuasive messages are sent to consumers, marketers can choose members with high structural relations and a common understanding for raising their MGC's influences (Wasko et al., 2005). For example, it could

be helpful to accurately position centralized users in online like-minded groups when marketers attempt to obtain a wider audience. However, marketers should realize that centralized users do not hold a more positive willingness to share commercials than other users.

Furthermore, in the social media environment, individuals with high and low prevention pride scores should be approached separately. Individuals with high prevention pride scores have stable sharing behavior, and are therefore likely to be cautious. By contrast, individuals with low prevention pride scores are more consistent in the relationship between their MGC sharing intention and behavior in social broadcasting context. Individuals with high prevention pride individuals with a recent behavior trace in MGC sharing are likely to share commercials such as MGC. The probable cause of this result is that individuals with a higher prevention pride are more dependent on the established trust, and their behavior is more likely to be fixed and constant if they feel that the MGC sharing behavior is useful and harmless.

6.3. Limitations and Future Research

As one of the first studies to examine the diffusion of MGC in social broadcasting networks, this study has limitations that warrant future research. First, our data were not randomly sampled. Even though using a youth sample could ensure the external validity of our study (Pedersen, 2005), it is undisputed that randomized trials on social websites would increase generalizability of our results. Second, as an empirical study, our data were derived from micro-blogging service context; thus, the generalizability of our results may be limited. The current study could be enhanced by adopting an alternative social network. Third, our study exhibits a favorable level

of explanatory power on users' MGC sharing behavior based on the evaluation of actual behavior (Sun et al., 2012). However, future research should consider explanations from other perspectives by including other control constructs (e.g., cultural factors and

platforms). Although these extensions might lead to challenges in data collection, additional contributions can be added to our understanding of the information diffusion process in virtual communities.

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<Appendix A> Survey Instrument

Constructs	Items
Structural capital (STR)	I maintain close social relationships with my fellows in Weibo.
	I spend a lot of time interacting with members in Weibo.
	I know some members in my Weibo circle on the personal level.
	I have frequent communication with some members in my Weibo circle.
Relational capital (REL)	There is close, personal interaction between the partners at multiple levels in my Weibo circle.
	The members respect each other at multiple interpersonal levels in my Weibo circle.
	The community is characterized by mutual trust between the partners at multiple in my Weibo circle.
	There is personal friendship between the partners at multiple levels in my Weibo circle.
	The relationship is characterized by high reciprocity between members in my Weibo circle.
Cognitive capital (COG)	When interacting with friends in Weibo, we use common terms or jargon.
	During the discussion with friends in Weib, we use understandable communication pattern.
	When communicating with friends in Weib, we use understandable narrative forms to post messages or articles
Enjoyment(ENJ)	I enjoy sharing useful messages I received from merchants with my Weibo fellows.
	I feel good to help others in my Weibo circle through my sharing behavior about promotion and marketing information.
	I like helping my friends in weibo through my my sharing behavior about promotion and marketing information
Perceived control(CON)	There are few obstacles for me to sharing Marketers-generated contents in Weibo.
	I can control when I receive content marketers generated in the Weibo environment.
	I am in control over the amount of content marketers generated in Weibo
Perceived recommendation quality(PRQ)	The business information and ads shared and recommended by members is usually meet the needs in my Weibo circle.
	The business information and ads shared and recommended by members is usually accurate in my Weibo circle.
	The business information and ads shared and recommended by members is usually complete in my Weibo circle.
	The business information and ads shared and recommended by members is usually reliable in my Weibo circle.
	The business information and ads shared and recommended by members is usually timely in my mobile social circle.
MGC sharing intention(MSI)	I would probably share marketers-generated content to my fellows.
	I would recommend some content marketers-generated to my friends if I think they are interested in.
	I would try to provide some useful marketers-generated messages I received to my friends in the future.
	I intend to forward some marketers-generated content to my fellows.

<Appendix A> Survey Instrument (Cont.)

Constructs	Items
Personal outcome expectations (POE)	Sharing certain business information that I know in my Weibo circle will help me to make friends with other members.
	Sharing certain business information that I know in my Weibo circle will give me a feeling of happiness.
	Sharing certain business information that I know in my Weibo circle will can build up my reputation.
	Sharing certain business information that I know in my Weibo circle will give me a sense of accomplishment.
	Sharing certain business information that I know in my Weibo circle will strengthen the tie between other members.
	Sharing certain business information that I know in my Weibo circle will enable me to get more interaction with active members.
	Sharing certain business information that I know in my Weibo circle will help me to make friends with other members.
Community-related outcome expectations (COE)	Sharing certain business information that I know in my Weibo circle will enhance the contact of my social circle.
	Sharing certain business information that I know in my Weibo circle will enhance the cohesion of my mobile social circle.
	Sharing certain business information that I know in my Weibo circle will enhance information richness of my mobile social circle.
	Sharing certain business information that I know in my Weibo circle will contribute to the development of our social network.
Past behaviour (PB)	In the last 2 weeks how often did you share marketers-generated content in Weibo?
	Approximately how many times did you share marketers-generated content in Weibo during the last 2 weeks?
MGC sharing behaviour(MSB)	I frequently participate in ads sharing and comment activities in my Weibo circle.
	I usually spend lots of time to share and comment certain business information marketers-generated in my Weibo circle.
	I usually actively share and recommend promotions and other information based on my perception and experiences in my Weibo circle.
	When discussing a consumption decision issue, I am usually involved in the subsequent interactions in my Weibo circle.
	In my Weibo circle., I usually involve myself in discussions of various consumption topics rather than specific topics.

<Appendix B> Common Method Bias

Constructs		Substantive Factor Loading (R1)	R12	Method Factor Loading (R2)	R22
Structural capital (STR)	STR1	0.773**	0.598	0.119**	0.031
	STR2	0.798**	0.636	0.016	0.000
	STR3	0.873**	0.762	-0.074**	0.004
	STR4	0.769**	0.591	-0.049	0.002
Relational capital (REL)	REL1	0.681**	0.464	-0.030	0.001
	REL2	0.830**	0.690	-0.005	0.006
	REL3	0.654**	0.416	-0.030	0.001
	REL4	0.764**	0.584	0.041	0.002
	REL5	0.748**	0.560	0.024	0.000
Cognitive capital (COG)	COG1	0.860**	0.739	0.046	0.002
	COG2	0.892**	0.797	-0.039*	0.001
	COG3	0.908**	0.825	0.000	0.000
Enjoyment (ENJ)	ENJ1	0.879**	0.772	-0.018	0.001
	ENJ2	0.917**	0.841	0.032	0.000
	ENJ3	0.878**	0.771	-0.009	0.000
Perceived control(CON)	CON1	0.931**	0.876	0.005	0.004
	CON2	0.938**	0.879	0.014	0.012
	CON3	0.921**	0.873	0.005	0.002
Personal outcome expectations (POE)	POE1	0.789**	0.623	-0.005	0.008
	POE2	0.847**	0.718	0.006	0.000
	POE3	0.765**	0.585	0.007	0.005
	POE4	0.835**	0.697	0.131*	0.025
	POE5	0.850**	0.723	0.070	0.001
	POE6	0.846**	0.716	-0.057	0.001
Community-related outcome expectations (COE)	COE1	0.861**	0.741	0.267**	0.034
	COE2	0.919**	0.845	0.024	0.000
	COE3	0.891**	0.795	-0.127**	0.025
	COE4	0.874**	0.764	-0.157**	0.019
Past behavior(PB)	PB1	0.960**	0.921	-0.020	0.001
	PB2	0.960**	0.921	0.024	0.000
Recommendations quality (RQ)	PRQ1	0.648**	0.449	0.078	0.011
	PRQ2	0.874**	0.765	0.044*	0.036
	PRQ3	0.869**	0.755	0.020	0.001
	PRQ4	0.860**	0.739	0.047	0.002
	PRQ5	0.811**	0.658	0.040	0.002

<Appendix B> Common Method Bias (Cont.)

Constructs		Substantive Factor Loading (R1)	R12	Method Factor Loading (R2)	R22
MGC sharing intention(MSI)	MSI1	0.883**	0.780	0.010	0.003
	MSI2	0.913**	0.834	0.044	0.003
	MSI3	0.912**	0.832	0.013	0.000
	MSI4	0.882**	0.778	-0.062*	0.032
MGC sharing behavior (MSB)	MSB1	0.757**	0.572	0.083	0.014
	MSB2	0.830**	0.689	0.053	0.002
	MSB3	0.693**	0.481	-0.077	0.003
	MSB4	0.830**	0.689	-0.080	0.003
	MSB5	0.641**	0.441	0.027	0.010
Average		0.836	0.708	0.011	0.007

Note: ** $p < .05$; * $p < .01$

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