

Enhancing Fan Participation in Social Media Based Virtual Brand Communities: The Case of Like, Comment, and Share Activities

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ABSTRACT

The purpose of marketing via Facebook is to convince consumers to become fans of a brand. Facebook constructs virtual brand communities that enable brand fans to interact with these brands. This study investigates the antecedents and consequences of fan participation characterized by the breadth and depth of brand fans' like, comment, and share activities. An empirical analysis with 204 survey respondents reveals that expected benefits, such as brand information, social interaction ties, playfulness, and incentive, have positive effects on fan participation. Furthermore, fan participation increases fan's attitudinal loyalty, which then positively affects behavioral loyalty. Theoretical and practical implications of the findings as well as future research directions are also discussed.

Keywords: Social Media Marketing, Brand Community, Fan Participation, Expected Benefits, Brand Loyalty

I . Introduction

With the explosive growth of social networking services (SNSs), a new way of marketing via social media has been put under the spotlight. The purpose of social marketing, which is different from traditional marketing, is to convince potential consumers to become fans of the brand by utilizing social media

(Laudon and Traver, 2014). Facebook, which had over 1.3 billion active users and over 2 million active advertisers globally by 2015 (Facebook, 2015), is the most successful social networking site. Thus, most of the Fortune 500 companies, as well as a great number of small and individual enterprises, believe Facebook to be one of the most valuable marketing/advertising platforms.

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Previous research conducted on social media marketing has explored the relevant questions from different perspectives, in which the social media marketing target audiences consist of two groups: the general SNS users and the brand fans or followers (e.g., Chi, 2011; Lipsman et al., 2012; Munnukka et al., 2015; Wallace et al., 2014). The latter, in addition to having the same characteristics as SNS users, actively take part in companies' business activities in the virtual brand community. In terms of Facebook, a typical example is that if users click on the "Like Page," they will become fans of the brand, and then, as fans, they can click on "Like," "Comment," or "Share" when they view updated content from this brand. These three activities are not only Facebook's unique advantages but are also critical to social marketing success because they increase the reach of the brand advertisement and enhance the interactions between consumers and brands (Laudon and Traver, 2014). According to Zwass (2010), these activities enhancing the consumer-firm interactions as well as consumer-consumer interactions can be considered as co-creation, of which participation is a core factor. On the other hand, marketing practitioners and platform providers believe that the increasing number of "Like", "Comment", and "Share" is an indicator of the successful marketing communication (Lipsman et al., 2012). Thus, research that focuses on consumers' activities corresponding to the real-world features of social media could not only make significant contributions to advancing social media marketing and customer relationship management but also provide further insights into the phenomenon of marketers continuously posting brand content in social media.

Participation generally referring to the activities performed by users or consumers during the product or service transactions has great impacts on fulfilling

consumers' needs and promoting companies' business performance (e.g., Barki and Hartwick, 1994; Chan et al., 2010). In the social media era, it is no exaggeration to say that consumer/user participation vitalizes social media based business activities of companies. That is, since consumers have perceived an ever-increasing level of empowerment, that is "a sense of control," (Fuchs et al., 2010, p. 65) their roles have shifted from passive recipients to active actors and they participate more actively in companies' business activities in the virtual environment (Fuller et al., 2009; Vargo et al., 2008). In this study, we aim to explore the participation of brand fans in terms of the "Like," "Comment," and "Share" actions.

Regarding fan participation, previous studies on motivation theory and social exchange theory propose that consumers' beliefs about the expected benefits got from the interactive experience can be antecedent variables of fan participation (e.g., Gefen and Ridings, 2002; Kohler et al., 2011). On the other hand, since fan participation increases fans' involvement and mutual understanding of the brands, we assume that brand loyalty can be enhanced by fan participation. Accordingly, on the basis of defining fan participation representing the realistic Facebook marketing's characteristics, our research has two major goals: (1) to find out what motivations (expectancies) lead to fan participation, and (2) to examine whether participation could increase brand loyalty including attitudinal loyalty and behavioral loyalty. This study proceeds as follows. First, we do literature review to define fan participation in the context of a Facebook brand community. Second, we present related theories and set hypotheses addressing research questions. Third, we use the survey method and test the hypotheses by a structural equation modeling analysis with PLS. Finally, we conclude

with several theoretical and managerial implications as well as future research directions.

II. Literature Review

2.1. Social Marketing and Virtual Brand Community

Social marketing is “the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences” (Andreasen, 1995, p. 7). In the era of Web 2.0, companies have embraced social media as an approach to conduct social marketing. Further, the voluntary behavior of target audiences includes many forms such as eWOM, social endorsement, user-generated content (UGC), information sharing, and other interactions within a virtual brand community. Social networking sites construct virtual consumer environments, for example, a virtual brand community, in which firms attract brand fans and encourage them to participate in community behaviors such as performing “Like,” “Comment,” or “Share” actions on the Facebook brand content. Fan acquisition is just the beginning of social marketing, with the subsequent stage aimed at encouraging fans’ community-behaviors, namely, fan participation because it provides many potential benefits to companies (Laudon and Traver, 2014; Nambisan and Nambisan, 2008).

2.2. Fan Participation

Consumer participation occupies the core position in virtual communities. Nambisan and Nambisan (2008) proposed the five types of customer roles

when they participate in firm-initiated co-creation in a virtual community: the product conceptualizer, product designer, product tester, product support specialist, and product marketer. These five roles are played in different virtual environments. Among the five roles, the product marketer role, who contributes to diffusing the product message to other members, has become easier to execute with the dramatic development of SNSs. Regarding Facebook, brand fans can access the brand content on their News Feeds and “Like,” “Comment,” or “Share” them in each moment. Facebook’s social characteristics ensure that these activities are seen and engaged by the fans’ friends and, as a result, enable the conversation about the brand and increase the brand message’s reach. In this study, we focus on fans’ “Like,” “Comment,” or “Share” behaviors to define fan participation based on comparisons with the other definitions in the previous studies because participation is a multifaceted concept (Yen et al., 2011).

User participation is widely used in the information systems field. Vroom and Jago (1988) set forth a general definition of user participation, which means taking part in a contribution activity. Barki and Hartwick (1994) proposed that user participation should include activities that are both formal and informal, direct and indirect, active and passive, performed alone or with others in the information system development. Koh et al. (2007) suggested that user participation, which can be an active behavior, such as posting content, or a passive behavior, such as viewing these, is an important driver for the development of online communities. User participation includes posting one’s comments, questions, pictures, videos, and viewing/reading others’ content within a community (Kordzadech et al., 2014).

As a similar construct, customer participation has been studied in the marketing field. For example,

customer participation refers to a degree to which the customer is involved in producing and delivering the service (Dabholkar, 2015). Ho and Ganesan (2013) defined customer participation as the customers' engagements in coordinating activities and providing assistance to get a better collaborative performance in transactions. Fang et al. (2008) argued that customer participation includes both the breadth and depth of a customer's involvement in the transaction activity process. Chan et al. 2010 adapted previous definitions of customer participation, which is a behavioral construct for measuring the extent to which customers provide or share information, make suggestions, and become involved in decision-making in the service co-creation and delivery process.

In comparison with these definitions about participation, scholars tend to use the concrete activities to represent participation corresponding to the research objective. On top of that, the "scope" and "depth" dimensions could be used to describe participation behaviorally. In practice, the "Like," "Comment," or "Share," buttons on Facebook are effective tools to engage fans in interacting with the brands (Ge, 2013). Therefore, we posit that the increasing number of these three actions represents fan participation in the Facebook environment. We define fan participation corresponding to Facebook marketing as the breadth and depth of fans' voluntary involvement in companies' Facebook marketing process mainly through interactions with the brand content. In detail, the breadth covers the brand fans' "Like," "Comment," or "Share" activities, while the depth refers to the weight attached to each of these, that is, the frequency of performing the related activity.

III. Hypotheses Development

3.1. Antecedents of Fan Participation

We would apply motivation theory and social exchange theory to explain why expectations of benefits affect fan participation. First, motivation theory highlights the energy and direction aspects of behavior. The benefits, which can be obtained from fan participation experiences, build a source of energy. The direction aspect that addresses the process and structure of the behavior aims at satisfying one's needs, that is, for acquiring the expected benefits (Deci and Ryan, 2002). According to cognitive motivation theory (Kanfer, 1990), the beliefs about expected benefits are the motivational forces, and if they can offset the time and effort required in participation, then the fans will engage in community behaviors.

Social exchange theory (SET), which suggests that individuals are goal-oriented and they determine whether to interact with other entities based on their subjective calculations of costs and benefits, explains these phenomena well (Ku et al., 2013). Gefen and Ridings (2002) state that "social exchange assumes that individuals take part in an exchange only when they expect their rewards from it to justify the costs of taking part in it" (p. 50); therefore, the expected benefits are essential factors that stimulate fans to play the marketer role, namely, to perform the "Like," "Comment," or "Share."

Consumers can get value or benefits from their interacting experiences with the brand via social media (Park et al., 2016; Zhang et al., 2015). According to Nambisan and Nambisan (2008) and Kohler et al. 2011, consumers have the four types of experiences in the technology-based virtual environment: (1) pragmatic experience, which refers to the brand fans' participation aimed at acquiring brand-related information; (2) sociability experience, which makes brand fans perceive themselves as members of the

brand community; (3) hedonic experience, which refers to the mentally stimulating or entertaining interactions for pleasure and enjoyment; and (4) usability experience, which is influenced primarily by the easy-to-use of the technologies. It is worth noting that usability experience focuses on the quality of human-technology interactions rather than fans' community behaviors in the platform. Furthermore, as brand fans are familiar with the features and functions of Facebook, the usability experience is less important than the other three experiences in providing potential benefits that stimulate fans to interact with the brand content.

On the other hand, a number of prior studies have explored the effects of motivations on consumer/user participation in the virtual world. The <Table 1> summarizes previous studies on motivations of consumer participation. Basically, such motivations include extrinsic and intrinsic aspects, which both affect individuals' participation behaviors in the virtual environments (Roberts et al., 2006). These studies further reveal that people's motivations of partic-

ipation are context-specific. That is, the environments and objects of participation determine what benefits they can obtain from the participation. Further, following the studies of Tsai and Men (2013) and Wallace et al (2014), monetary incentive can be an antecedent of consumer participating in firm-initiated brand community activities on the Facebook platform. Accordingly, by combining the above-mentioned fan experiences and motivations of consumer participation, we propose a number of expected benefits, such as brand information from pragmatic experience, social interaction ties and self-expression from sociability experience, playfulness from hedonic experience, as well as incentive could be antecedents of fan participation in this study.

First, brand fans can obtain useful information from the pragmatic experience because posted brand content is designed to transmit useful brand information to fans. Thus, the brand content as an advertisement helps fans to understand the details about a brand before they buy and use it (MacInnis et al., 1991). In this study, brand information as

<Table 1> Motivations of Consumer Participation

Authors	Research Context	Intrinsic Motivation	Extrinsic Motivation
Tsai and Men (2013)	Consumer engagement with Facebook brand page	Entertainment	Social integration, Personal identity, Information, Empowerment, and Remuneration
Wallace et al (2014)	Typology of Facebook fans	Self-esteem	Brand information, Social ties, Self-expression, and Incentives
Kosonen et al (2014)	Knowledge sharing	Hedonic benefits	Learning benefits, Social benefits, and Recognition from others
Zhang et al (2015)	Customer participation in co-creation	Hedonic value	Information learning and Social interaction
Hamari et al (2016)	Collaborative consumption	Sustainability and Enjoyment	Reputation and Economic outcomes
Pera et al (2016)	Value co-creation	Playfulness	Reputation and Relationships
Ryu and Kim (2016)	Sponsor participation in crowdfunding	Interest, Playfulness, and Philanthropic	Reward, Relationships, and Recognition

a kind of expected benefit is related to Facebook brand fans' behaviors to seek the useful brand or consumption information. Facebook is good at interest-based advertising, that is, Facebook takes into account the rate at which fans "Like," "Comment," or "Share" the brand content, and then posts personalized brand content to the fans (Owens and Vickrey, 2014). If fans actively interact with the brand content, Facebook has the capability to keep them informed about highly personalized brand content. Since participation enhances the communications among community members, it is anticipated that the highly pertinent brand and consumption related information also can be obtained from other fans. Hence, for the benefit of receiving more useful brand information from the pragmatic experience, many fans will consistently interact with the brand content (Wallace et al., 2014). Therefore, we posit the following hypothesis:

H1: Brand information is positively related to fan participation.

On the sociability side, social interaction ties and self-expression are the main benefits that can be acquired from the sociability experience. Social interaction ties refer to individuals' desires to increase the strength of the relationship, the amount of time spent in communication, and communication frequency among members within an organization (Chiu et al., 2006). In the community context, the term can be defined as interpersonal relationships, or the structural dimension of social capital (Nahapiet and Ghoshal, 1998). On the Facebook platform, interactions between fans can be mediated by interacting with the brand content. That is, brand fans can interact with other users by clicking the "Like," "Comment," or "Share" buttons for the brand content

because the News Feed shows users what their friends or fans have done continuously. Therefore, the interpersonal relationships between the fans and their friends are likely to be enhanced when the engaged brand content also attracts the recipients, namely, the fans' friends. Li and Wang (2015) confirmed that social interaction ties could be antecedent of content sharing in the social media environments.

Another sociability-related expected benefit can be self-expression, which describes the brand fans' desires to show their images and preferences to others (Basak and Calisir, 2015). Facebook is an effective self-expressive medium that provides an environment for impression management, such as an individual's profile (Bareket-Bojmel et al., 2016). Furthermore, it offers fans many opportunities to present their hoped-for possible selves through participation in fan community activities (Mehdizadeh, 2010). In addition, since each of the brands has a unique image and personality, interacting with the brand (content) enables fans to show their desired images within the virtual brand community or networks (Carroll and Ahuvia, 2006). Accordingly, we have the following hypotheses on the relationships between expected benefits from sociability experience and fan participation.

H2: Social interaction ties are positively related to fan participation.

H3: Self-expression is positively related to fan participation.

Playfulness can be defined as the perceived mental satisfaction, such as enjoyment, interest, fun, or curiosity, generated from consumers' online activities (Kim et al., 2011; Moon et al., 2001). Kaur et al (2016) suggested that playfulness is an individual's experiential state derived from using the Facebook-based brand communities. Dutta (2010) proposes

that firms should keep their Facebook page attractive and update popular brand content consistently when they apply social media to their business. For brand fans, interacting with varied, interesting brand content can form part of an entertaining experience when using Facebook (Reinecke et al., 2014). Hence, we assume that brand fans would actively interact with the brand content in order to achieve the playfulness from the hedonic experience.

H4: Playfulness is positively related to fan participation.

In addition to the expected benefits from pragmatic, sociability, and hedonic experiences, the extrinsic compensation factor can be considered. Marketers usually provide tangible rewards to community members to improve their enthusiasm (Laudon and Traver, 2014). As an extrinsic motive, incentive also has an important effect on the consumer's participation in online community activities (e.g., Füller, 2006; Jang et al., 2008; Roberts et al., 2006; Wu and Lu, 2013). In Facebook marketing, the compensation is mainly a monetary incentive such as a discount, coupon, or giveaway provided to brand fans. Although fan participation is a voluntary behavior, it takes some time and effort, so companies should provide some external benefits to encourage fans to act effectively. Hence, we anticipate that brand fans may be interested in the incentive provided by the companies at certain times. Therefore, we posit the following hypothesis:

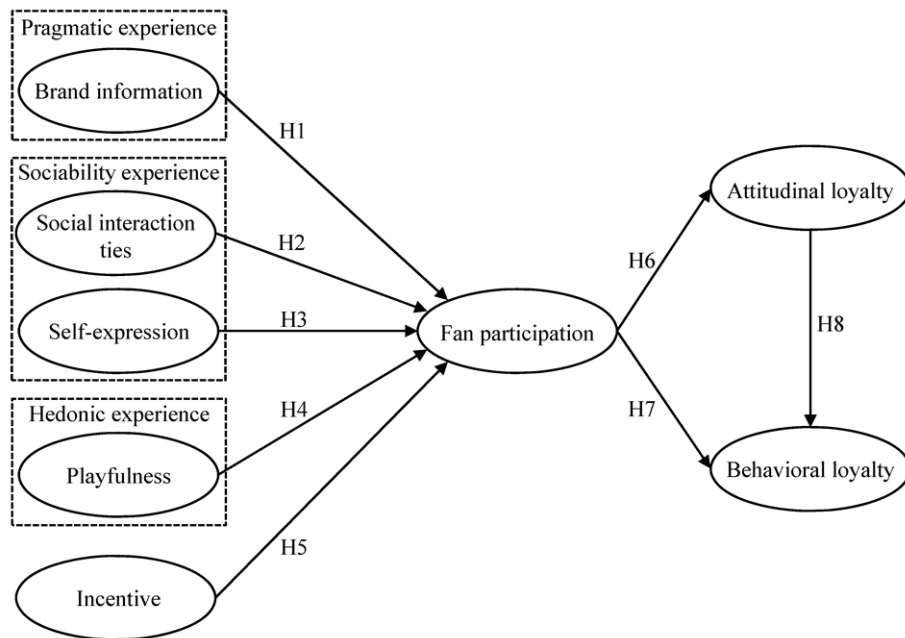
H5: Incentive is positively related to fan participation.

3.2. Outcomes of Fan Participation

A number of previous studies have emphasized brand loyalty as an important outcome of brand

community (e.g., Casaló et al., 2010; Jang et al., 2008; Munnukka et al., 2015). Regarding the consequence of fan participation in Facebook-based brand community, we also propose that brand loyalty can be enhanced by fan participation. Loyalty generally consists of attitudinal and behavioral aspects, which occupies a central place in marketing (Chaudhuri and Holbrook, 2001; Oliver, 1999). Oliver (1999) defines brand loyalty as “a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future ...” (p. 34). Further, he has explored the satisfaction-loyalty conundrum and come to the conclusion that satisfaction is a necessary step in loyalty formation but the latter also can be formed through other mechanisms. For instance, a number of previous research has confirmed that participation leads to a high brand loyalty in the context of virtual community (Casaló et al., 2010; Pai and Tsai, 2011).

In this study, we suggest fan participation has the potential to increase fans' attitudinal and behavioral loyalty via increasing fans' involvement and mutual understanding of the brands. On the one hand, user participation could increase user involvement. That is, users are likely to have beliefs that a new developed system is good, important, and personally relevant when they participate in the development process (Barki and Hartwick, 1989). Involvement refers to the degree of an individual's interest in an object or the centrality of the object to his/her ego structure (Day, 1970). Bennett et al (2005) suggested involvement is an important antecedent of attitudinal loyalty. Olsen (2007) confirms involvement positively affect behavioral loyalty. On the other hand, Auh et al (2007) proposed co-production (i.e., participation) has positive effects on attitudinal and behavioral loyalty because customer participation leads to the increased mutual under-



<Figure 1> Research Model

standing and repeated positive emotional experiences which result in customer satisfaction and loyalty to the brands during the service co-production process. Accordingly, we propose the relationships between fan participation and brand loyalty as follows:

H6: Fan participation is positively related to attitudinal loyalty.

H7: Fan participation is positively related to behavioral loyalty.

On the relationship between attitudinal and behavioral loyalty, Oliver (1999) suggests brand loyalty should be assessed within the traditional consumer attitude structure, which emphasizes the cognition-affect-conation phases. Therefore, brand loyalty is a bi-dimensional construct, which includes both affective commitment and behavioral (re)purchase intention (Chaudhuri and Holbrook, 2001). Attitudinal

loyalty is defined as “the level of commitment of the average consumer toward the brand,” while behavioral loyalty is defined as “the willingness of the average consumer to repurchase the brand” (Chaudhuri and Holbrook, 2001, p. 83). Based on the attitude-behavior relations (Ajzen and Fishbein, 1977; Bagozzi, 1992), we propose attitudinal loyalty is a significant predictor of behavioral loyalty. Thus, we have the following hypothesis:

H8: Attitudinal loyalty is positively related to behavioral loyalty.

We propose our research model as shown in <Figure 1>. We assume that the expectations of benefits could influence fan participation in the context of Facebook brand communities and fan participation could increase brand loyalty consisting of the attitudinal and behavioral components.

IV. Research Methodology

To test the proposed research hypotheses, we used the survey method for data collection. Since our study focuses on fan participation in Facebook brand communities, the unit of analysis is an individual who is a Facebook brand fan, rather than a general Facebook user.

4.1. Measurement Development

Regarding the independent and dependent variables, we adopted and modified previously validated measures to fit our research. Constructs were measured with multiple items based on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). In detail, the operational definitions of constructs are as follows. Brand information refers to the extent to which fans want to acquire useful brand information consistently from the brand (Wallace et al., 2014). Social interaction ties refer to brand fans' desire for familiarity and frequency of communication with their friends (Lin and Lu, 2011). Self-expression refers to brand fans want to express their social selves such as social images, roles, and status to others (Chen et al., 2009). Playfulness is operationalized as the expected enjoyment, interest, fun, and curiosity generated from interacting with the brand content (Kim et al., 2011). Incentive is manipulated as an expected monetary reward, such as give-way, discount, or bonus point (Füller, 2006). Brand loyalty is measured using the attitudinal and purchase-related aspects of brand commitment (Chaudhuri and Holbrook, 2001). The measurement items for constructs are listed in Appendix A.

Next, in order to measure fan participation, we adopted the method of measuring customer participation used in Fang et al (2008) study. Fan partic-

ipation includes two dimensions: breadth and depth. Breadth refers to how broadly fans are involved in "Like," "Comment," or "Share" activities. Depth represents how frequently fans perform the related activities. First, for each one, we asked if the fans were involved (0 = "not involved" and 1 = "involved") in this activity; the sum of the number of activities the fan checked was used to represent the fan participation breadth. Then, if this fan was involved in this activity, we asked about the depth of their involvement in it (the frequency of performing it) using a seven-point Likert scale (e.g., How frequently do you "Like"?). We determined the overall depth of participation across the activities they were involved in by calculating the mean of the completed items. Finally, since breadth is determined as an additive measure (1 to 3), it was converted into a seven-point scale to correspond to the depth measure. Hence, the direction of causality is from the breadth and depth items to fan participation, suggesting fan participation was operationalized as a formative construct.

4.2. Data Collection

The strategy of social media marketing varies across brands, which may lead to a great variation in the level of fan participation. Socialbakers (<http://www.socialbakers.com>) provide free social media statistics including the list of the largest audiences of brands in South Korea. Therefore, we selected the top brands in the Facebook, as ranked by the number of fans surveyed by Socialbakers for the sample because the top brands having the largest fans somewhat indicate they do well in the social media marketing. Regarding the online survey tool, we utilized the global version of Sojump that is one of the leading online self-designed questionnaire service providers in China (<http://www.sojump.com>) to con-

<Table 2> Descriptive Statistics of the Respondents' Characteristics

Category	Item	Frequency	Percentage
Gender	Male	100	49.0
	Female	104	51.0
Age	<20	12	5.9
	20-29	158	77.5
	30-39	25	12.3
	>39	9	4.4
Education	<Undergraduate	5	2.5
	Undergraduate	142	69.6
	Postgraduate or higher	57	27.9
Occupation	Student	122	59.8
	Non-student	82	40.2
Brand	Samsung	62	30.4
	G Market	27	13.2
	CJ OneCard	40	29.6
	SK Telecom	24	11.8
	Hyundai	9	4.4
	LANEIGE	7	3.4
	LOTTERIA	18	8.8
	Lotte Duty Free	4	2.0
	Kloud Beer	13	6.4
Total		204	100

duct an online survey. In detail, we displayed this link on a university website. Simultaneously, we recommended the survey link to the respondents through Facebook and KakaoTalk. We conducted Levene's test to examine the equality of variance. As a result, there was no bias in the data collected through the bulletin board and recommendations.

It is worth noting that the unit of analysis is a Facebook brand fan rather than a general user. For this, we made a clear statement about the research purpose and limited the respondents to Facebook users who have become fans of the listed brands, having the experiences of performing "Like,"

"Comment," or "Share" activities at the beginning of the questionnaire. Since a respondent might be the fan of one or more listed brands, we designed the online survey as a single choice so that only one brand could be chosen, which avoids a generalized response bias (see Majchrzak et al., 2013, p. 460). A total of 229 questionnaires were collected. Out of these, 25 responses were judged as having no integrity or authenticity in some of the answers. As a result, 204 usable responses were used for the analysis. The demographic information of the samples is shown in <Table 2>.

V. Results

PLS-structural equation modeling (SEM) is suitable for the data analysis in our study, in which fan participation is a formative construct and considered as rarely normally distributed. PLS-SEM is robust to this issue because it makes minimal demands in sample size to validate the research model and does not assume that the sample is normally distributed (Chin et al., 2008). In addition, PLS-SEM can handle the model that comprises the reflective and formative constructs.

5.1. Reliability and Validity

We ran Smart PLS 3.0 to conduct a confirmatory factor analysis (CFA) to examine reliability and validity. As shown in <Table 3>, the values of composite reliability (CR) and Cronbach's α for all the reflective constructs were higher than the threshold value of 0.7, suggesting a highly acceptable scale reliability and internal consistency (Fornell and Larcker, 1981; Gefen et al., 2000). Regarding the convergent validity, in addition to the values of composite reliability (CR) that are higher than 0.7, the standardized factor loadings of indicators for each reflective construct are significant and greater than 0.7; the values of average variance extracted (AVE) for all the reflective constructs exceed the recommended minimum of 0.5, which show a satisfactory convergent validity (Fornell and Larcker, 1981; Gefen et al., 2000). In order to check the discriminant validity, according to Fornell and Larcker (1981), we compared the square root of AVE for each construct with the inter-construct correlation estimates. The <Table 4> shows the square roots of AVE (the diagonal elements in bold) for constructs and construct correlation estimates. Each square root of AVE is greater than

its corresponding row and column elements, indicating an adequate discriminant validity.

Regarding the reliability and validity of fan participation, since the fan participation breadth and depth items measured some particular aspects of fan participation, it could not be assessed by conventional statistical techniques that were based on the assumption of the high inter-item correlation (see Homburg et al., 2002, p. 94). We evaluated the bivariate correlation between indicators and construct, by referring to Cenfetelli and Bassellier (2009) and Majchrzak et al., (2013). As a result, the fan participation breadth and depth indicators are significantly correlated to fan participation (correlation coefficients: 0.817, $p < 0.01$; 0.690, $p < 0.01$, respectively), which indicates an acceptable construct validity.

Since some independent variables show relatively high correlations, the potential multicollinearity needs to be checked. According to Tabachnick and Fidell (1996), we calculated the variable inflation factor (VIF) values for antecedent variables, and the results showed that VIF values did not exceed the threshold value of 10.0 (i.e., between 1.343 and 3.039), indicating no problem in multicollinearity.

Self-reported data from a single source may have common method bias (CMB) which can threaten the validity of the study. Therefore, we conducted a statistical test to assess the level of CMB, using Harman's one-factor test (Podsakoff and Organ, 1986). The result of the factor analysis indicated that different scale items in our study did not load into one common factor, suggesting that CMB was not a significant problem in this study. The analysis revealed that there were five latent factors exceeding 1.000 of the eigenvalue to the model and the first factor accounted for less than 50% of the total variance.

<Table 3> Results of Reliability and Convergent Validity Tests

Construct	Indicator	Loading	CR	AVE	Cronbach's α
Brand Information	BI1	0.883	0.911	0.772	0.853
	BI2	0.881			
	BI3	0.873			
Social Interaction Ties	SIT1	0.890	0.958	0.852	0.942
	SIT2	0.924			
	SIT3	0.934			
	SIT4	0.942			
Self-Expression	Se1	0.882	0.953	0.835	0.934
	Se2	0.929			
	Se3	0.927			
	Se4	0.916			
Playfulness	Pla1	0.898	0.940	0.796	0.915
	Pla2	0.879			
	Pla3	0.928			
	Pla4	0.863			
Incentive	Inc1	0.883	0.899	0.692	0.849
	Inc2	0.892			
	Inc3	0.828			
	Inc4	0.713			
Attitudinal Loyalty	AL1	0.935	0.911	0.837	0.807
	AL2	0.894			
Behavioral Loyalty	BL1	0.959	0.962	0.926	0.920
	BL2	0.965			
Fan Participation*	Breadth	NA	NA	NA	NA
	Depth				

Note: Fan participation is a formative construct.

NA: not applicable

5.2. Hypotheses Test

We assessed the structural model to test the hypotheses. <Figure 2> depicts the hypotheses test results. In detail, brand information, social interaction ties, playfulness, and incentive had positive effects on fan participation ($\beta = 0.322$, $t = 4.576$, $p < 0.001$; $\beta = 0.201$, $t = 2.014$, $p < 0.05$; $\beta = 0.275$,

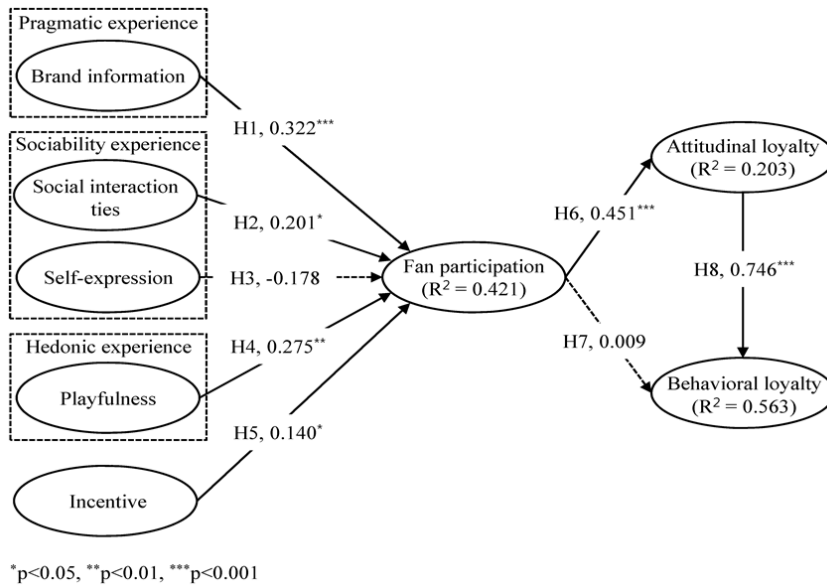
$t = 2.735$, $p < 0.01$; $\beta = 0.140$, $t = 2.211$, $p < 0.05$, respectively), supporting H1, H2, H4, and H5. However, self-expression had no effect on fan participation ($t = -1.835$, $p > 0.05$). Thus, H3 was not supported.

Regarding brand loyalty, fan participation only positively affected attitudinal loyalty ($\beta = 0.451$, $t = 7.822$, $p < 0.001$), and it had no effect on behavioral

<Table 4> Correlation between Constructs and Discriminant Validity

Construct	Mean	S.D.	1	2	3	4	5	6	7	8
1. BI	4.286	1.254	0.879							
2. SIT	3.525	1.437	0.510	0.923						
3. Se	3.020	1.431	0.486	0.704	0.914					
4. Pla	3.686	1.347	0.666	0.667	0.712	0.892				
5. Inc	2.610	1.325	0.392	0.331	0.434	0.472	0.832			
6. FP	3.498	1.190	0.576	0.469	0.376	0.563	0.385	NA		
7. AL	3.377	1.404	0.591	0.409	0.551	0.615	0.458	0.451	0.915	
8. BL	4.343	1.334	0.542	0.341	0.393	0.518	0.379	0.345	0.750	0.962

Note: BI: Brand information, SIT: Social interaction ties, Se: Self-expression, Pla: Playfulness, Inc: Incentive, FP: Fan participation, AL: Attitudinal loyalty, BL: Behavioral loyalty
 The bold numbers in the diagonal row are the square roots of the AVE.



<Figure 2> Hypotheses Test Results

loyalty ($\beta = 0.009, t = 0.156, p > 0.05$), thus, H6 was supported, but H7 was not supported. However, attitudinal loyalty had a positive effect on behavioral loyalty ($\beta = 0.746, t = 21.393, p < 0.001$), supporting H8. Furthermore, Sobel test confirmed that attitudinal loyalty mediates the effect of fan participation on behavioral loyalty ($z = 7.305, p < 0.001$).

Finally, 42 percent ($R^2 = 0.421$) of the variance in fan participation, 20 percent ($R^2 = 0.203$) of the variance in attitudinal loyalty, and 56 percent ($R^2 = 0.563$) of the variance in behavioral loyalty were explained by the related antecedent variables in our research model.

VI. Discussion and Implications

6.1. Interpretation of the Results

This study focuses on fan participation in a social media based brand community. We derived the five expected benefits from Facebook fan community experiences based on motivation theory and social exchange theory, and empirically tested the relationships between the expected benefits and fan participation as well as brand loyalty.

The results showed that brand information, social interaction ties, playfulness, and incentive increased fan participation significantly. These findings are consistent with the existing literature, which suggests that remuneration (economic incentive), information, entertainment, and social interaction are the main motivations for interacting with brands on the Facebook (Tsai and Men, 2013). However, from the empirical results, self-expression had no effect on fan participation. Tsai and Men (2013) also confirmed that the need for expressing oneself is not the key reason for using a Facebook brand page, which is helpful to explain why the expected benefit of self-expression had no effect on fan participation. On the Facebook, most of the brand contents are the firm-generated contents, which is commercial advertising in nature. Therefore, brand fans' Like, Comment, and Share activities may be very different from traditional online contribution behaviors such as improvement with Wikis. Interacting with brand content needs fans' energy and knowledge only at a low level, whereas the latter needs consumers' lots of knowledge and expertise. Accordingly, we interpret that fans participating in these kinds of firms' social marketing activities doesn't contribute to enhancing one's social image and role, and vice versa.

Finally, fan participation was significantly asso-

ciated with attitudinal loyalty but not with behavioral loyalty. No significant relationship between fan participation and behavioral loyalty implies that the active brand fans might not frequently purchase products, which is consistent with Wu, Huang, Zhao, and Hua (2015)'s study. However, attitudinal loyalty could mediate the effect of participation on behavioral loyalty. These are consistent with the results of Auh, Bell, McLeod, and Shih (2007). According to theories of reasoned action, consumers' attitudinal responses can proceed behavioral responses, which suggests the attitudinal loyalty can be influenced by participation, and then affect the behavioral loyalty (Auh et al., 2007).

6.2. Theoretical Implications

This study's findings contribute to future research. First, this study tried to address why fan participation is important for social marketing and to sketch a specific way of approaching this construct. Since understanding how fans behave in social media based virtual brand communities is a good starting point, we have conceptualized the construct of fan participation. This study focused on Facebook's real-world features to define and measure fan participation, which is similar to Zhang, Jansen, and Chowdhury's (2011) research that operationalized business engagement on Twitter on the basis of representing the realistic features of marketing via Twitter. Although social media, such as Facebook, YouTube, Weibo, and KakaoTalk, have different characteristics, they all emphasize user participation. The findings of this study imply that research on consumers' behaviors in social media based communities can adopt our fan participation construct that emphasizes the scope and depth of performing related activities in the specific platforms. Thus, we believe that our study

contributes towards the enrichment of social media based marketing research.

Second, we employed motivation theory and social exchange theory to explain the effects of expected benefits on fan participation based on integrating Nambisan and Nambisan's (2008) virtual customer environment experience and existing studies on motivations for participating in activities in virtual environments. Empirical results suggest that most of the intrinsic and extrinsic motivations can be well utilized as predictors of individuals' community behaviors. Accordingly, in addition to providing monetary reward, the virtual community experience of participants should be well designed and prepared to fulfill their utilitarian, hedonic, and socializing needs (Kohle et al., 2011). In other words, fan experiences in brand communities are critical to the success of social media marketing.

Third, we also found empirical support for fan participation enhancing attitudinal brand loyalty. Brand loyalty enhanced in the context of social media is a key indicator of marketing performance, which is likely to increase the long-term profit (Zhang, et al., 2016). These findings imply that consumer-brand relationships can be promoted via encouraging consumers to actively participating in community activities. This new mechanism of loyalty formation is not related to expectation-confirmation theory widely used in the consumer behavior research, which highlights the social media enabled consumer-brand interactions rather than the product purchase and use. Furthermore, since fan participation can't increase purchase directly, we suggest that the process of social media marketing should be consistent with the cognition-affect-conation framework of consumer behavior (Oliver, 1999). Although fan participation stresses consumers' behaviors in brand communities, it actually provides cues that affect consumers'

brand-related cognitions, and then leads to consumers' affective response (attitudinal loyalty) and behavioral response (purchase) to the brand.

6.3. Practical Implications

On the practical side, we can get a couple of implications from the study findings. First, since Web 2.0 emphasizes users' participation and sharing, companies should utilize SNSs to improve their business performance. Consumer participation plays a core role in co-creation, which can be utilized by the company as a source of competitive advantage (Kotler et al., 2010). This study implies that managers need to choose the appropriate platforms to attract fans and collaborate with them. In other words, marketing managers can utilize the new information communication technologies to enlarge customer contact channels to communicate with their customers. For example, many companies encourage their frontline employees to utilize the SNSs to manage customers' feedback and derive insights from them.

Second, Facebook enables enterprises to create brand homepages and then build virtual brand communities. However, firms should make sure that their brand content is of a high information quality, socializing, and playfulness to improve fans' interactions when they decide to carry out various marketing strategies via Facebook. As any brand contents' popularity rank can be shown clearly in numbers, managers may easily find and benchmark popular brand content to make their brand content have high popularity and be well engaged. Consequently, fans' motivations for participation can be aroused more greatly. In addition, although some prior studies have suggested that monetary incentives could increase consumers' online behavior only in the short run (Fahey et al., 2007; Garnefeld et al., 2012), we

would recommend that providing incentive, such as membership discount, bonus, or coupons, could stimulate brand fans to increase their online community activities and then they are able to receive many benefits from these.

Third, fan management is important for companies' business performance. Companies may have more brand fans via social media than via offline channels. For example, Coca-Cola has more than a hundred million audiences on the Facebook (<http://www.socialbakers.com>). Wu et al. (2015) proposed a ladder of participation including content consumption, content contribution, community collaboration, and community leadership in online communities, in which consumers' purchase frequency are different. Thus, considering the marketing cost, firms should find out the enthusiastic fans who have high brand loyalty based on the level of participation. Firms can monitor their fans' Like, Comment, and Share activities thoroughly through analytical techniques, such as the dashboard and big data, to classify them deeply. However, deep brand fan participation in virtual communities may be accompanied by the exposure of privacy, which is likely to impair their participation intention. Thus, firms need to establish strict regulations to protect fan privacy invasion.

Practitioners charged with social media marketing can derive specific action calls from the study's findings. For example, marketing managers should consider and design a way of social media marketing via social network sites such as Facebook. For this, employees in charge of marketing in firms need to build a Facebook marketing site for their firm and make a dashboard calculating the level of fan participation of each member as a proxy of their loyalty level. Also, they might conduct content analysis to identify the features of feedbacks from members (i.e., knowing whether the feedbacks are positive or neg-

ative). Like these, the mixed approach of the qualitative and quantitative data analytics can be effective for social marketing. Finally, they ought to design the elaborated incentive system for active members crossing-over online and offline. One of the ideas for this implementation may be to issue and give some special gifts or membership cards to active users via physical mail to enhance their loyalty.

6.4. Limitations and Future Research Directions

This study has a couple of limitations. First, this study defined fan participation as the scope and frequency of "Like," "Comment," or "Share" activities on the brand content on Facebook. However, regarding the measurement of fan participation, we acknowledge two shortcomings that are likely to threaten the reliability. First, since the characteristics of three activities are quite different, a simple additive measure of "breadth" dimension fails to consider consumers' internal states when they do these activities. Second, a subjective measure of "depth" dimension may lead to a lack of consensus. Thus we suggest that future research to measure the three activities separately and set a reference criterion of frequency (e.g., the frequency of performing "Like," "Comment," or "Share" activities on the content that are not related to the brand) would overcome this problem.

Second, since there are great numerical differences in "Like," "Comment," or "Share" activities on each brand content, the relationships found in our study might actually underrepresent the true practical relations. Hence, further research needs to use the field data or experimental design to test those relationships in addition to considering some control variables, such as brand content pattern, format, and the number of fans' friends (Sabate et al., 2014).

Third, in terms of the causality issue, the link between fan participation and loyalty might be in debate. Thus, we may consider a moderating role of loyalty in the relationship between motivation and participation as one of the alternative research models.

Fourth, participation in online community activities via SNS may consist of many ways (e.g., UGC, campaign). Furthermore, users' motivations for participating in brand communities need to be examined carefully. For this, we may adopt the mixed methods for the future research to gain more and richer insights (Venkatesh et al., 2016). Future research that

divides participation into various types and then explores the differential effects of their antecedents on consequences by types would be interesting.

Finally, fan participation can enhance firms' social marketing performance. However, this study only confirmed its effects on the brand loyalty aspect. Lipsman et al (2012) suggested that the target audiences of Facebook marketing include the fans and the potential users. Therefore, future research should investigate whether and how fan participation influences other target audiences. This would contribute to developing the process and outcomes of social media marketing.

<References>

- [1] Ajzen, I., and Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84(5), 888-918.
- [2] Andreasen, A. (1995). *Marketing social change: Changing behavior to promote health, social development, and the environment*. San Francisco: Jossey-Bass.
- [3] Auh, S., Bell, S. J., McLeod, C. S., and Shih, E. (2007). Co-production and customer loyalty in financial services. *Journal of Retailing*, 83(3), 359-370.
- [4] Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly*, 55(2), 178-204.
- [5] Bareket-Bojmel, L., Moran, S., and Shahar, G. (2016). Strategic self-presentation on Facebook: Personal motives and audience response to online behavior. *Computers in Human Behavior*, 55(February), 788-795.
- [6] Barki, H., and Hartwick, J. (1989). Rethinking the concept of user involvement. *MIS Quarterly*, 13(1), 53-63.
- [7] Barki, H., and Hartwick, J. (1994). Measuring user participation, user involvement, and user attitude. *MIS Quarterly*, 18(1), 59-82.
- [8] Basak, E., and Calisir, F. (2015). An empirical study on factors affecting continuance intention of using Facebook. *Computers in Human Behavior*, 48(July), 181-189.
- [9] Bennett, R., Härtel, C. E., and McColl-Kennedy, J. R. (2005). Experience as a moderator of involvement and satisfaction on brand loyalty in a business-to-business setting 02-314R. *Industrial Marketing Management*, 34(1), 97-107.
- [10] Carroll, B. A., and Ahuvia, A. C. (2006). Some antecedents and outcomes of brand love. *Marketing Letters*, 17(2), 79-89.
- [11] Casaló, L. V., Flavián, C., and Guinaliú, M. (2010). Relationship quality, community promotion and brand loyalty in virtual communities: Evidence from free software communities. *International Journal of Information Management*, 30(4), 357-367.
- [12] Cenfetelli, R. T., and Bassellier, G. (2009). Interpretation of formative measurement in information systems research. *MIS Quarterly*, 33(4), 689-707.
- [13] Chan, K. W., Yim, C. K., and Lam, S. S. K. (2010). Is customer participation in value creation a

- double-edged sword? Evidence from professional financial services across cultures. *Journal of Marketing*, 74(3), 48-64.
- [14] Chaudhuri, A., and Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- [15] Chen, S., Langner, C., and Mendoza-Denton, R. (2009). When dispositional and role power fit: Implication for self-expression and self-other congruence. *Journal of Personality and Social Psychology*, 96(3), 710-727.
- [16] Chi, H.-H. (2011). Interactive digital advertising vs. virtual brand community: Exploratory study of user motivation and social media marketing responses in Taiwan. *Journal of Interactive Advertising*, 12(1), 44-61.
- [17] Chin, W., Peterson, R., and Brown, S. (2008). Structural equation modeling in marketing: Some practical reminders. *Journal of Marketing Theory and Practice*, 16(4), 287-298.
- [18] Chiu, C. M., Hsu, M. H., and Wang, T. G. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems*, 42(2), 1872-1888.
- [19] Dabholkar, P. A. (2015). How to improve perceived service quality by increasing customer participation in *Proceedings of the 1990 Academy of Marketing Science (AMS) Annual Conference*, 483-487.
- [20] Day, G. S. (1970). *Buyer attitudes and brand choice behavior*. New York: Free Press.
- [21] Deci, E. L., and Ryan, R. M. (2002). *Handbook of self-determination research*. University Rochester Press.
- [22] Dutta, S. (2010). What's your personal social media strategy? *Harvard Business Review*, 88(11), 127-130.
- [23] Facebook. (2015). Announcing 2 million advertisers on Facebook and a new app to manage your ads on the go. <<http://newsroom.fb.com/news/2015/02/announcing-2-million-advertisers-on-facebook-and-a-new-app-to-manage-your-ads-on-the-go/>> (24.2.2015).
- [24] Fahey, R., Vasconcedos, A. C., and Ellis, D. (2007). The impact of rewards within communities of practice: A study of the SAP online global community. *Knowledge Management Research and Practice*, 5(3), 186-198.
- [25] Fang, E., Palmatier, R. W., and Evans, K. R. (2008). Influence of customer participation on creating and sharing of new product value. *Journal of the Academy of Marketing Science*, 36(3), 322-336.
- [26] Fornell, C., and Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.
- [27] Fuchs, C., Prandelli, E., and Schreier, M. (2010). The psychological effects of empowerment strategies on consumers' product demand. *Journal of Marketing*, 74(1), 65-79.
- [28] Fuller, J. (2006). Why consumers engage in virtual new product developments initiated by producers. *Advances in Consumer Research*, 33(1), 639-646.
- [29] Fuller, J., Mühlbacher, H., Matzler, K., and Jaweck, G. (2009). Consumer empowerment through internet-based co-creation. *Journal of Management Information Systems*, 26(3), 71-102.
- [30] Garnefeld, I., Iseke, A., and Krebs, A. (2012). Explicit incentives in online communities: Boon or bane? *International Journal of Electronic Commerce*, 17(1), 11-37.
- [31] Ge, H. (2013). News Feed FYI: More relevant ads in news feed. <<http://newsroom.fb.com/news/2013/09/news-feed-fyi-more-relevant-ads-in-news-feed/>> (27.9.2013).
- [32] Gefen, D., and Ridings, C. M. (2002). Implementation team responsiveness and user evaluation of customer relationship management: A quasi-experimental design study of social exchange theory. *Journal of Management Information Systems*, 19(1), 47-69.
- [33] Gefen, D., Straub, D. W., and Boudreau, M. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications*

- of the Association for Information Systems, 4(7), 2-76.
- [34] Hamari, J., Sjöklint, M., and Ukkonen, A. (2016). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67(9), 2047-2059.
- [35] Ho, H., and Ganesan, S. (2013). Does knowledge base compatibility help or hurt knowledge sharing between suppliers in competition? The role of customer participation. *Journal of Marketing*, 77(6), 91-107.
- [36] Homburg, C., Hoyer, W. D., and Fassmacht, M. (2002). Service orientation of a retailer's business strategy: Dimensions, antecedents, and performance outcomes. *Journal of Marketing*, 66(4), 86-101.
- [37] Jang, H., Olfman, L., Ko, I., Koh, J., and Kim, K. (2008). The influence of on-line brand community characteristics on community commitment and brand loyalty. *International Journal of Electronic Commerce*, 12(3), 57-80.
- [38] Kanfer, R. (1990). *Motivation theory and industrial organizational psychology in Handbook of industrial and organizational psychology (1) Theory in industrial and organizational psychology*, M. D. Dunnette and L. Hough (Eds.), Palo Alto, CA: Consulting Psychologists Press, 75-170.
- [39] Kaur, P., Dhir, A., and Rajala, R. (2016). Assessing flow experience in social networking site based brand communities. *Computers in Human Behavior*, 64(November), 217-225.
- [40] Kim, H.-W., Gupta, S., and Koh, J. (2011). Investigating the intention to purchase digital items in social networking communities: A customer value perspective. *Information & Management*, 48(6), 228-234.
- [41] Koh, J., Kim, Y.-G., Butler, B., and Bock, G. W. (2007). Encouraging participation in virtual communities. *Communication of the ACM*, 50(2), 68-73.
- [42] Kohler, T., Fueller, J., Matzler, K., and Stieger, D., (2011). Co-creation in virtual worlds: The design of the user experience. *MIS Quarterly*, 35(3), 773-788.
- [43] Kordzadeh, N., Liu, C. Z., Au, Y. A., and Clark, J. G. (2014). A multilevel investigation of participation within virtual health communities. *Communications of the Association for Information Systems*, 34(26), 493-512.
- [44] Kosonen, M., Gan, C., Vanhala, M., and Blomqvist, K. (2014). User motivation and knowledge sharing in idea crowdsourcing. *International Journal of Innovation Management*, 18(5), 1-23.
- [45] Kotler, P., Kartajaya, H., and Setiawan, I. (2010). *Marketing 3.0*. John Wiley and Sons.
- [46] Ku, Y.-C., Chen, R., and Zhang, H. (2013). Why do users continue using social network sites? An exploratory study of members in the United States and Taiwan. *Information & Management*, 50(7), 571-581.
- [47] Laudon, K. C., and Traver, C. G. (2014). *E-commerce 2014 business, technology, society*. 10th edition, Pearson.
- [48] Li, Y., and Wang, K. (2015). Marketer-generated content sharing among social broadcasting users: Effects of intrinsic motivations, social capital and the moderating role of prevention focus. *Asia Pacific Journal of Information Systems*, 25(4), 719-745.
- [49] Lin, K. Y., and Lu, H. P. (2011). Intention to continue using Facebook fan pages from the perspective of social capital theory. *Cyberpsychology, Behavior, and Social Networking*, 14(10), 565-570.
- [50] Lipsman, A., Mudd, G., Rich, M., and Bruich, M. (2012). The power of "like": How brands reach (and influence) fans through social-media marketing. *Journal of Advertising Research*, 52(1), 40-52.
- [51] MacInnis, D. J., Moorman, C., and Jaworski, B. J. (1991). Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information from ads. *Journal of Marketing*, 55(4), 32-53.
- [52] Majchrzak, A., Wagner, C., and Yates, D. (2013). The impact of shaping on knowledge reuse for organizational improvement with Wikis. *MIS Quarterly*, 37(2), 455-469.
- [53] Mehdizadeh, S. (2010). Self-presentation 2.0:

- Narcissism and self-esteem on Facebook. *CyberPsychology, Behavior and Social Networking*, 13(4), 357-364.
- [54] Moon, J.-W., and Kim, Y.-G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management*, 38(4), 217-230.
- [55] Munnukka, J., Karjaluoto, H., and Tikkanen, A. (2015). Are Facebook brand community members truly loyal to the brand? *Computers in Human Behavior*, 51(October), 429-439.
- [56] Nahapiet, J., and Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review*, 23(2), 242-266.
- [57] Nambisan, S., and Nambisan, P. (2008). How to profit from a better 'virtual customer environment'. *MIT Sloan Management Review*, 49(3), 53-61.
- [58] Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(4), 33-44.
- [59] Olsen, S. O. (2007). Repurchase loyalty: The role of involvement and satisfaction. *Psychology & Marketing*, 24(4), 315-341.
- [60] Owens, E., and Vickrey, D. (2014). News Feed FYI: Showing more timely stories from friends and pages. <<http://newsroom.fb.com/news/2014/09/news-feed-fyi-showing-more-timely-stories-from-friends-and-pages/>> (18.9.2014).
- [61] Pai, P. Y., and Tsai, H. T. (2011). How virtual community participation influences consumer loyalty intentions in online shopping contexts: An investigation of mediating factors. *Behavior and Information Technology*, 30(5), 603-615.
- [62] Park, J. W., Cho, E. Y., and Kim, H.-W. (2016). Examining context-specific social media marketing strategies. *Asia Pacific Journal of Information Systems*, 26(1), 143-162.
- [63] Pera, R., Occhiocupo, N., and Clarke, J. (2016). Motives and resources for value co-creation in a multi-stakeholder ecosystem: A managerial perspective. *Journal of Business Research*, 69(10), 4033-4041.
- [64] Podsakoff, P. M., and Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.
- [65] Reinecke, L., Vorderer, P., and Knop, K. (2014). Entertainment 2.0? The role of intrinsic and extrinsic need satisfaction for the enjoyment of Facebook use. *Journal of Communication*, 64(3), 417-438.
- [66] Roberts, J. A., Hann, I., and Slaughter, S. A. (2006). Understanding the motivations, participation, and performance of open source software developers: A longitudinal study of the apache projects. *Management Science*, 52(7), 984-999.
- [67] Ryu, S., and Kim, Y. G. (2016). A typology of crowdfunding sponsors: Birds of a feather flock together? *Electronic Commerce Research and Applications*, 16(March), 43-54.
- [68] Sabate, F., Berbegal-Mirabent, J., Cañabate, A., and Lebherz, P. R. (2014). Factors influencing popularity of branded content in Facebook fan pages. *European Management Journal*, 32(6), 1001-1011.
- [69] Tabachnick, B. G., and Fidell, L. S. (1996). Using multivariate statistics (3rd ed.), HarperCollins, New York.
- [70] Tsai, W. H. S., and Men, L. R. (2013). Motivations and antecedents of consumer engagement with brand pages on social networking sites. *Journal of Interactive Advertising*, 13(2), 76-87.
- [71] Vargo, S. L., Maglio, P. P., and Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26(3), 145-152.
- [72] Venkatesh, V., Brown, S. A., and Sullivan, Y. W. (2016). Guidelines for conducting mixed-methods research: An extension and illustration. *Journal of the Association for Information Systems*, 17(7), 435-495.
- [73] Vroom, V., and Jago, A. G. (1988). *The new leadership: Managing participation in organizations*. Prentice Hall, Englewood Cliffs, NJ.
- [74] Wallace, E., Buil, I., de Chernatony, L., and Hogan, M. (2014). Who "likes" you ... and why? A typology of Facebook fans. *Journal of Advertising Research*,

- 54(1), 92-109.
- [75] Wu, J., Huang, L., Zhao, J. L., and Hua, Z. (2015). The deeper, the better? Effect of online brand community activity on customer purchase frequency. *Information & Management*, 52(7), 813-823.
- [76] Wu, J., and Lu, X. (2013). Effects of extrinsic and intrinsic motivators on using utilitarian, hedonic, and dual-purposed information systems: A meta-analysis. *Journal of the Association for Information Systems*, 14(3), 153-191.
- [77] Yen, H. J. R., Hsu, S. H. Y., and Huang, C. Y. (2011). Good soldiers on the web: Understanding the drivers of participation in online communities of consumption. *International Journal of Electronic Commerce*, 15(4), 89-120.
- [78] Zhang, H., Lu, Y., Wang, B., and Wu, S. (2015). The impacts of technological environments and co-creation experiences on customer participation. *Information & Management*, 52(4), 468-482.
- [79] Zhang, K. Z., Benyoucef, M., and Zhao, S. J. (2016). Building brand loyalty in social commerce: The case of brand microblogs. *Electronic Commerce Research and Applications*, 15(January), 14-25.
- [80] Zhang, M., Jansen, B. J., and Chowdhury, A. (2011). Business engagement on Twitter: A path analysis. *Electronic Markets*, 21(3), 161-175.
- [81] Zwass, V. (2010). Co-creation: Toward a taxonomy and an integrated research perspective. *International Journal of Electronic Commerce*, 15(1), 11-48.

<Appendix A> Measurement of Research Variables

Constructs	Items	Sources
Brand information	<i>I decided to perform these activities because...</i> 1. I want to know more information about this brand. (BI1) 2. The updates from this brand on my News Feed keep me up to date. (BI2) 3. The information from this brand on my News Feed is useful to me. (BI3)	Wallace et al. (2014)
Social interaction ties	<i>I decided to perform these activities because...</i> 1. I want to engage in a high level of interaction with other Facebook friends. (SIT1) 2. I want to have frequent communications with other Facebook friends. (SIT2) 3. I want to maintain close social relationships with other Facebook friends. (SIT3) 4. I want to spend considerable time interacting with other Facebook friends. (SIT4)	Lin and Lu (2011)
Self-expression	<i>I decided to perform these activities because...</i> 1. I think they contribute to my image. (Se1) 2. I think they add to the social "role" I play. (Se2) 3. I think they have a positive impact on what other Facebook friends think of me. (Se3) 4. I think they improve the way other Facebook friends view me. (Se4)	Carroll and Ahuvia (2006); Wallace et al. (2014)
Playfulness	<i>I decided to perform these activities because...</i> 1. They are fun. (Pla1) 2. I think that they stimulate my curiosity. (Pla2) 3. I find that they provide me with a lot of pleasure. (Pla3) 4. I feel relaxed. (Pla4)	Kim et al. (2011)
Incentive	<i>I decided to perform these activities because...</i> 1. I want to receive monetary compensation. (Inc1) 2. I want to receive compensation in return. (Inc2) 3. I want to get paid for it. (Inc3) 4. I want to receive a discount. (Inc4)	Füller (2006); Wallace et al. (2014)
Attitudinal loyalty	1. I am committed to this brand. (AL1) 2. I would be willing to pay a higher price for this brand over other brands. (AL2)	Chaudhuri and Holbrook (2001)
Behavioral loyalty	1. I will buy this brand the next time I buy (product name). (BL1) 2. I intend to keep purchasing this brand. (BL2)	Chaudhuri and Holbrook (2001)

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