사회적 자본, 지식 품질 그리고
온라인 브랜드 커뮤니티의 성공

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Social Capital, Knowledge Quality, and Online Brand
Community Success

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■ Abstract ■

   Online brand communities have become a major component of marketing strategy given that these communities encourage participation and share the culture of Web 2.0 core concepts to Internet users. This study investigated the effects of social capital and knowledge quality on the success of online brand communities. A research model suggests that trust among members and the identification derived from social capital theory and knowledge quality influence individual community participation; knowledge quality also influences brand trust. In turn, community participation and brand trust develop brand loyalty. The model was empirically analyzed using structural equation modeling with data from online brand community members in Korea. The results indicate that identification and knowledge quality significantly affects brand trust and brand loyalty through community participation. This study provides a basis for developing a success model for online brand communities. Also, this study identifies a new role of knowledge quality in an online brand community context.

Keyword : Online Brand Community, Social Capital, Knowledge Quality, Brand Trust, Brand
          Loyalty, Identification, Community Participation

1. Introduction

The rapid popularization and development of the Internet has brought forth many changes in the marketing field. Various marketing strategies are developed by companies to take advantage of the Internet's encouragement of participation and sharing of the culture of core Web 2.0 concepts to users. Among these strategies, one of the most notable is using online communities (Kim et al., 2009). Establishing communities related to their product brands enables enterprises to increase customer trust and loyalty at low cost (Wirtz et al., 2013).

An online brand community refers to a cyberspace that targets a specific brand and enables customers to interact through the sharing of experience with the brand and other interests. Online brand communities have recently been used by companies as a means of brand marketing for their products (Jang et al., 2008). Successful online brand communities encourage positive attitudes toward a brand, build brand trust and customer loyalty, and ultimately maximize brand equity (Casaló et al., 2008; Laroche, 2013; Wirtz et al., 2013); thus, enterprises currently devote considerable attention to marketing via online brand communities (Hur et al., 2011).

Despite the practical importance of online brand communities, however, little integrative research has been conducted on what factors motivate users to participate in online brand communities and how community participation affects brand success. Most previous studies identify the determinants that enhance member participation or propose factors that affect brand success variables in an online community, such as brand loyalty. The separate research streams do not provide an integrated view for the effective operation of online brand communities. Given this backdrop, the present work proposes an integrated model of online brand community success, in which trust among members and the identification derived from social capital theory and knowledge quality as a usability factor influence individual's community participation, in turn the community participation and knowledge quality influence brand trust and brand loyalty, and empirically tests the model. The results of this research can serve as strategic guidelines for the successful operation of online brand communities.

2. Theoretical Background and Hypothesis Development

2.1 Online Brand Community Success

Brand community researchers agree that one of the main functions of a brand community is to build customer loyalty to a brand (Laroche et al., 2012). Brand loyalty is defined as "a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior" (Oliver, 1999, p.34; Chaudhuri and Holbrook, 2001, p.82). The concept of brand loyalty is suggested as the ultimate dependent variable in brand marketing literature because enhancing such loyalty enables companies to earn more profits through reducing service costs, price premiums, and positive word-of-mouth (Gounaris and Stathakopoulos, 2004). In a brand community context, therefore, a number of studies have been performed to identify

the determinants of brand loyalty (Laroche et al., 2012; Ahn and Kim, 2006). In the current work, we establish brand loyalty as a success variable of online brand communities.

Trust, an element that determines the nature of partner relationships in a relationship marketing context (Dwyer et al., 1987; Moorman et al., 1992; Morgan and Hunt, 1994), has emerged as an important variable in brand literature (e.g., Chaudhuri and Holbrook, 2001; Laroche et al., 2012). It is traditionally defined as a confident positive expectation regarding the behavior of others in situations that involve risk (Boon and Holmes, 1991; Lewicki et al., 1998). Trust is critical to minimizing uncertainty (Gefen, 2000) and building long-term relationships (Morgan and Hunt, 1994). Specifically in relation to marketing, brand trust is defined as "the confident expectations of the brand's reliability and intentions in situations entailing risk to the consumer" (Delgado-Ballester et al., 2003); this trust builds brand loyalty by creating highly valued exchange relationships (Morgan and Hunt, 1994; Chaudhuri and Holbrook, 2001; Laroche et al., 2012) and by reducing the uncertainty that gives rise to customer doubts in their trusted brands (Laroche et al., 2012). Hiscock (2001, p.32) argues that "the ultimate goal of marketing is to generate an intense bond between the consumer and the brand, and the main ingredient of this bond is trust." We therefore propose brand trust as another success variable of online brand communities and establish the following hypothesis :

H1 : Brand trust positively affects brand loyalty.

In online community studies, community participation has been treated as a dependent varia-

ble (e.g., Koh and Kim, 2004; Algesheimer et al., 2005; Casaló et al., 2008). Community participation can be defined as users' voluntary behaviors as community members; such behaviors include providing valuable messages for others or replying to requests from help-seeking community members (Koh and Kim, 2004), participating in joint activities, and acting volitionally in ways that the community endorses and that enhance its value for themselves and others (Algesheimer et al., 2005). Because participation in the activities of online communities develops group cohesion, Casaló et al. (2008) argues that member participation is not only a key factor in ensuring community success, but also a crucial element in guaranteeing community survival. Algesheimer et al. (2005) contends that level of participation considerably sustains brand communities. Accordingly, we propose community participation as the third success variable of online brand communities.

A number of studies suggest that participation in a brand community fosters consumer loyalty to the brand around which the community is developed (e.g., Koh and Kim, 2004; Casaló et al., 2007; Wirtz et al., 2013). Koh and Kim (2004) indicate that enterprises can create and strengthen brand loyalty in community members who are committed to an online community because these individuals are frequently exposed to the various promotional services and events launched by the community provider. Zhou et al. (2012) affirms that committed participation and interactions among members reinforce consumers' brand experience and value, enhancing brand loyalty. In accordance with these considerations, we propose :

H2 : Community participation positively affects
      brand loyalty.

Casaló et al. (2007) explain that because mem-
bers' knowledge regarding a brand and its prod-
ucts increases through the activities carried out
in online brand communities (e.g., interactions
among community members), members that more
actively participate become more familiar with
brand products. According to trust literature, fa-
miliarity is crucial to creating trust (Gefen, 2000).
During participation in community activities, the
information presented by online brand commun-
ity providers (i.e., through communication activ-
ities) fosters trust because such information fa-
cilitates dispute resolution, as well as the align-
ment of perceptions and expectations (Morgan
and Hunt, 1994). Thus, we propose the hypoth-
esis :

H3 : Community participation positively affects
      brand trust.

2.2 Social Capital in a Community

Social capital refers to "a resource that is de-
rived from the relationships among individuals,
organizations, communities, or societies" (Bolino
et al., 2002, p.506). It facilitates interactions among
organizational members and promotes a variety
of pro-social behaviors in a community (Chow
and Chan, 2008); thus, social capital has been
frequently used as a theoretical framework in
online community studies that explore positive
individual behaviors in a community context
(Yoon and Wang, 2011). Although a variety of
social capital variables (e.g., social interaction ties,
trust, commitment, reciprocity, identification, and

shared goals) have been proposed given the
multi-faceted nature of social capital, the present
study employs only trust among members and
identification because these reflect the core con-
cepts of interpersonal relationships and have
been frequently used in social capital studies
(Chiu et al., 2006).

As a core variable of social capital, trust is
key to inspiring the willingness of network ac-
tors to share resources. Nahapiet and Ghoshal
(1998) suggest that when trust exists among
people, they are more inclined to share their tho-
ughts with one another and cooperate in shared
activities. According to Inkpen and Tsang (2005),
an atmosphere of trust contributes to knowledge
exchange among committed exchange partners
because actors are not compelled to protect them-
selves from the opportunistic behavior of others.
Chiu et al. (2006) supports the aforementioned
ideas, stating that a trustworthy actor is more
likely to be a popular exchange partner for other
actors in a network. With these considerations
in mind, we propose that :

H4 : Trust among members positively affects
      community participation.

Identification refers to "the process through
which individuals see themselves as one with
another person or group of people" (Nahapiet and
Ghoshal, 1998, p.256). It is a condition wherein
the interests of individuals merge with those of
a group, thereby creating an identity that is based
on these interests (Kankanhalli et al., 2005). Ac-
cording to Kankanhalli et al. (2005), identifica-
tion provides a context for pro-social behavior
by stimulating concern for collective interests,
which integrate with an individual's own pursuits.

Algesheimer et al. (2005) defines identification as a process in which consumers agree with a community's norms, traditions, rituals, and objectives, and accordingly promotes its wellbeing. Chiu et al. (2006) declare that emotional identification fosters citizenship behaviors in a group setting and effectively explains individuals' willingness to maintain committed relationships with online communities. Several other studies have shown that identification significantly affects positive member behaviors, such as knowledge sharing (Yoon and Wang, 2011). These ideas prompt the formulation of the following hypothesis :

H5 : Identification positively affects community participation.

In an online community environment, trust among members enables and determines the nature of interpersonal relationships (Lee et al., 2006); it therefore serves as a framework for community identification. Lin (2008) asserts that when participants trust other community members, they are more inclined to participate and feel a sense of belonging. Pai and Tsai (2011) confirm that an atmosphere of trust is an important mechanism that encourages the development of community identification. Therefore, we propose the following :

H6 : Trust among members positively affects identification.

2.3 Knowledge Quality in a Community

In online community literature, knowledge quality is regarded as a dependent variable (e.g. Chiu et al., 2006, Park and Oh, 2014), but in knowledge management literature, it is an important factor in system use because it advances problem resolution and innovation knowledge, as well as decision making in work (Tongchuay and Praneetpolgrang, 2008). In an online brand community context, knowledge quality can be regarded as the benefits perceived by online brand community participants (Wirtz et al., 2013). Perceived benefit refers to the perception of positive consequences that are caused by a specific behavior (Springer Reference, 2013). Social cognitive theory holds that individuals are more likely to engage in behavior for which they expect favorable results. Other studies have supported this assertion (Chiu et al., 2006). Useful, accurate, and up-to-date knowledge shared in an online brand community therefore facilitates member participation, leading us to propose the hypothesis :

H7 : Knowledge quality positively affects community participation.

Knowledge quality is a primary factor that enhances learning, especially if it is useful, up-to-date, and accurate (Dholakia et al., 2009). In an established online brand community, brand-related and current knowledge facilitates members' learning about a brand (Wirtz et al., 2013). Brand familiarity ultimately forms trust in the brand (Gefen, 2000). We therefore propose :

H8 : Knowledge quality positively affects brand trust.

2.4 Research Model

The model for this research <Figure 1> is
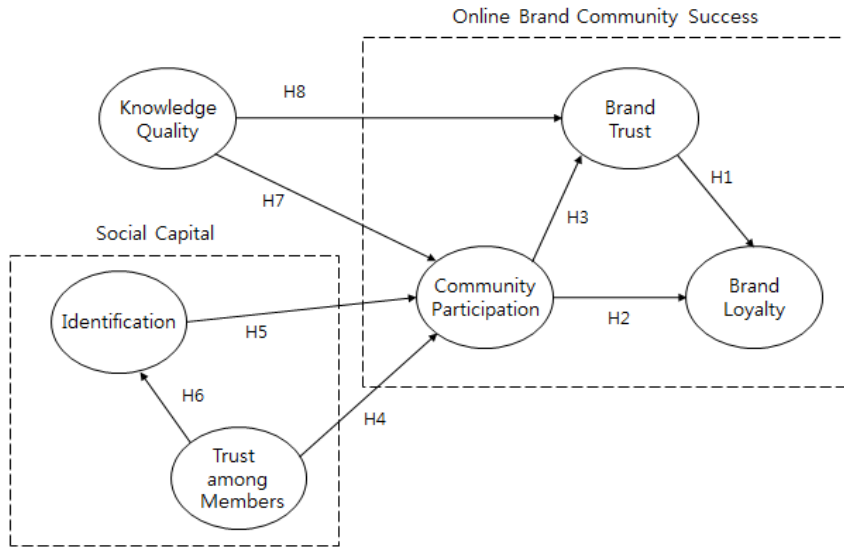
<Figure 1> Research Model

based on social capital theory, knowledge quality, and success variables for online brand communities (i.e., community participation, brand trust, and brand loyalty). The research model posits that trust among members and the identification derived from social capital theory and knowledge quality influence individual community participation, and that knowledge quality influences brand trust. In turn, community participation and brand trust influence brand loyalty.

3. Research Methodology

3.1 Data collection

Surveys were administered to a convenience sample of university and MBA students in South Korea. We explained the purpose of the study and invited the students to participate. To collect diverse real data, we first identified 15 popular online brand communities in Korea through portal sites and then asked the students to join one

of the brand communities. About four months later, we conducted a survey with the participants. A total of 135 usable questionnaires were obtained. The sample comprises 93 males and 42 females; 86 percent of the respondents were university students below the age of 30. The

<Table 1> Descriptive Statistics of Respondents' Characteristics

Measure	Value	Frequency(%)
Gender	Male	93(68.9)
	Female	42(31.1)
Age	Younger	2(1.48)
	20~29	114(84.44)
	30~34	8(5.93)
	40~49	4(2.96)
	Older	7(5.19)
Member history	Less than 1 years	67(49.63)
	1~3	47(34.81)
	3~5	13(9.63)
	More than 5	8(5.93)
Frequency of visiting the community	>= 1/day	15(11.11)
	>= 1/week	45(33.33)
	>= 1/month	52(38.52)
	< 1/month	23(17.04)

detailed descriptive statistics related to the respondents' are shown in <Table 1>.

3.2 Measurements

Before developing the measurements we have defined the constructs in the research model as shown in <Table 2>. The questionnaire used for data collection contains scales for measuring the various constructs of the research model. The measurements for the trust among members, identification, and knowledge quality constructs were adapted from Chiu et al. (2006). The measurements for the community participation construct were adapted from Koh and Kim (2004), and those for the brand trust and brand loyalty constructs were adapted from Gefen (2002), Yoon and Kim (2009), Delgado-Ballester et al. (2003), and Laroche et al. (2013). All the questionnaire items <Appendix A> were rated using a seven-point Likert scale, with responses ranging from "strongly disagree" to "strongly agree."

4. Results

The Structural Equation Modeling (SEM) approach was used to validate the research model. Partial Least Squares (PLS-Graph Version 3.0) was employed to perform the analysis. PLS employs a component-based approach for estimation, thus it places less restrictions on sample size and residual distributions than covariance-based approaches such as LISREL and AMOS (Chin, 1998). Accordingly, we chose the PLS to accommodate the presence of a small amount of sample.

4.1 Reliability and Validity of Measurement Items

Partial Least Squares (PLS) can test the convergent and the discriminant validity of the constructs. In a Confirmatory Factor Analysis (CFA), by PLS, convergent validity is shown when each of the measurement items loads significantly, with the p-value of its t-value well within the 0.05 level, on its assigned construct (Gefen and Straub, 2005). <Table 3> shows the factor loadings of the measurement items and t-values.

All t-values in the <Table 3> are above 1.96. The factor loadings of all items also loaded highly (above 0.80). This demonstrates convergent validity of all the measurement items for the constructs.

Discriminant validity is shown when the following two things occur : (1) measurement items load more strongly on their assigned construct than on the other constructs in a CFA, and (2)

<Table 2> Operational Definition of the Variables in the Research Model

Construct	Definition
Trust among members	the trustworthy relationships between members in an online brand community
Identification	a sense of belonging toward an online brand community
Knowledge Quality	the benefits perceived by online brand community participants
Community Participation	members' voluntary behaviors of an online brand community to enhance its value
Brand Trust	the confident expectations of the brand's reliability
Brand Loyalty	a commitment to use a brand consistently in the future

〈Table 3〉 Results of Confirmatory Factor Analysis

Construct		Construct loading scores						t-value
		1)	2)	3)	4)	5)	6)	
Trust among members	TM1	**0.89**	0.70	0.71	0.46	0.62	0.58	39.28
	TM2	**0.81**	0.59	0.57	0.43	0.50	0.53	17.74
	TM3	**0.89**	0.67	0.72	0.51	0.66	0.61	32.90
Identification	ID1	0.67	**0.90**	0.55	0.72	0.56	0.63	48.96
	ID2	0.66	**0.92**	0.57	0.69	0.62	0.62	69.40
	ID3	0.71	**0.82**	0.77	0.53	0.77	0.67	21.52
	ID4	0.65	**0.89**	0.63	0.74	0.61	0.67	46.08
Knowledge Quality	KQ1	0.56	0.61	**0.81**	0.37	0.64	0.55	20.74
	KQ2	0.61	0.58	**0.86**	0.37	0.58	0.46	23.89
	KQ3	0.67	0.64	**0.89**	0.52	0.72	0.66	43.55
	KQ4	0.70	0.60	**0.85**	0.58	0.65	0.67	33.27
	KQ5	0.70	0.63	**0.90**	0.49	0.71	0.69	44.87
	KQ6	0.75	0.61	**0.87**	0.45	0.70	0.66	28.89
Community Participation	CP1	0.56	0.77	0.50	**0.91**	0.52	0.60	70.28
	CP2	0.49	0.70	0.44	**0.91**	0.48	0.60	46.65
	CP3	0.36	0.60	0.41	**0.87**	0.45	0.51	32.40
	CP4	0.51	0.61	0.60	**0.82**	0.57	0.58	24.13
	CP5	0.45	0.66	0.42	**0.89**	0.48	0.61	45.98
Brand Trust	BT1	0.65	0.68	0.71	0.56	**0.93**	0.80	75.83
	BT2	0.60	0.69	0.68	0.59	**0.92**	0.83	52.70
	BT3	0.65	0.63	0.75	0.44	**0.95**	0.84	95.68
	BT4	0.68	0.69	0.76	0.54	**0.95**	0.85	93.63
Brand Loyalty	BL1	0.59	0.62	0.57	0.61	0.74	**0.86**	25.21
	BL2	0.60	0.67	0.66	0.63	0.83	**0.94**	96.77
	BL3	0.59	0.66	0.67	0.58	0.83	**0.93**	49.53
	BL4	0.61	0.67	0.70	0.61	0.83	**0.94**	79.66
	BL5	0.65	0.73	0.69	0.59	0.83	**0.91**	47.10

when the square root of the Average Variance Extracted (AVE) of each construct is larger than its correlations with the other constructs (Gefen and Straub, 2005).

As shown in 〈Table 3〉, all the measurement items loaded considerably stronger on their respective factor than on the other constructs. 〈Table 4〉 shows the square root of the AVE and the inter-construct correlations. Comparisons of the correlation with the square root of the AVE show that all correlations between the two constructs are less than the square root of the AVE of both constructs.

To assess the reliability of a measurement item, the study computed a composite construct reliability coefficient, as shown in 〈Table 4.〉 Composite reliabilities ranged from 0.90 (for trust among members) to 0.97 (for brand Trust), which exceeded the recommended level of 0.60 (Bagozzi and Yi, 1988). The AVE ranged from 0.75 (for trust among members and knowledge quality) to 0.88 (for brand Trust), which also exceeded the recommended level of 0.50 (Fornell and Larcker, 1981). The results, therefore, demonstrate a reasonable reliability level for the measured items.
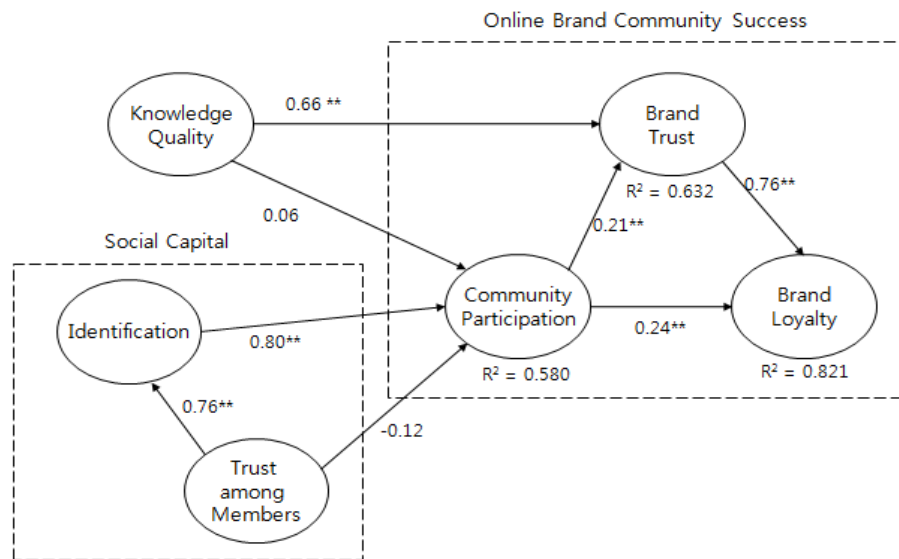
〈Table 4〉 Average Variance Extracted and Correlation Matrix

Construct	Factor						CCR*	AVE**
	1)	2)	3)	4)	5)	6)		
Trust among members	(0.86)						0.90	0.75
Identification	0.76	(0.89)					0.94	0.78
Knowledge Quality	0.78	0.71	(0.86)				0.95	0.75
Community Participation	0.54	0.76	0.54	(0.88)			0.95	0.78
Brand Trust	0.69	0.72	0.77	0.57	(0.94)		0.97	0.88
Brand Loyalty	0.66	0.73	0.72	0.66	0.89	(0.92)	0.96	0.84

Note) * CCR : Composite Construct Reliability.
　　 ** AVE : Average Variance Extracted.
　　 (▇) : Square root of AVE.

Note) ** p < 0.01.

〈Figure 2〉 Path Diagram for Research Model

4.2 Hypothesis Testing Results

Having assessed the structural model, we then examined the coefficients of the causal relation-ships between constructs, which would validate the hypothesized effects. 〈Figure 2〉 illustrates the paths and their significance for the struc-tural model. The coefficients, their t-value on the structural model, and the coefficients of de-termination (R^2) for each dependent construct are shown in 〈Table 5〉.

We performed hypotheses testing on the basis of the structure model. As indicated in 〈Table 5〉, the results show that the hypotheses regarding the relationships among the success variables of online brand communities reflect significance for all paths. That is, brand trust significantly af-fects brand loyalty, and community participation

significantly influences brand trust and brand loyalty, with α = 0.01. H1, H2, and H3 are therefore supported. The results for the hypotheses on the effects of social capital variables on the success of online brand communities show that identification exerts a significant effect on community participation (α = 0.01); trust among members has insignificant influence on community participation, but significantly affects identification (α = 0.01). Thus, H5 and H6 are supported but H4 is rejected. The results for the hypotheses on the effects of knowledge quality on the success of online brand communities indicate that knowledge quality significantly influences brand trust (α = 0.01) but poses insignificant effect on community participation. Thus, H8 is supported but H7 is rejected.

In addition, more than 82% of the variance in brand loyalty (R^2 = 0.821) is explained by brand trust and community participation, and 63% of the variance in brand trust (R^2 = 0.632) is explained by knowledge quality and community participation. <Table 5> shows the results of the hypotheses testing in more detail.

5. Discussion and Conclusion

We investigated the effects of social capital and knowledge quality on the success of online brand communities. The research model used indicates that trust among members and identification (i.e., social capital variables) and knowledge quality influence individual community participation; knowledge quality influences brand trust. Community participation and brand trust, in turn, develop brand loyalty. An analysis of the model provides the following insights :

First, identification is crucial to building successful online brand communities. The study shows that identification exerts the greatest effect on community participation (path coefficient = 0.80)–a finding consistent with those of previous research (e.g. Algesheimer et al., 2005; Chiu et al., 2006; Lee et al., 2011). This result also confirms identification as a core determinant of members' voluntary behaviors in a brand community; such values are key to guaranteeing the success of brand communities (Casaló et al., 2008). This study also shows that identification

〈Table 5〉 Hypothesis Testing Results

Hypothesis	Path	Path coefficient	t-value
H1	Brand trust → Brand loyalty	0.76	17.12**
H2	Community participation → Brand loyalty	0.24	4.83**
H3	Community participation → Brand trust	0.21	2.83**
H4	Trust among members → Community participation	−0.12	1.04
H5	Identification → Community participation	0.80	12.86**
H6	Trust among members → Identification	0.76	15.05**
H7	Knowledge quality → Community participation	0.06	0.74
H8	Knowledge quality → Brand trust	0.66	10.23**

Note) Community participation R^2 : 0.580.
　　　Brand trust R^2 : 0.632.
　　　Brand loyalty R^2 : 0.821.
　　　** Significant at the 0.01 level.

is significantly influenced by trust among members-an expected finding given that trust can serve as a framework for community identification. However, trust among members exerts insignificant influence on community participation. Although previous researchers have argued that such trust directly affects members' voluntary behaviors, including knowledge sharing (Chiu et al., 2006; Fang and Chiu, 2010), we derived findings to the contrary. This difference in results may be attributed to the fact that trust among members indirectly influences community participation through identification, seeing as trust among members is a core variable in forming identification. We performed mediation analysis (Sobel, 1982) to validate our assertions and derived a z-value of 9.78 (p < 0.01), a result that supports our arguments.

Second, knowledge quality plays a crucial role in the formation of members' trust in a brand. Online brand community literature minimally discusses the relationship between knowledge quality and brand trust, although the importance of knowledge quality has been emphasized in literature on information systems. The present research shows that knowledge quality directly affects brand trust, suggesting that members' trust in a brand is formed by familiarity with that brand through a learning mechanism. Contrary to expectations, however, knowledge quality exerts insignificant effect on community participation. One possible explanation may be that although individuals acquire useful and up-to-date knowledge from an online brand community, it cannot form motive for them to enhance the community's value, because human are selfish by nature. Namely, the result implies that acquiring benefits from a community and voluntary behaviors for the community are two different issues.

This study confirms that member participation in a brand community plays an important role in brand success. Community participation affects not only brand trust, but also brand loyalty-a finding that agrees with those of Casaló et al. (2007).

5.1 Contributions and Implications

This study presents important implications for research and practice. Despite the practical importance of online brand communities, little integrative research has been conducted on such platforms. Most studies on online brand communities focus on identifying the factors that increase user participation in online communities or on proposing the factors that affect brand trust and loyalty, which are brand success variables. Minimal effort has been directed toward an integrated model of the factors that motivate Internet users to participate in online brand communities and the manner by which community participation affects brand success. The first contribution of this study, therefore, is an integrated model, which indicates that identification (i.e., sociality) and knowledge quality (i.e., usability) influence individual community participation. As previously stated, community participation and knowledge quality reciprocally influence brand trust and brand loyalty. The second contribution of this study is its identification of a new role for knowledge quality in an online brand community context. Although knowledge quality has been proposed as an important factor in the use of information systems, its effect on brand success has not been explored in online brand com-

munity literature. The present work reveals that knowledge quality significantly influences brand trust through a learning mechanism. Finally, brand trust and community participation account for more than 82% of the variance in brand loyalty (R^2 = 0.821), while knowledge quality and community participation account for 63% of the variance in brand trust (R^2 = 0.632). These explanatory powers are significantly higher than those reported in previous studies. Furthermore, almost all the hypothesized relationships in the model are supported, indicating that this study can serve as basis for developing a success model for online brand communities.

Our findings also present important implications for practitioners. First, identification is critical for increasing community participation and knowledge quality, which are determinants of brand trust. To facilitate member participation in communities, therefore, operation managers should develop strategies that strengthen member relationships. Holding regular face-to-face meetings and encouraging members to share knowledge and experiences among themselves during these meetings can serve as measures for enhancing the sense of identification among members (Yoon and Wang, 2011). Another strategy is to highlight a member as a core contributor to a brand community. Creating and maintaining a set of core and experienced individuals substantially contributes to the development and sustainability of an online community (Chiu et al., 2006). Second, knowledge quality is key to building brand trust; when useful, accurate, and up-to-date knowledge is shared in an online brand community, members become familiar with a brand, thereby reinforcing loyalty to it. Thus, operation managers should continually provide

useful and up-to-date brand information to enhance the quality of knowledge in their online brand communities.

5.2 Limitations and Recommendations for Future Research

Similar to any exploration, our study presents some limitations. We investigated the effect of social capital and knowledge quality on only two brand-related variables (i.e., brand loyalty and brand trust). In brand literature, diverse variables, such brand identification, brand attachment, and brand commitment, have been emphasized as equally essential determinants. Thus, future studies should incorporate more variables into the proposed model, which should then be subjected to empirical testing. Second, although a variety of social capital variables such as social interaction ties, trust, commitment, norms of reciprocity, identification, and shared goals have been proposed by researchers, this study employed only two variables-trust and identification-as social capital variables, for a detailed analysis on the effects of social capital in an online brand community context, future studies need to include more social capital variables in the research model. Third, the data were gathered from a relatively homogeneous demographic group-a feature that may considerably hinder generalizability. To enhance the validity and reliability of results, future research should be tested in diverse social strata and challenged with samples from a wider range of cultures.

References

Ahn, T.-Y. and J. Kim, "The Effect of Online

Community's Interactivity, Reward, Commit-ment and Loyalty on Purchase Intention in Portal Sites", *Journal of the Korea Society of IT Services*, Vol.5, No.3, 2006, 25-43.

Algesheimer, R., U.M. Dholakia, and A. Herrmann, "The Social Influence of Brand Community : Evidence from European Car Clubs", *Journal of Marketing*, Vol.69, No.3, 2005, 19-34.

Bagozzi, R.P. and Y. Yi, "On the Evaluation of Structural Equation Models", *Journal of the Academy of Marketing Science*, Vol.16, No.1, 1988, 74-94.

Bolino, M.C., W.H. Turnley, and J.M. Bloodgood, "Citizenship Behavior and the Creation of Social Capital in Organizations", *Academy of Management Review*, Vol.27, No.4, 2002, 505-522.

Boon, S.D. and J.G. Holmes, *The Dynamics of Interpersonal Trust : Resolving Uncertainty in the Face of Risk*, In Hinde, R.A. and J. Groebel (Eds), Cooperation and Prosocial Behavior, Cambridge, UK : Cambridge University Press, 1991, 190-211.

Casaló, L.V., C. Flavián, and M. Guinalíu, "Promoting Consumer's Participation in Virtual Brand Communities : A New Paradigm in Branding Strategies", *Journal of Marketing Communications*, Vol.14, No.1, 2008, 19-36.

Casaló, L.V., C. Flavián, and M. Guinalíu, "The Impact of Participation in Virtual Brand Communities on Consumer Trust and Loyalty : The Case of Free Software", *Online Information Review*, Vol.31, No.6, 2007, 775-792.

Chaudhuri, A. and M. Holbrook, "The Chain Effects from Brand Trust and Brand Affect to Brand Performance : The Role of Brand Loyalty", *Journal of Marketing*, Vol.65, No.2, 2001, 81-94.

Chin, W.W., "Issues and Opinion on Structural Equation Modeling", *MIS Quarterly*, Vol.22, No.1, 1998, vii-xvi.

Chiu, C.M., M. Hsu, and E.T.G. Wang, "Understanding Knowledge Sharing in Virtual Communities : An Integration of Social Capital and Social Cognitive Theories", *Decision Support Systems*, Vol.42, No.3, 2006, 1872-1888.

Chow, W.S. and L.S. Chan, "Social network, Social Trust and Shared Goals in Organizational Knowledge Sharing", *Information and Management*, Vol.45, No.7, 2008, 458-465.

Delgado-Ballester, E., J.L. Manuera-Aleman, and M.J. Yague-Guillen, "Development and Validation of a Brand Trust Scale", *International Journal of Market Research*, Vol.45, No.1, 2003, 35-54.

Dholakia, U.M., V. Blazevic, C. Wiertz, and R. Algesheimer, "Communal Service Delivery : How Customers Benefit from Participation in Firm-Hosted Virtual P3 Communities", *Journal of Service Research*, Vol.12, No.2, 2009, 208-226.

Dwyer, F.R., P.H. Schurr, and S. Oh, "Developing Buyer-Seller Relationships", *Journal of Marketing*, Vol.51, No.4, 1987, 11-27.

Fang, Y.H. and C.M. Chiu, "In Justice We Trust : Exploring Knowledge-Sharing Continuance Intentions in Virtual Communities of Practice", *Computers in Human Behavior*, Vol.26, No.2, 2010, 235-246.

Fornell, C. and D.F. Larcker, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error", *Journal of Marketing Research*, Vol.18, No.1, 1981, 39-50.

Gefen, D., "Customer Loyalty in E-commerce", *Journal of the Association for Information Systems*, Vol.3, 2002, 27-51.

Gefen, D., "E-commerce : The Role of Familiarity and Trust", *Omega*, Vol.28, No.5, 2000, 725-737.

Gefen, D. and D. Straub, "A Practical Guide to Factorial Validity Using PLS-Graph : Tutorial and Annotated Example", *Communications of the Association for Information Systems*, Vol.16, 2005, 91-109.

Gounaris, S. and V. Stathakopoulos, "Antecedents and Consequences of Brand Loyalty : An Empirical Study", *Journal of Brand Management*, Vol.11, No.4, 2004, 283-306.

Hiscock, J., "Most Trusted Brands," *Marketing*, March 1st, 2001, 2-33.

Hur, W.M., K.H. Ahn, and M. Kim, "Building Brand Loyalty through Managing Brand Community Commitment", *Management Decision*, Vol.49, No.7, 2011, 1194-1213.

Inkpen, A.C. and E.W.K. Tsang, "Social Capital, Networks and Knowledge Transfer", *Academy of Management Review*, Vol.30, No.1, 2005, 146-165.

Jang, H., L. Olfman, I. Ko, J. Koh, and K. Kim, "The Influence of On-Line Brand Community Characteristics on Community Commitment and Brand Loyalty", *International Journal of Electronic Commerce*, Vol.12, No.3, 2008, 57-80.

Kankanhalli, A., B.C.Y. Tan, and K.K. Wei, "Contributing Knowledge to Electronic Knowledge Repositories : An Empirical Investigation", *MIS Quarterly*, Vol.29, No.1, 2005, 113-143.

Kim, S.H., K.H. Yang, and J.K. Kim, "Finding Critical Success Factors for Virtual Community Marketing", *Service Business*, Vol.3, No.2, 2009, 149-171.

Koh, J. and D. Kim, "Knowledge Sharing in Virtual Communities : An e-business Perspective", *Expert Systems with Applications*, Vol.26, No.2, 2004, 155-166.

Laroche, M., M.R. Habibi, and M. Richard, "To Be or Not to Be in Social Media : How Brand Loyalty Is Affected by Social Media", *International Journal of Information Management*, Vol.33, No.1, 2013, 76-82.

Laroche, M., M.R. Habibi, M. Richard, and R. Sankaranarayanan, "The Effects of Social Media Based Brand Communities on Brand Community Markers, Value Creation Practices, Brand Trust and Brand Loyalty", *Computers in Human Behavior*, Vol.28, No.5, 2012, 1755-1767.

Lee, D., H.S. Kim, and J.K. Kim, "The Impact of Online Brand Community Type on Consumer's Community Engagement Behaviors : Consumer-Created vs. Marketer-Created Online Brand Community in Online Social-Networking Web Sites", *Cyberpsychology, Behavior, and Social Networking*, Vol.14, No.1/2, 2011, 59-63.

Lee, H.Y., H.C. Ahn, and I.G. Han, "Analysis of Trust in the E-commerce Adoption", *Proceedings of the 39th Hawaii International Conference on System Sciences*, Vol.6, 2006.

Lewicki, R.J., D.J. McAllister, and R.J. Bies, "Trust and Distrust : New Relationships and Realities", *Academy of Management Review*, Vol.23, No.3, 1998, 438-458.

Lin, H., "Determinants of Successful Virtual Communities : Contributions from System Characteristics and Social Factors", *Information and Management*, Vol.45, No.8, 2008, 522-

527.

Moorman, C., G. Zaltman, and R. Deshpande, "Relationships Between Providers and Users of Market Research : The Dynamics of Trust Within and Between Organizations", *Journal of Marketing Research*, Vol.29, No.3, 1992, 314-328.

Morgan, R.M. and S.D. Hunt, "The Commitment-Trust Theory of Relationship Marketing", *Journal of Marketing*, Vol.58, No.3, 1994, 20-38.

Nahapiet, J. and S. Ghoshal, "Social Capital, Intellectual Capital, and the Organizational Advantage", *Academy of Management Review*, Vol.23, No.2, 1998, 242-266.

Oliver, R.L., "Whence Consumer Loyalty?", *Journal of Marketing*, Fundamental Issues and Directions for Marketing, Vol.63, 1999, 33-44.

Pai, P. and H. Tsai, "How Virtual Community Participation Influences Consumer Loyalty Intentions in Online Shopping Contexts : An Investigation of Mediating Factors", *Behaviour and Information Technology*, Vol. 30, No.5, 2011, 603-615.

Park, K.-S. and S.-W. Oh, "A Study on Knowledge Sharing in On-Line Communities of Practice : Focusing on the Relational Characteristics", *Journal of the Korea Society of IT Services*, Vol.13, No.1, 2014, 57-73.

Sobel, M.E., "Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models", *Sociological Methodology*, Vol.13,

1982, 290-312.

Springer Reference, "Perceived Benefits", Retrieved on September 22, 2013 from http://www.springerreference.com/docs/html/chapterdbid/346006.html.

Tongchuay, C. and P. Praneetpolgrang, "Knowledge Quality and Quality Metrics in Knowledge Management Systems", *Fifth International Conference on eLearning for Knowledge-Based Society*, December 11-12, 2008, Bangkok, Thailand.

Wirtz, J., A. den Ambtman, J. Bloemer, C. Horváth, B. Ramaseshan, J. van de Klundert, Z.G. Canli, and J. Kandampully, "Managing Brands and Customer Engagement in Online Brand Communities", *Journal of Service Management*, Vol.24, No.3, 2013, 223-244.

Yoon, C. and S. Kim, "Developing the Causal Model of Online Store Success", *Journal of Organizational Computing and Electronic Commerce*, Vol.19, No.4, 2009, 265-284.

Yoon, C. and Z. Wang, "The Role of Citizenship Behaviors and Social Capital in Virtual Communities", *The Journal of Computer Information Systems*, Vol.52, No.1, 2011, 106-115.

Zhou, Z., Q. Zhang, C. Su, and N. Zhou, "How Do Brand Communities Generate Brand Relationships? Intermediate Mechanisms", *Journal of Business Research*, Vol.65, No.7, 2012, 890-895.

〈Appendix A〉

Trust among Members : Likert scale ranging from "strongly disagree" to "strongly agree"
TIM1 : Members in this brand community have reciprocal faith-based and trustworthy relationships.
TIM2 : Members in this brand community will not take advantage of others even when a profitable op-
       portunity arises.
TIM3 : Members in this brand community always keep the promises that they make to one another.

Identification : Likert scale ranging from "strongly disagree" to "strongly agree"
IDN1 : I feel a sense of belonging toward this brand community.
IDN2 : I experience togetherness or closeness in this brand community.
IDN3 : I hold strong positive feelings toward this brand community.
IDN4 : I am proud to be a member of this brand community

Knowledge Quality : Likert scale ranging from "strongly disagree" to "strongly agree"
KQ1 : The knowledge shared in this brand community is useful.
KQ2 : The knowledge shared in this brand community is easy to understand.
KQ3 : The knowledge shared in this brand community is accurate.
KQ4 : The knowledge shared in this brand community is complete.
KQ5 : The knowledge shared in this brand community is relevant.
KQ6 : The knowledge shared in this brand community is timely.

Community Participation : Likert scale ranging from "strongly disagree" to "strongly agree"
CP1 : I take an active part in this brand community.
CP2 : I do my best to stimulate this brand community.
CP3 : I often provide useful information/contents for brand community members.
CP4 : I eagerly reply to posts by help-seekers in this brand community.
CP5 : I actively participate in the activities organized by this brand community.

Brand Trust : Likert scale ranging from "strongly disagree" to "strongly agree"
BT1 : The quality of brand products always corresponds to my expectations.
BT2 : The products of this brand never disappoint me.
BT3 : I believe that the brand's products are trustworthy.
BT4 : I trust the brand's products.

Brand Loyalty : Likert scale ranging from "strongly disagree" to "strongly agree"
BL1 : I am willing to pay more for this brand's products than for others available on the market.
BL2 : I would consider this brand's products my first choice when buying goods.
BL3 : I would recommend this brand's products to others.
BL4 : I would encourage others to use this brand's products.
BL5 : I will continuously use this brand's products.

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