The impact of online brand community members, brand identification and community identification on participation: The moderating effects of frequency

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Abstract

The effect of online brand communities' value creation practices on brand identification and community identification was examined using social identity theory as a theoretical background of this study. In examining their relationship, this study defined the practices that relate to the focal brand as both brand use and impression management whereas the practices that relate to the community were defined as both social networking and community engagement. The effects of the two identification constructs (brand and community identification) on participation and their impact on brand awareness were also tested. The effects of frequency as a moderating variable on the relationship between brand identification community identification and participation were also revealed. Structural equations modeling was used to analyze the data collected after an online survey was done. Among the value creation practices, this study revealed that the impression management practice had a significant effect on brand identification and the community engagement practice had a significant effect on community identification. Test results have also shown that community identification has a significant effect on participation. Frequency moderated the relationship between brand identification and participation. In the high frequency group, brand identification had a significant effect on participation whereas in the low frequency group, the effect was not significant.

Keywords: Brand awareness, Brand identification, Community identification, Frequency, Online brand community, Participation, Value creation practices.

1. Introduction

With the advancement of digital technologies, the introduction of an online brand community serves as an important marketing tool for many companies that seek to strengthen and manage their relationships with consumers. It has been highly acknowledged as an effective brand communication strategy for reaching and establishing deeper connections and relationships with consumers. Companies may stay updated on consumer trends learn more about consumers and get

insights into how consumers discuss the brands. Therefore, many companies use online brand communities as a method to improve their distinction and competitive position.

Online brand communities become a crucial medium for consumers to freely express their brand-related consumption experiences as well as an online space for them to communicate with other consumers who share common interests that improve their social connections within the community. It is a community in which consumers develop and form a variety of value creation practices that benefit brands. Numerous consumers are participating in community activities and thus, it remains a challenge for companies to make efforts to understand the strategies and ways to effectively operate, manage and maintain functional communities. Although, it has been evident in existing research that these value creation practices are essential in influencing and fostering the good connections between brands and consumers. It is still necessary for marketers to further explore these practices' role in the development not only consumer relationships within the online brand community but how this translates to the formation of consumers' identification.

The aim of this study is to explore the effects of the value creation practices of online brand communities on two identification constructs such as the brand and community identification. In examining their relationship, this study defined the practices that relate to the focal brand as both the brand use and impression management whereas the practices that relate to the community were defined as both social networking and community engagement. Furthermore, this study also investigates the effect of brand and community identifications on participation in community activities and their impact on brand awareness. This study intends to examine both the qualitative and quantitative aspects of consumer participation in order to assess the impact of participation which has gotten less attention in previous research.

2. Literature Review

2.1. Online Brand Community

A brand community refers to a setting that is non-geographically constrained where the focal point of discussion revolves around a certain brand and consumers with common interests form social relationships [1]. It enables firms to facilitate social bonds and communications among brand consumers [2] as well as strengthen relationships not only with the brand and its consumers, but also with other consumers [1]. When consumers share common interests in a brand, they form brand communities to attain common goals and demonstrate their commitment and shared feelings toward the brand [3].

The advent of technologies allows consumers and communities to alter user-generated content, create, share and discuss it on different interactive platforms [4]. For example, through the individual or collaborative efforts of the members of the online brand community, they may create value that is beneficial for themselves, other community members or companies [5-7]. It provides a social platform where consumers can express their enthusiasm towards their preferred brands, meet and share their brand experiences with other consumers [8, 9]. In an online brand community, community members are usually very inclined to the brand and knowledgeable about it [1] and they share common goals and a strong commitment towards it [10]. Online brand communities which are defined as having continuous community interactions without geographic and time constraints, foster harmonious community relationships and community identification because members can communicate with one another and share their product knowledge easily [11, 12]. Due to the interactive capabilities of an online brand community, many firms are considering it as an effective marketing communication strategy to attain competitive advantages which include increasing consumer awareness of the brand [13], generating positive feedback [14], boosting trust [15] and enhancing the brand loyalty of consumers [16].

It is important to enhance consumer experiences within the online brand community to obtain consumer-brand loyalty and build strong brand communities [1, 17-19]. Consumer-brand loyalty through relational marketing can be developed in brand communities through consumers contributing to the improvement of the market offerings in the form of exchanging and communicating ideas [20]. When companies allow consumers to take part in branding co-creation, it strengthens their relationship with the consumers, enabling enhanced distinction and competitive position [21]. With continuous communications among community members, these consumers gain experiences and become more knowledgeable about the brand [22]. These long-term communications through the different practices and activities, establish the consumers' long-lasting relationships that allow them to have a deeper connection and further understanding with the brand [23, 24].

2.2. Value Creation Practices

As consumers engage within the online brand community, they may seek social enhancement in ways such as improving their social status or gaining the acceptance or approval of other community members [25, 26]. It has been shown through community practices that community members increasingly communicate with one another [27]. Practices are defined as "repeated actions or behaviors that follow a set of comprehensive procedures and rules of action" [27]. These practices create value with or for other members, provide shared meaning among community members and generate consumption-related opportunities [28].

The process of collectively value creation in a brand community is primarily based on a set of practices. Practices are an important form of community activity because they not only help community members go beyond the mere communication related to the brand but also strengthen their social connections [29]. Previous studies have shown that these various practices strengthen the interactions and the social connections among community members as well as their emotional attachment to the brand which are all essential when community members make brand-related decisions and choices [30-32]. Brand community practices enable the creation of a triad consisting of consumers, brands and other consumers as they continuously interact within the brand community and attain deeper knowledge about the brand [1]. In an online brand community, there are four thematic categories of practices. These include social networking, community

engagement, impression management and brand use. These groups of practices work together in the form of providing ideas, preserving the community culture and brand history and providing assistance especially to those relatively new members of the community to add value to their experiences with the brand [27].

The first practice is social networking. It is a practice that focuses on building, developing and maintaining social relationships among the members of the community. In social networking forms of activity include welcoming new members, empathizing with them and governing them. These processes emphasize the similarities and expectations that community members have for themselves and one another. These community activities function mainly through affective means that help strengthen the social bonds and relationships of community members [27]. The second practice is community engagement. It is a practice that focuses on strengthening the increasing engagement of community members. In community engagement, the forms of activities include documenting, badging, milestoning and staking which highlight the heterogeneity among community members. In an online brand community, these activities are competitive and community members naturally gain social capital [27]. The third practice is brand use. It is a practice that is centered on the use of the focal brand and in which community members assist others in using the product more efficiently. In brand use, some of the activities involve grooming, customizing, commoditizing, sharing and providing information pertaining to the products to better cater to the needs of the community members. Moreover, it is also offering help to the members of the online brand community who are relatively new. The fourth practice is impression management. It is a practice that has an external focus to attract brand enthusiasts and make good impressions of the brand. Communities members' activities in impression management include evangelizing and justifying the brand by emphasizing the positive features and benefits that encourage others to use the brand. Community members who engage in such activities have altruistic behaviors making them representatives of the brand [27].

2.3. Brand Identification and Community Identification

Social identity is when a community member feels a sense of belonging in a social group to which they belong which includes emotional connotation and value [33]. Social identity plays a crucial role in knowing the depth of the relationships between social groups and individuals [34]. It involves a categorization process in which a member classifies himself or herself as part of the brand community [35]. In previous research, social identity theory has been a widely used approach and has been shown to be an antecedent of other related constructs such as the member's participation, engagement and identification [36]. According to this theory, consumers define their social identity based on the community to which they belong and brands are an important component of consumers' social identification [37, 38].

Social identity has two components which include brand identity and consumer-brand identification [39]. Brand identity enables consumers to differentiate a brand from its competitors based on the unique characteristics that a brand possesses [39]. Brands with distinctiveness and prestige are more attractive to consumers who tend to identify with them as they are perceived as having a strong identity [38]. In an online brand community, brands are essential as they are the primary source for the identification of community members [40] and they influence their behaviors and activities [41]. Consumers give brands meaning and construct their identities around them through the telling of brand stories [42-44]. Consumers identify with brands based on two perspectives. First, on a personal level, brands serve as a medium for individuals to express their personality, beliefs, and values [38]. Second, from a common point of view, brands symbolize the self-status and aspirations of an individual [45]. Within an online brand community, the levels of bond between customer and brand and customer other customers depend heavily on the interactions between community members [35]. These continuous interpersonal interactions promote brand identification [29] as it is vital in strengthening and enhancing the social connections of community members and in building a solid foundation for brand communities [46-48].

Brand use and impression management practices are distinguished from social networking and community engagement practices since they are practices for the focal brand itself rather than for community cohesion. Members of the online brand community can be more satisfied when consuming the focal brand in a functional and emotional way by practicing brand use. Moreover, through impression management practice, satisfactory consumption related experiences can be shared with external, outward and potential consumers.

Therefore, we propose the following hypotheses:

Hypothesis 1: As members of the online brand community engage in brand use practices, they will identify themselves with the focal brand.

Hypothesis 2: Members of the online brand community will identify with the focal brand as they engage in impression management practices.

According to social identity theory, when members have a positive outlook about the organization itself, they become more inclined toward it which improves the relationship and trust they have with other members of the community as well [49, 50]. Community is identity when members feel that they are part of the social group [29] in which they identify with the practices, norms and traditions of the community and place importance on the existing connections between the members and the community that they are part of Tajfel [33]. Community identity also comes from another type of social identity known as "group identity" wherein members feel included and valued in the online brand community through their membership [35]. Members will act in accordance with group norms if they feel that they belong to the group (e.g., Algesheimer, et al. [29]). When members identify with the online brand community, they see themselves as part of the group [51] which shows the depth of the bond that they have with the community [29].

Harmonious community relationships in online brand community relationship provide members a sense of belonging and help them identify with the community by providing relaxing and comfortable environment [49]. Strong interpersonal communication is vital for developing a shared perspective and understanding of the community as well as maintaining

its functionality [52]. Through these community relationship   customer's identification with the community is positively influenced [35]. As community members share their positive experiences within the community, they eventually form strong and positive connections with each other [53]. When they identify themselves with the online brand community, the depth of the connection they have with the brand that is supporting the community can also be seen [29]. Strong community interaction is ensured when there is an on-going relationship among community members [29].

Considering the characteristics of value creation practices, social networking and community engagement are the activities that aim to strengthen the bonds between community members and enhance engagement within the community. The focal brand acts as a medium in the process of confirming the similarities between community members and enhancing social capital through increased engagement with the community. However, the ultimate goal of social networking and community engagement practices is to strengthen the social ties and unity of the community members. Therefore, social networking and community engagement practices are activities for the community itself rather than a focal brand.

Therefore, we propose the following hypotheses:

Hypothesis 3: As   members of an online brand community engage in social networking practices, they will identify themselves with the community.

Hypothesis 4: As members of an online brand community engage in community engagement practices, they will identify themselves with the community.

2.4. Participation

Brands are confronted with   challenges in handling their social web platforms such as ensuring consumers' participation in their online brand communities. There can be various reasons for consumers' participation in online communities. These include consumers being able to obtain moral support and inspiration from others, freely exploring and expressing their ideas for the betterment of the community and cultivating their own interests and potential. It has been evident that the key to successful online communities is   consumers' participation in community activities [54, 55]. Kozinets [56] provided different suggestions and ideas according to the level of the member's participation in the online brand community [56, 57]. According to previous research, active members and passive members are the two types of community participation. Active members are those who contribute and publish the main contents of an online community while passive members are those who do not have any contribution to the community's activities and only look through the contents and receive information [58, 59]. Nevertheless, the degree of commitment of community members can be reflected through these two types of community participation making them an essential part of the community [54].

User participation has different levels. The lowest of its kind is known as "lurking" in which a member merely belongs to a community but does not actively participate and contribute to it [49, 60]. However, having a mere online presence is not sufficient for an online brand community's success [61, 62]. "Lurkers" who are the passive members are still beneficial to the community since they help make it popular due to the increased hits and website traffic that they generate. However, in terms of the content of the online community, lurkers do not necessarily contribute to its success [63]. Depending on the level of participation, online brand community members can be described as shallow to deep participators [64, 65]. To make better purchasing decisions, many of the consumers join the community to be able to get different perspectives, ideas and information pertaining to the brand. In the online brand community, many consumers meet other congenial members who share common interests with them which naturally makes them active in the community by contributing in the form of quickly responding to the inquiries of other consumers and by giving out new information for others to learn. By organizing group activities or discussions, members may also become leaders in the community and are considered to be more deeply involved compared with the members who just look through the information that is available online [61, 66]. According to Andersen [67], the participation behavior of community members can be classified as light browsers, browsers, enthusiasts and contributors which are all based on the degree of their interactivity within the community. Light browsers and browsers are   community members who participated without any contribution, whereas enthusiasts and contributors are community members that actively contribute and publish contents in the online brand community. Preece and Shneiderman [68] indicated that the participation behavior of community members can be seen as ranging   from "reader" to "leader." For instance, in relation to being a "reader," community members exhibit certain behaviors such as looking through the available information, browsing to get more ideas, searching to learn more and returning to the community to get new updates from other members; whereas, in relation to being a "leader," certain behaviors can be identified which include encouraging other members to actively participate and contribute to the community activities, mentoring new members and establishing the rules and guidelines to be observed in the community.

Participation is vital for the functionality of an online community and to achieve its long-term goals [69]. It is a way to acquire new members to join the community and to strengthen the existing relationships among the members of the community [21]. Participation also facilitates the attainment of community objectives that are shared by both the members and the brand supporting the community [3]. The concept of participation represents the community's longevity, survival, and success. Kozinets [56] indicated that the success of the online community can be rooted in the members' active participation in it. Previous research suggested that within the scope of online communities, the participation of the members helps the community providers and increases consumer and brand loyalty [70]. Thus, for the online brand community to continuously function well, it is essential for the members to actively participate in the community.

As the members of the online brand community identify themselves with the focal brand and the community, identified members will favor active participation in community activities since they want to enhance their social status and try to follow the community's social norms.

Therefore, we propose the following hypotheses:

Hypothesis 5: Members of the online brand community will be more involved in community activities as they identify the focal brand.

Hypothesis 6: As online brand community members identify themselves with the community participative in community activities

Members' community participation can be evaluated not only through the extent of their degree of participation which pertains to members posting, engaging, and contributing, but also through the frequency of their participation which is simply counting the number of times they log-in to the online brand community. In frequency, there is no level of participation such that members merely read, search or browse in the community without any contribution. The lowest level of participation is known to be "lurkers" which are the members of the online brand community who are non-interactive, have passive behaviors and who only browse and read messages posted in the online brand communities. Although lurkers may have a shallow participation level in online brand community, researchers have argued that they can still be valuable to companies [71]. It is very common for community members to just log-in to the online brand community out of habit and leave without participating in community activities. "Ghost towns" refers to those websites that have been abandoned by their users [72]. When online brand community becomes ghost towns, members log out to the community without participating in it. Members log-out of the community for a variety of reasons including when there are no new posts or no members that are active in the community. If there are new posts, members are exposed to the available information and start to engage in community activities especially when the information provided is intriguing.

According to Janiszewski [73], the company becomes more accessible to the consumers even through the mere exposure of the contents that are presented to them. The community members would be more favorably inclined toward the community as they are exposed to the available information relating to the products and to the numerous messages from other members and the community. Therefore, as the members frequently log in to the online brand community, they are exposed to new messages or postings that help develop a positive attitude toward the community and strengthen the member-community relationship that would eventually lead members to have higher levels of participation [74].

Therefore, we propose the following hypothesis:

Hypothesis 7a: Frequency will moderate the relationship between brand identification and participation.

Hypothesis 7b: Frequency will moderate the relationship between community identification and participation.

2.5. Brand Awareness

Brand awareness is when an individual has the capacity to remember the brand, and to distinguish it among other competing brands [75]. It is the process by which people recognize, recall, become well-informed and become acquainted with a brand name [76, 77]. When recommending and purchasing a product or service from a well-known brand individuals have higher intentions Horng, et al. [78]. Keller [79] indicated that when consumers make purchasing decisions, there are three major reasons why brand awareness is an integral element to be considered. First, consumers should be able to think about a brand within its product category when they make purchase decisions. Second, even if there are no other associations with the brand, when consumers think about the consideration set, brand awareness plays a vital role that can highly influence their decisions relating to the brand. Brand awareness is also an important element that can have an effect on the strength and formation of the brand cues that make up the brand image [79].

The degree of consumers' brand awareness is essential not only when they make decisions [80] but also for the brand's market share, and other brand-related elements including brand loyalty, equity and image [81-83]. Initially, consumers already have different sets of brands in their minds that appeal to them and before they are able to select, brand awareness acts as a decisive component that helps consumers make decisions [84]. Brand awareness also involves the consumers' understanding of the brand and their ability to recall and recognize it. When compared to unknown brands, consumers are more likely to consider and choose well-known brands [13]. Within the scope of online social networks, brand awareness pertains to the consumer's familiarity relating to a brand's image and distinct qualities of goods or services [79]. Therefore, consumers recommend and influence purchase intentions when there is a strong brand awareness among online social network users [85]. Profiles and pages on online social networks are effective means for boosting brand awareness [13]. The harmonious relationship among community members helps improve their overall experience with the brand which consequently promotes brand awareness [1]. As an interactive environment, it provides firms with the opportunity to get access to and learn more about their consumers which helps boost their awareness of the brand [86]. When there are high consumer interactions about the brand, consumers repeatedly see information in relation to the brand and usage-related cues that make it easier for them to recognize and recall the brand which directly improves their awareness of the brand [80, 87].

Therefore, we propose the following hypothesis:

Hypothesis 8: The more members participate in community activities, the more brand awareness increases.

Table 1.
Measurement model and results.

Construct	Items	Factor loadings	C.R.
Social networking [88]	My brand community keeps in touch with me through notifications.	0.644	10.654
	At least some members of my community know me.	0.689	11.324
	My community provides me with product information.	0.645	10.668
	My community is concerned with my needs.	0.658	10.858
	My community gathers my feedback on the services or product.	0.643	10.637
	I share my opinions with my community.	0.671	
Community engagement [29]	I benefit from following my community.	0.677	10.700
	I am motivated to participate in the activities because I feel good afterwards or because I like them.	0.634	10.133
	I am motivated to participate in my community's activities because I am able to support other members.	0.639	
Impression management [27]	My community encourages discussions related to the company, brand or product.	0.619	10.553
	Members of my community actively engage in discussions in order to justify their reasons for their affinity for the brand.	0.632	
Brand use [27]	Members of my community share useful hints for making better use of a product or brand.	0.675	10.411
	Members of my community share their experiences with successful and unsuccessful products customization attempts.	0.522	8.294
	Members of my community monitor and support activities deemed beneficial to community building.	0.659	
Brand identification [29]	My online brand community says a lot about the kind of person I am.	0.57	8.691
	The brand's image of my online brand community and my self-image are similar in many respects.	0.612	9.207
	My online brand community plays an important role in my life.	0.623	
Community identification [29, 89]	I see myself as a part of my online brand community.	0.651	10.703
	If community members planned something, I'd think of it as something "we" would do rather than something "they" would do.	0.572	9.550
	When someone praises my community, it feels like a personal compliment.	0.651	
Participation [90]	I actively participate in my community's activities.	0.684	8.571
	I spend a lot of time engaging in my community's activities.	0.64	8.254
	I provide feedback related to participation on my community's website.	0.533	
Brand awareness [91]	I know what the brand looks like.	0.731	
	I can recognize the brand among other competing brands.	0.668	10.782
	Some characteristics of the brand come to mind quickly.	0.624	10.101
	I can quickly recall the symbol or logo of the brand.	0.64	10.358

3. Methodology

The participants of this study are composed of 315 American consumers. At the beginning of the survey, there were two questions asked to ensure that all of these participants were members of any online brand communities. A brief understanding of online brand community was provided and its definition, types and examples were also included for the participants to get general idea of the scope and meaning of this concept. Moreover, a link was given so that the participants could easily browse the website of the online brand community. Then, the participants were asked to provide the name of the online brand community that they are part of to ensure that they are qualified to take part in the study. Overall, the questionnaire was introduced as an "opinion survey" to investigate the effects of consumer behavior and consumer consumption experiences within the context of an online brand community. Amazon Mechanical Turk is an

online system that was used to collect the data in April 2021. The measurement scales used for this study are shown in Table 1. All items were measured on a 7-point Likert scale (1=strongly disagree to 7=strongly agree).

4. Results

To analyze the data, structural equations modeling was conducted. Amos 20, a statistical software package used in structural equation modeling, was used for the data analysis. Both the measurement model and structural model were tested in terms of CMIN (chi-square value), GFI (goodness-of-fit index), CFI (comparative fit index), and RMSEA (root mean square error of approximation). RMSEA measures the difference between the observed covariance matrix per degree of freedom and the predicted covariance matrix.
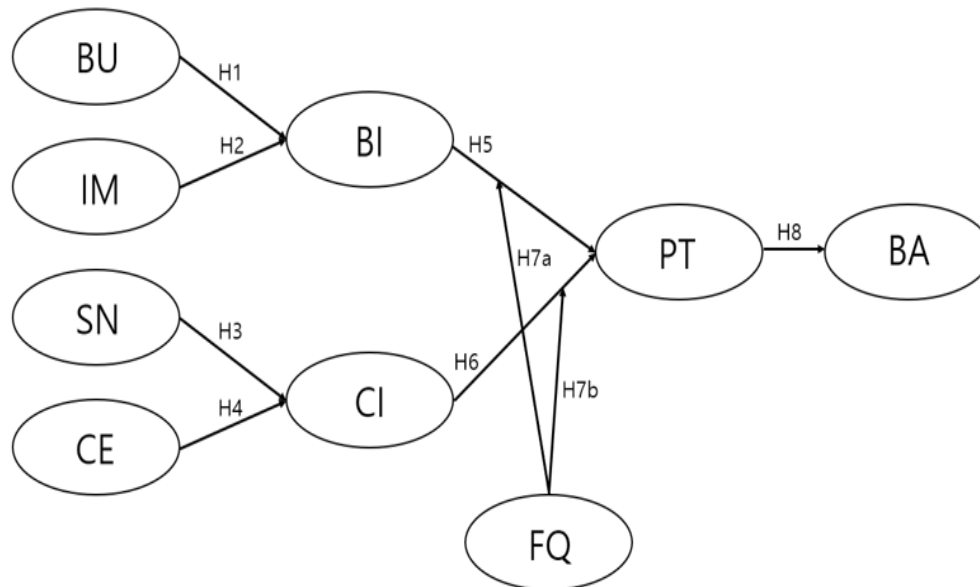
Figure 1 shows the research model.

Figure 1.
Research model.
Note: BU: Brand use, IM: Impression management, SN: Social networking, CE: Community engagement, BI: Brand identification, CI: Community identification, PT: Participation, BA: Brand awareness, FQ: Frequency.

4.1. Measurement Model

Using the complete existing data, confirmatory factor analysis (CFA) was conducted to assess the measurement model. The CFA tested the followings; the reliability of all items, convergent validity, and discriminant validity [92, 93].

To test the item reliability, the factor loading for each items associated on its respective construct was assessed, and only items with factor loadings greater than 0.50 were retained for analysis [94]. Overall, 27 items were retained, with all of them revealing factors loadings greater than 0.52. The factor loadings for each item are presented in Table 1.

Cronbach's alpha, the average variance extracted (AVE), and the construct reliability were measured to examine the constructs' internal consistency and convergent validity. The cut off value for Cronbach's alpha, average variance extracted (AVE), and construct reliability are 0.70 [95, 96], 0.50 [97, 98] and 0.70 [97], respectively. All construct in the measurement model had Cronbach's alpha value greater than 0.70. As presented in Table 2, the average variance extracted (AVE) for all constructs was greater than the accepted value of 0.50 and the construct reliabilities for all constructs were also greater than the acceptable value of 0.70. Since the square root of the average variance extracted for all constructs exceeded the correlation between two latent constructs, discriminant validity was achieved for all constructs [97]. With respect to the goodness-of-fit statistics, the final measurement model has demonstrated a satisfactory fit result [98]; $X^2(296) = 598$, $X^2/df = 2.02$, $p = 0.000$, GFI = 0.879, CFI = 0.914, RMSEA = 0.057.

4.2. Structural Model

In terms of the structural model, the goodness-of-fit statistics were shown to be satisfactory [98]; $X^2(311) = 655$, $X^2/df = 2.11$, $p = 0.000$, GFI = 0.868, CFI = 0.903, RMSEA = 0.059. Both the measurement and structural models were within acceptable ranges offering satisfactory overall fit statistics. Hypotheses were tested through a structural model. Test results are shown in Table 3.

Table 2.
Internal consistency and convergent validity.

	Un-standardized coefficient	S.E.	C.R. (Critical ratio >1.965)	P	Standardized coefficient	AVE	C.R. (Construct reliability)
Social networking 8	1				0.698		
Social networking 6	0.962	0.092	10.637	***	0.669		
Social networking 5	0.927	0.087	10.858	***	0.684	0.936	0.989
Social networking 4	0.931	0.089	10.668	***	0.671		
Social networking 2	0.886	0.097	11.324	***	0.717		
Social networking 1	0.929	0.089	10.654	***	0.670		
Community engagement 3	1				0.665		
Community engagement 2	0.896	0.090	10.133	***	0.659	0.869	0.952
Community engagement 1	0.092	0.101	10.700	***	0.704		
Impression management 2	1				0.657	0.906	0.951
Impression management 1	0.833	0.081	10.553	***	0.644		
Brand use 3	1				0.685		
Brand use 2	0.898	0.110	8.294	***	0.543	0.848	0.943
Brand use 1	0.961	0.098	10.411	***	0.702		
Brand identification 3	1				0.648		
Brand identification 2	0.928	0.103	9.207	***	0.636	0.839	0.940
Brand identification 1	0.902	0.106	8.691	***	0.593		
Community identification 3	1				0.677		
Community identification 2	0.958	0.102	9.550	***	0.595	0.852	0.945
Community identification 1	0.826	0.102	10.703	***	0.677		
Participation 3	1				0.554		
Participation 2	0.937	0.158	8.254	***	0.666	0.783	0.915
Participation 1	0.971	0.164	8.571	***	0.711		
Brand awareness 5	0.891	0.088	10.358	***	0.666		
Brand awareness 4	0.780	0.079	10.101	***	0.649	0.873	0.965
Brand awareness 2	0.959	0.091	10.782	***	0.695		
Brand awareness 1	1				0.760		

Note: (***, significant at $p < 0.01$ level).

Table 3.
Results of SEM analysis.

Hypothesis	Unstandardized regression weights	Standardized regression weights	S.E.	C.R.	P	Hypothesis testing
H1: Brand use to brand identification	-0.040	-0.19	0.286	1.917	0.060	Not supported
H2: Impression management to brand identification	0.850	0.92	0.393	2.659	p<0.01	Supported
H3: Social networking to community identification	-0.439	-0.45	0.446	-1.004	0.325	Not supported
H4: Community engagement to community identification	0.352	0.83	0.431	3.201	p<0.01	Supported
H5: Brand identification to participation	-0.280	-0.36	0.183	1.559	0.126	Not supported
H6: Community identification to participation	0.961	0.83	0.187	5.236	p<0.001	Supported
H8: Participation to brand awareness	0.986	0.87	0.133	7.546	p<0.001	Supported

Hypothesis 7 centered on the moderating effects of frequency on the relationship between identifications (both brand and community) and participation. Using a median split, participants (N=315) were classified into two separate groups:

high (N=148) and low (N=-167) frequency groups. To test the moderating effect of frequency, this study conducted a multiple group analysis in a structural equation model (SEM) to compare the two groups. Based on the levels of frequency, the full model was split into two individual models to compare the structural relationships and the degree of the relationships between these two groups.

To confirm measurement equivalence between the two groups, this study conducted a multiple group confirmatory factor analysis [99]. The results showed that the X^2 difference between the unconstrained model and the measurement weights model was 25(19). Values given in Table 4 which is smaller than the cutoff value 30.14(19) at p = .05 level. Thus, the test results have confirmed the measurement equivalence between the two groups (high and low frequency groups).

Table 4.
X^2 difference between the unconstrained model and the measurement weights model.

	X^2	Df	GFI	CFI	RMSEA
Unconstrained	1124.152	592	0.790	0.853	0.054
Constrained_measurement weights	1149.412	611	0.786	0.848	0.054

This study first used a multiple group analysis to test the structural relationships for each model. Then, using the pairwise parameter comparisons in Amos 20, the relationship between the two models was compared. A path analysis was also conducted for both models to test the group differences in terms of the levels of frequency.

The test results of the high frequency group were the same as the whole participant model except for the relationship between brand identification and participation. In comparison to the overall participants model, brand identification had significant effects on participation (β=0.43, p<.01). The results of the low frequency group were the same as the whole participant model except for the relationship between impression management and brand identification. In comparison to overall participant, the effects of impression management on brand identification were not significant (β=0.18, p=0.02)

Pairwise parameter comparisons were conducted to compare the effects of brand and community identifications on participation between the two groups. Among all paths, only the path between brand identification and participation showed a critical ratio value higher than the cut-off value of -1.965 (Table 5). The findings of this study have shown that frequency has a moderating effect on the relationship between brand identification and participation. Community identification showed significant effects on participation in both high- and- low frequency groups. However, the effects of brand identification on participation were significant only in the high frequency group.

Table 5.
Critical ratios for differences between parameters.

	BI-PT _high	CI-PT _high
BI-PT _low	-3.273	
CI-PT _low		1.546

5. Discussion

Based on social identity theory, this study investigated the effects of online brand communities' value creation practices on brand identification and community identification. In examining the relationship between value creation practices and brand and community identifications, brand use and impression management practices were defined as practices related to the focal brand and social networking practices and community engagement practices were defined as practices related to the community. In addition, this study measured the impact of brand and community identifications on participation. In measuring participation, this study attempted to contribute to online brand community research by measuring not only the qualitative but also the quantitative aspect of participation. The impact of participation on brand awareness was revealed.

Among the four value creation practices, this study defined brand use and impression management practices as the practices related to the focal brand. According to test results, brand identity is influenced by impression management practice but not by brand usage. These results are attributed to the characteristics of each practice. Brand use practice is an activity to give and receive practical help related to the use of a product, and it is carried out within the online brand community. Since the interaction is limited to online brand community members, not only brand's strengths are being discussed but also inconveniences experience while using the brand and the shortcomings that the brand wishes to improve. On the other hand, impression management practice focuses on activity outside of the online brand community. It aims to form a friendly impression of the brand and thus, it tends to deliver only the strengths rather than the weaknesses of the brand. Therefore, the members participating in impression management practice emphasize the strength and positive aspects of the brand and in the process, they identify themselves more easily with the brand.

Brand use and impression management practices are practices that are related to the focal brand whereas social networking and community engagement are practices related to the community. Test results showed that community engagement practice has a significant effect on community identification while social networking practice does not. Social networking practices are practices that online brand community members engage with when they first join the community. Members who newly joined in online brand community engage in higher-level practices as they repeatedly participate in social networking practice. Compared to social networking practice, community engagement practice can only be participated by members with a higher level of understanding about the rituals and traditions of the community. Online

brand community members gain a deeper understanding of the community's traditions, history and discipline by participating in activities such as documenting and badging, and in the process, identifying themselves with the community.

This study tested the effects of brand identification and community identification on the degree of participation in community activities. Test results showed that brand identification did not have a significant effect on participation, whereas, community identification had a significant effect on participation. These results suggest implications for marketers regarding the operational direction of online brand communities. Considering that high-level participation by members is essential for an online brand community to be maintained voluntarily, marketers should encourage members of an online brand community to immerse themselves in community activities and identify themselves with the community. Members who simply identify themselves with the brand tend not to participate in altruistic behaviors for the community because they want to get practical benefits related to brand-related experiences through community activities. Therefore, although members may be active in information search activities (e.g., lurking and reading) to enhance their individual consumption experience, they do not participate in activities that contribute to the community (e.g., leading). However, based on moral responsibility, members who identify themselves with the community actively participate in activities for the development of the community. The level of participation increases because members want to contribute to the community while creating new practices rather than simply consuming the existing practices in the online brand community.

Regarding the role of participation, the quantitative aspects of participation have not been studied in previous online brand community research. By testing both the qualitative and quantitative aspects of participation, this study showed that frequency, the quantitative aspect of participation, moderates the relationship between brand identification and participation.

These results suggest important implications for marketers. Even members who lack moral responsibility toward the community will engage in higher levels of participation if they are repeatedly exposed to community activities. For example, when a member identified with a brand repeatedly takes practical information from the community, the member feels a sense of debt to the community and thus, the member participates in altruistic activities to compensate for his behavior (e.g., contributing). Therefore, marketers should not only encourage members of an online brand community to participate at a deeper level of participation (e.g., leading) but also to access the online brand community even at lower levels of participation (e.g., lurking, shadowing). Members should be encouraged to be exposed to these practices as often as possible.

It was found that the level of brand awareness increased as members participated more deeply in online brand community activities. The results of this study showed that online brand community activities influence the decision-making of consumers and prove the effectiveness of online brand community as a marketing tool.

6. Limitations and Future Research

This study did not test the difference in influence between the types of online brand communities. Online brand communities can be divided into two large categories: firm-supported online brand communities and user-generated online brand communities. Depending on the type of online brand community, the degree of member participation and the value creation practices created may be different.

In addition, this study defined all types of brand communities existing in the digital environment as "online brand community". However, with the development of the digital environment, new types of digital platforms have emerged and the online brand community has been further subdivided accordingly. As an example, it is expected that the online brand community existing on a traditional website and the online brand community existing on social media will show different characteristics in various aspects (e.g., member characteristics, interaction types, etc). Therefore, in future research, it will be necessary to study the change of the online brand community according to the change of the digital environment.

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