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An Empirical Study of Brand Fan Page Engagement Behaviors

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Abstract: Nowadays, numerous companies present themselves on social networking sites (SNSs) by establishing brand communities to maintain continuous interaction with existing and potential customers to influence their brand choices, promote the products and services, and cultivate brand loyalty. However, the research into online brand communities is mainly centered on that utilizing the platforms of websites instead of using social media platforms. Thus, it calls for more studies to investigate consumer brand fan page engagement behavior to increase their fan base and further induce a fan's purchase behavior. By adopting the perspectives of co-production and social identity theory, this study endeavors to investigate the impact of customer perceived value derived from engaging in brand fan pages on their identification with and stickiness to an online brand community in the SNS-based context. The target population of this study is consumers who have ever participated in an online brand community. Data was collected through a web-based survey. After deleting 36 incomplete responses, 524 usable responses remained for further analysis, with an effective sample rate of 93.57%. The results revealed that utilitarian value, hedonic value, and monetary value separately exerted a significantly positive effect on community identification. Utilitarian value and hedonic value also had significantly positive effects on community stickiness. Moreover, community identification was positively related to community stickiness. Community identification was found to have significantly positive influences on both word-of-mouth and repurchase intention. Furthermore, community stickiness exerted a significantly positive effect on word-of-mouth and repurchase intention. This study confirms the importance of perceived value on enhancing consumers' identification with and their stickiness to online brand communities. Therefore, businesses should provide consumers with the value they desired to cultivate customer loyalty to their brand fan pages.

Keywords: online brand community; customer value; identification; stickiness; customer loyalty

1. Introduction

Modern businesses, especially small- and medium-sized enterprises (SMEs), utilize social media as a critical marketing vehicle to increase brand exposure, enhance brand attractiveness, reduce marketing expenses, improve sales, and develop loyal fans [1–3]. With the combined characteristics of social and media, social media is the channel or platform on which individuals with common interests can interact, create, and exchange user-generated contents with each other [2]. Social media use provides a multi-way interaction among consumers, customers, and companies to communicate the information, knowledge, values, and ethics relevant to different products and services, thereby facilitating companies to build and manage customer relationships [4]. Among the various types of social media proposed by Karimi and Naghibi [5], social networking sites (SNSs) (e.g., Facebook,

Twitter, and Instagram) have attracted millions of users, infiltrated people's daily life, and become popular social platforms for computer-mediated communication [6,7].

SNSs refer to a second generation of web development and design features that facilitate communication, information sharing, and collaboration on the World Wide Web [8]. Many businesses have employed SNSs as an important practice in relationship marketing due to the benefits of synchronous interaction and communication with multiple parties without geographical constraints [9,10]. Companies establish brand communities on SNSs to maintain continuous interaction with existing and potential customers to promote their products and services [11], influence consumers' brand choices [12], and cultivate customers' brand loyalty [10,13]. Muniz and O'Guinn [13] defined a brand community as "a specialized, non-geographically bound community based on a structured set of social relations among admirers of a brand." A brand community can create numerous benefits for businesses and consumers. Businesses can collect customer information [13,14] to facilitate the innovation of their products and services through a brand community [10,15]. Consumers' needs, wants, and opinions can be heard and be satisfied by interacting with the brand, company employees, and other consumers in a brand community [13]. Therefore, how to build a successful SNS-based brand community to manage consumer–brand, consumer–consumer, and consumer–marketer relationships is critical for the sustainability of businesses and calls for more academic marketing research.

Facebook is one of the most popular SNSs, which has a market value of approximately $177 billion as of 28 February 2014 with a total of over one billion users all over the world [16]. Since Facebook launched "fan pages" in 2007, it has offered enterprises an innovative way to contact and communicate with their customers or potential consumers [13]. A brand fan page is defined as "a social media profile created and managed by a company with the intention to market its products and services and foster closer relationships with consumers" [14]. Brand fan pages allow businesses to distribute and exchange information virally [17] as well as help consumers to communicate with others and express their sentiments to companies [18]. Recent studies indicate that users of brand fan pages tend to exhibit different levels of engagement and brand promotion behavior [17]. Moreover, brand fans appear to spend more money on focal brands than non-fans [19]. Fans of a brand can make various contributions to the business and thus, marketers and practitioners must increase their fan base and cultivate fans' loyalty to their brand community. However, research into examining consumers' motivations or benefits of engaging in brand fan pages is scarce [18]. To fill the aforementioned research gaps, the objectives of this research are to develop a theoretical model and conduct an empirical study to explore the antecedents and outcomes of brand fan page engagement behavior.

As the information in a brand fan page is co-created by an enterprise and its consumers [20], consumer engagement in a fan page is viewed to be accordant with the value co-creation logic [21]. Moreover, such an engagement can be regarded as a model of customers' co-production with a business. Co-production refers to services produced through the interaction between customers and service providers [22,23]. Through co-production, customers and service providers can create or attain further value for themselves and for any other partners [24]. Therefore, co-production has become a central tenet of a proposed service-centered logic for marketing [25]. Co-production has also received much attention from several scholars. In addition, the reason for offering brand fan pages is consistent with the definition of so-called "brand communities," which provide a social and communication platform for consumers to connect and share their common interests about their favorite brands with others [20]. Hence, the present research integrates the perspectives of co-production and social identity theory to investigate the impacts of customers' perceived value derived from engaging in brand fan pages on their identification with and stickiness to online brand communities in an SNS-based context. This study also examines the relationships among brand community identification, stickiness, and customer loyalty to determine whether consumers' identification with a brand community can lead to their stickiness to the community and further influence their repurchase intention and positive word of mouth.

2. Theoretical Background

2.1. Co-Production

Co-production is a prevalent phenomenon in a postmodern world [26], where consumers are actively engaged in service production and delivery. Wikström [27] defined co-production as buyer–seller social interaction and adaptability with a view of attaining further value (p. 10). The logic underlying co-production is that value can be created for customers and any other partners within their interaction process [27,28]. As co-production enables firms to achieve competitive advantages [25], it has become a major topic of discussions and received much research interest in marketing literature [29].

Past studies on co-production focused on the fields of public service and consumer market. In public service, the co-production between citizens and governments is investigated. In consumer market, the co-production between firms and customers is examined. The findings of public service-related studies unequivocally support that public services, such as education, public health, and community safety, can be effective through the active co-production of citizens [30]. The results of consumer market research confirm that co-production can generate certain benefits for firms and customers. For firms, co-production can increase productivity gains [31] and enhance customer satisfaction and loyalty [24,25]. By contrast, customers can achieve high service quality and increased control [25] and receive product or service customization [29] via co-production with firms.

2.2. Social Identity Theory

Social identity theory states that in articulating their sense of self, people typically go beyond their personal identity to develop a social identity [32,33]. People do so by identifying with or categorizing themselves in a contextual manner as members of various social categories, such as gender, occupation, sports team, and other short-lived groups [32]. Social identity enables people to create a social environment, where they locate themselves together with others [33], resulting in intragroup favoritism and intergroup differentiation [34]. Tajfel [35] defined social identity as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups), together with the value and emotional significance attached to that membership." According to the definition, Ellemers et al. [36] deconstructed social identity into three distinct components: a cognitive, an evaluative, and an emotional component to resolve its conceptual confusion. The proposition has been adopted in past research [37].

Social identification refers to the perception of belongingness to a group and a sense of oneness with the group [38]. With identification, the members of a group perceive themselves as psychologically intertwined with the group's fate and view its fortunes, goals, successes, and failures as their own [39]. Identification is a complex perception that draws on beliefs, attitudes, and emotions [39,40]. With respect to the components of identification, certain scholars regard identification as a 3D construct [37], whereas others argue about the existence of a fourth component of identification, namely, a behavioral component [41]. Previous research indicated that individual motives lead to organizational or group identification [42]. Identification is suggested to result in beneficial consequences for either profit or nonprofit organizations. The findings confirm that various identification results are present in individuals' supportive behavior, including customer loyalty [32], positive word of mouth [32,33], and purchase intention [33,42,43].

3. Research Model and Hypotheses

3.1. Impacts of Customer Perceived Value on Brand Community Identification

By adopting the perspectives of self-determination theory, Kelley and Alden [44] investigated online brand community (OBC) engagement behavior and proposed an OBC motivation development continuum model. According to their model, the stages consumers engaging in an OBC can be classified into three continuum stages, including introjection stage, identification stage, and

assimilation/internalization stages. In the introjection stage, consumers' motivation plays an important role in their participation in an OBC. Dholakia et al. [45] argued that both individual- and group-level motives have impact on consumer participation in virtual communities, wherein value perceptions stand for individual-level motives and social influences stand for group-level motives. Consumers are also motivated to interact with a brand on Facebook by certain factors, such as search for information, entertainment, reward, trust, and so on [46]. Schau et al. [15] indicated that brand communities enable consumers to engage in co-productive activities with organizations to provide values to them. Such collaborative value creation can be fostered and nurtured by adopting a broad array of practices. In the context of OBCs, community members and visitors can create and co-create value for themselves, other members, and/or organizations through individual and collaborative efforts [47]. Customer perceived value, defined as "a consumer's overall assessment of the utility of a product/service based on perceptions of what is received and what is given" [48], reflects a customer's perceived net benefits arising from specific interactions with a particular object [49]. Previous research maintained that perceived value is inherent in the interaction between a consumer and a product or service. Perceived value is also subjectively perceived by customers [16,50] that can be derived from performance/quality, emotional, money, and social factors [51].

Perceived value is a context-specific perception [16] and has been utilized to study consumer behavior in different environments. Two types of value, namely, utilitarian and hedonic values, have been widely investigated by several scholars in the online shopping context [52,53]. Hsu and Lin [54] applied both perceived values to study in-app purchase intention and confirmed the impact of perceived value on mobile application users' attitude and satisfaction. In the context of information technology or information system, utilitarian value is related to enhance individuals' task performance to fulfill specific goals, while hedonic value is associated with increasing individuals' pleasurable experience of performing a particular behavior [54]. Dholakia et al. [45] claimed that consumers participate in virtual communities to obtain and share information to accomplish specific tasks, such as solving problems and validating decisions (i.e., utilitarian value), and to receive fun and relaxation through interacting with others (i.e., hedonic value). Jahn and Kunz [55] investigated the significance of information sharing on brand fan page engagement. Their findings show that content-oriented functional and hedonic values positively affect fan-page usage intensity. Research into online brand communities also demonstrates that utilitarian and hedonic values resulting from brand fan page engagement positively lead to members' behavioral intentions to purchase a brand's products/services [56]. Perez-Vega et al. [56] revealed that utilitarian value is associated with solving problems either by the brand or other community members, whereas hedonic value is related to the mental and emotional interactions among users, brands, and other community members. In the present study, utilitarian value refers to the utility derived from the content of an OBC to fulfill specific needs, such as solving problems and validating decisions. By contrast, hedonic value describes the utility derived from feelings or affective states (e.g., pleasure, fun, and entertainment) gained through OBC engagement. We posit that utilitarian and hedonic values can affect consumers' brand fan page engagement behavior.

In addition to the two perceived values, Sung et al. [57] indicated that one of the reasons for consumers to participate in a brand community is to acquire exclusive offers and deals and follow promotional events. Modern loyalty programs are utilized as a crucial marketing practice to manage customer bases in various industries, such as retailers, airlines, car manufacturers, and hotels [58]. In the hospitality industry, businesses often employ monetary sales promotions to provide their customers with incentives or immediate transactional benefits to increase customer purchase intentions [8]. Research on hospitality issues regards monetary sales promotion as an aspect of special treatment or individualized service offered by a business to satisfy its customers' economic needs [8]. In the present study, monetary value refers to the utility derived from the economic advantages (e.g., discounts, special price breaks, coupons, or free gifts) that are provided by an OBC. Han and Kim [59] identified a positive relationship between gift certificate offering and restaurant customers' attitude. Ladhari et al. [60]

found that collecting discount coupons and availing exclusive discounts for Facebook page members are two of the main motives for consumers to visit a food retailer's Facebook page.

In an OBC environment, customer perceived values are postulated to have impacts on members' identification with the community. Prior studies on organizational identification notified that various kinds of motives can lead consumers to adopt a social identity [42,61]. Contributions of an organization to the accomplishment of an individual's goal are found to have effects on organizational identification [32,62]. Dholakia et al. [45] indicated that identifying with a virtual community that an individual has volitionally selected stems from an understanding that membership entails significant benefits. Identification with social groups is also derived, first and foremost, from their functionality. The evaluative component of social identification considers a positive or negative value connotation attached to the group membership. Thus, the three types of customer values: utilitarian, hedonic, and monetary values are proposed to be associated with brand community identification. Consumers can assess the utilitarian, hedonic, and monetary values they experience from engaging in an SNS-based brand community. Moreover, consumers likely identify with a community that can provide them with the values congruent to their expectancies. Literature indicates that consumers' motives and organizations' capacity to accomplish individuals' goals have influences on individuals' identification with an entity or an event [62,63]. Therefore, we posit:

Hypothesis 1a (H1a). *Utilitarian value has a positive effect on consumers' identification with an OBC.*

Hypothesis 1b (H1b). *Hedonic value has a positive effect on consumers' identification with an OBC.*

Hypothesis 1c (H1c). *Monetary value has a positive effect on consumers' identification with an OBC.*

3.2. Impacts of Customer Perceived Value on Brand Community Stickiness

Roy et al. [64] defined stickiness as "the time a customer spends at an e-retail website whether during a single visit or over multiple visits". Stickiness is found to make significant contributions to e-retailers' bottom lines [65]. With the rising popularity of social media and SNSs, the research locus of stickiness has gradually transferred to the settings of virtual communities. Lee and Hyun [66] studied the antecedents of stickiness in an online tourist community context and indicated that trusting beliefs and solution acceptance are positively related to stickiness. In the study of Chiang and Hsiao [67], they contended that continuance motivation and sharing behavior are associated with YouTube viewers' stickiness. Hsu and Liao [68] inspected stickiness in the settings of a microblog and found an inverted U-shaped curve relationship between perceived information accessibility and stickiness. Hollebeek [49] indicated that consumer engagement with a brand generates more hedonic values than utilitarian values. Kang et al. [20] posited that hedonic value is positively associated with consumer participation in a Facebook fan page. On the contrary, Shang et al. [69] argued that utilitarian value is positively related to consumer resonance on SNSs. Hsu and Lin [43] proposed that utilitarian and hedonic values positively affect consumers' attitude and satisfaction with a mobile application and thereby lead their stickiness to it. Furthermore, Zhang et al. [70] revealed that functional and hedonic values positively affect stickiness. The results of previous studies confirm that customer perceived value has positive effects on consumers' continued intention [7], customer loyalty [71,72], and intention to stick [73]. Hence, we propose:

Hypothesis 2a (H2a). *Utilitarian value has a positive effect on consumers' stickiness to an OBC.*

Hypothesis 2b (H2b). *Hedonic value has a positive effect on consumers' stickiness to an OBC.*

Hypothesis 2c (H2c). *Monetary value has a positive effect on consumers' stickiness to an OBC.*

3.3. Impacts of Brand Community Identification on Stickiness

According to Kelley and Alden's [44] OBC motivation development continuum model, internalization stage is the final stage, which occurs when an individual identifies with an object and fully assimilates it with the self (e.g., integral part of one's identity) (p. 793). Social identity theory [33] maintains that social identification occurs when the members of a group perceive themselves as psychologically intertwined with the group's fate and view its fortunes, goals, successes, and failures as their own [39]. Findings of previous research confirm the effects of social identification on perceived similarity [33], positive word of mouth [33,74], and customer loyalty [32,75].

Social identity theory is also employed by numerous researchers to investigate consumer engagement behavior in the settings of virtual communities [19,45,67,76], or consumers' intention to purchase mobile application [54]. Dholakia et al. [45] inspected consumers' virtual community participation intention and revealed that social identity is positively associated with participation behavior. Consumers' identification with a brand is also found to have a positive influence on their brand community engagement [19]. Hammedi et al. [76] further confirmed the positive relationship between personal identification and core brand community and participation in it. The results of Hsu and Lin's research [54] proposed that social identification leads to stickiness to mobile application use. Furthermore, previous studies firmly believed that identification is positively related to trust [77] or commitment [78]. Trust and commitment are positively associated with stickiness [66,79]. Thus, we propose that identification can lead to stickiness.

Hypothesis 3 (H3). *Brand community identification has a positive effect on consumers' stickiness to an OBC.*

3.4. Impacts of Brand Community Identification on Customer Loyalty

Van Dick et al. [41] argued that the fourth component of social identity, namely, behavioral identification may exist apart from the cognitive, evaluative, and emotional components of social identity. An individual is proposed to be ready to stand for a certain group and behave in a way which is supportive of the group once he or she perceives himself or herself as a member of the social group. The same individual can positively evaluate the group's characteristics and feel strong affective ties with the group. Considerable research confirms the existence of supportive behavior derived from social identification.

Studies on customer–company identification indicate that identification with a company results in customer extra-role behaviors, such as positive word of mouth, product improvement suggestions, cooperation, and recruitment of other customers [22,80]. Moreover, organizational identification is positively related to customer purchase intention or re-patronizing intention [42,43,81]. Prior research on nonprofit organizations also identified a positive relationship between alumni's organizational identification and their support for the organization [82]. In the context of sports, team identification leads to fans' supportive behavior [83,84]. Furthermore, brand identification is suggested to positively associate with supportive behavior, including word of mouth, repurchase, and recommendation intention [33,85].

Literature suggests that customers tend to support a social group once they identify with it. Accordingly, in the SNS-based brand community context, consumers likely display supportive behavior (i.e., positive word of mouth and re-patronizing intention) toward a brand community once they generate an identification with it. Hence, we hypothesize:

Hypothesis 4a (H4a). *Brand community identification has a positive effect on consumers' word of mouth.*

Hypothesis 4b (H4b). *Brand community identification has a positive effect on consumers' repurchase intention.*

3.5. Impacts of Brand Community Stickiness on Customer Loyalty

Customer loyalty attracts researchers' attention because studies indicate that customer loyalty can help retailers either gain additional financial profits [86] or achieve sustainable competitive advantages [87]. Past research suggested that a loyal customer tends to repurchase or re-patronize a preferred product/service/retailer [88] and makes further recommendations to others [89,90].

Holland and Baker [91] defined website stickiness as "the sum of all the website qualities that induce visitors to remain at the site rather than move on to other sites." Hence, website stickiness refers to the ability of a website to induce a customer to prolong his/her duration time, navigate deeply into a site, and revisit the website frequently. They proposed that encouraging online community likely enhances customers' site stickiness and positive attitude that lead to brand loyalty. Kim, Baek, Kim, and Yoo [92] examined the issue of mobile application and explored a positive relationship between mobile application stickiness and word of mouth. Zhang et al. [70] also confirmed the positive effects of stickiness on word of mouth in the settings of SNSs. Moreover, Hsu and Lin [54] indicated that stickiness is positively associated with consumers' intention to purchase mobile applications. On the basis of the above discussions, we propose:

Hypothesis 5a (H5a). *Stickiness to an OBC has a positive effect on consumers' word of mouth.*

Hypothesis 5b (H5b). *Stickiness to an OBC has a positive effect on consumers' repurchase intention.*

Based on the discussions above, the research model of this study is displayed in Figure 1, which describes the relationships between the three customer perceived values, community identification and stickiness, word of mouth and repurchase intention.
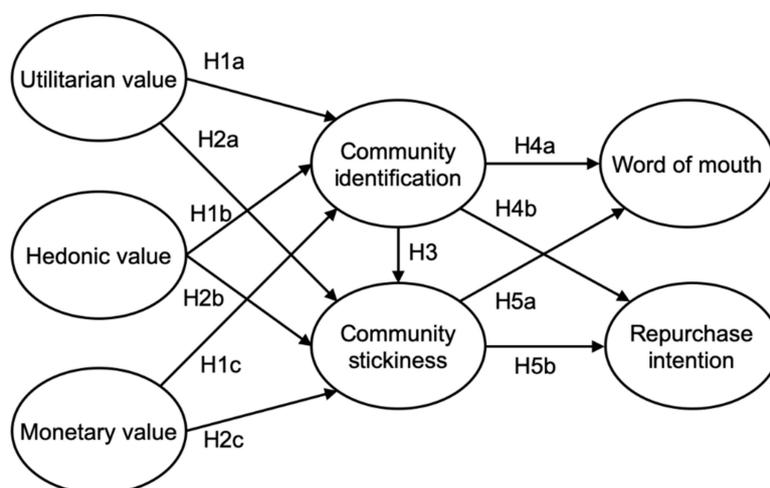

Figure 1. Research Model.

4. Methodology

4.1. Data Collection

A survey approach was utilized to collect data. To verify the measurement scales, this research conducted a pilot study. The preliminary questionnaire was distributed to 35 college students with OBC engagement experiences to ensure content validity. This dataset was only used as the pre-test to ensure the reliability of measurement constructs. A Cronbach's $\alpha > 0.7$, factor loading > 0.5, an average variance extracted (AVE) > 0.5, and composite reliability (CR) > 0.7 indicated a satisfactory survey construction.

The target population of this study was consumers who have ever participated in an OBC. Convenience sampling approach was employed because many people are using Facebook in Taiwan

and such a sampling approach enables us to collect data from volunteer individuals [1]. Additionally, convenience sampling approach is also recommended for a quantitative research [1]. Data were collected through a web-based survey conducted in May 2018. To recruit additional voluntary respondents, we posted our questionnaire invitation letter and its hyperlink on the makeup Bulletin Board System (BBS) of Post Text Table (PTT), which is the largest Bulletin Board System (BBS) platform in Taiwan [78]. Doing so allowed voluntary respondents to easily link to the DoSurvey survey portal (https://www.dosurvey.com.tw/) and complete the survey. Moreover, we provided 10 gifts worth USD 10–30 as rewards for our lottery game to increase the response rate. We received 560 responses from the survey. After deleting 36 incomplete responses, a total of 524 usable responses remained for further analysis, with an effective sample rate of 93.57%.

4.2. Measurement Development

The measurement consisted of three parts. The first part contained several questions to ask respondents' experiences or habits when engaging in online brand communities. The second part examined the model constructs: utilitarian value, hedonic value, monetary value, community identification, community stickiness, word of mouth, and repurchase intention. All the construct items were drawn from previous studies with a slight modification to enhance appropriateness for the present research. Utilitarian and hedonic values were measured by six items from Shang et al. [69], whereas monetary value was assessed by five items from Park and Kim [93] and Kang et al. [20]. Community identification was measured by six items from Bhattacharya et al. [63], Casaló et al. [94], Shang et al. [69], Shen and Chiou [95], and Trail et al. [75]. Community stickiness was assessed by six items from Hsu and Lin [54] and Zhang et al. [70]. Word of mouth was measured by six items from Jones and Reynolds [96] and Munnukka et al. [97], whereas repurchase intention was assessed by five items from Erkan and Evans [98], Liao et al. [99], and Shin et al. [100]. All items were measured using a five-point Likert scale with anchors from "strongly disagree" as 1 to "strongly agree" as 5. The third part of the measurement elicited respondents' demographic information. Table 1 shows a summary of measurement scales.

Table 1. Measures of constructs.

Construct	Item	Measure	Source
Utilitarian value (ULV)	ULV1	The content on the brand community is useful.	Shang et al. (2017)
	ULV2	The content on the brand community is beneficial.	
	ULV3	The content on the brand community is practical.	
Hedonic value (HDV)	HDV1	The content on the brand community is fun.	Shang et al. (2017)
	HDV2	The content on the brand community is exciting.	
	HDV3	The content on the brand community is pleasant.	
Monetary value (MTV)	MTV1	The brand community provides me with special offers (e.g., discounts and promotions).	Park and Kim (2014)
	MTV2	The brand community gives me loyalty incentives for my continued participation.	
	MTV3	I obtain discounts or special deals that most consumers do not get.	Kang et al. (2014)
	MTV4	I obtain better prices than other consumers from the brand community.	
	MTV5	I receive free coupons by becoming a member of the brand community.	

Table 1. *Cont.*

Construct	Item	Measure	Source
Community identification (CMI)	CMI1	I consider myself as a real member of the brand community.	Trail et al. (2005)
	CMI2	The brand community's successes are my successes.	Bhattacharya et al. (1995)
	CMI3	Being a member of the brand community is very important to me.	Bhattacharya et al. (1995)
	CMI4	I will experience a loss if I have to stop being a member of the brand community.	Trail et al. (2005)
	CMI5	I am very attached to the brand community that I participate in.	Shen and Chiou (2009)
	CMI6	I see myself as a part of the brand community.	Casaló et al. (2010)
Community stickiness (CMS)	CMS1	I can stay for a long time while browsing the brand community.	Zhang et al. (2016)
	CMS2	I will visit the brand community frequently.	
	CMS3	I will stay longer on this brand community than other communities.	Hsu and Lin (2016)
	CMS4	I intend to spend more time on the brand community I belong to.	
	CMS5	I use the brand community as often as I can.	
	CMS6	I use the brand community every time I am online.	
Word of mouth (WOM)	WOM1	I invite my close acquaintances to join this brand community.	Munnukka et al. (2015)
	WOM2	I often talk to people about the benefits of this brand community.	
	WOM3	I often introduce my peers or friends to this brand community.	
	WOM4	I likely say good things about this brand community.	Jones and Reynolds (2006)
	WOM5	I recommend this brand community to my friends and relatives.	
	WOM6	I recommend this brand community to others.	
Repurchase intension (RPT)	RPT1	I will purchase a product from the brand community when I need one.	Erkan and Evans (2016)
	RPT2	I will definitely try the brand community.	
	RPT3	The probability that I will repurchase from the brand community is high.	Liao et al. (2016)
	RPT4	I want to buy products from the brand community again.	Shin et al. (2013)
	RPT5	I want to buy products from the brand community continuously through this site.	

5. Data Analysis and Results

Structural equation modeling (SEM) was employed to analyze the data. We first examined the measurement model to verify the reliability and validity of the instrument. We then assessed the structural model with IBM SPSS AMOS. Confirmatory factor analysis (CFA) was performed to demonstrate the validity of the scale, whereas SEM was conducted to test the hypotheses.

5.1. Sample Profile

The demographic profile of the brand fan page respondents is presented in Table 2. Female participants comprised 98.5% of the sample, whereas 1.5% was male. The age of most respondents ranged from 18 to 25 (75.4%), followed by the 26–30 age group (18.9%). The results indicated that

82.3% of respondents had completed a bachelor's degree, whereas 12.2% possessed a graduate degree. Education profiles fit with current SNS user groups in Taiwan [101]. Moreover, 21% of the respondents participate in more than eight cosmetic brand communities, whereas those participating in more than three communities accounted for 79%. More than 66% of the respondents reported to have participated in an online cosmetics brand community for more than one year.

Table 2. Sample profile.

Measure	Item	Frequency	Percentage (%)
Gender	Male	8	1.5
	Female	516	98.5
Age	Below 18	3	0.6
	18–25	395	75.4
	26–30	99	18.9
	31–40	22	4.2
	41–50	3	0.6
	Over 50	2	0.4
Education	High School	29	5.5
	College	431	82.3
	Graduate	64	12.2
Number of cosmetic brand communities the respondents belong to	1	73	13.9
	2	109	20.8
	3	107	20.4
	4	53	10.1
	5	58	11.1
	6	11	2.1
	7	3	0.6
	8 and more	110	21
Duration of the participation in cosmetic brand communities	6 months or less	87	16.6
	7–12 months	90	17.2
	1–2 years	156	29.8
	2–3 years	107	20.4
	3–4 years	48	9.2
	4–5 years	15	2.9
	5 years and more	21	4.0

5.2. Measurement Model

A CFA using AMOS 21.0 was conducted to test the measurement model. The initial assessment indicated that items with a factor loading less than 0.5 should be removed [102]. Thus, the final instrument included a total of 34 items. Table 3 shows the measurement items with factor loadings, composite reliabilities, Cronbach's α, and AVE estimates for each construct. The data indicated that the reliability of the individual items ranged from 0.60 to 0.94, exceeding the minimum acceptable value of 0.50 [102]. The Cronbach's α estimates and CR values were found greater than 0.70, indicating a satisfactory level of internal consistency [103] and high reliability of multiple items for assessing each construct [27].

The validity analysis involved convergent and discriminant validity. The CR values of latent variables were between 0.71 and 0.93, which was larger than the minimum suggested value of 0.70; thus convergent validity was sufficient, and the scale had good internal consistency [104]. The AVE values were between 0.5 and 0.71, suggesting that all variables had good convergent validity [104]. Meanwhile, the square roots of the AVE values of the latent variables were larger than those of the correlation coefficients (Table 4); the scales for evaluating these constructs were also deemed to exhibit fairly good discriminant validity [104].

Table 3. Factor loadings, Cronbach's α, composite reliability (CR), and average variance extracted (AVE).

Construct	Item	Factor Loading	Cronbach's α	CR	AVE
Utilitarian value (ULV)	ULV1	0.741	0.818	0.819	0.602
	ULV2	0.803			
	ULV3	0.783			
Hedonic value (HDV)	HDV1	0.698	0.79	0.713	0.501
	HDV2	0.752			
	HDV3	0.798			
Monetary value (MTV)	MTV1	0.693	0.769	0.833	0.5
	MTV2	0.783			
	MTV3	0.692			
	MTV4	0.767			
	MTV5	0.589			
Community identification (CMI)	CMI1	0.692	0.865	0.866	0.521
	CMI2	0.724			
	CMI3	0.708			
	CMI4	0.668			
	CMI5	0.751			
	CMI6	0.776			
Community stickiness (CMS)	CMS1	0.738	0.868	0.872	0.535
	CMS2	0.763			
	CMS3	0.684			
	CMS4	0.732			
	CMS5	0.846			
	CMS6	0.605			
Word of mouth (WOM)	WOM1	0.759	0.93	0.926	0.677
	WOM2	0.775			
	WOM3	0.828			
	WOM4	0.848			
	WOM5	0.88			
	WOM6	0.839			
Repurchase intention (RPT)	RPT1	0.686	0.9	0.912	0.677
	RPT2	0.743			
	RPT3	0.852			
	RPT4	0.942			
	RPT5	0.866			

Table 4. Discriminant validity: correlations and square roots of AVE.

	ULV	HDV	MTV	CMI	CMS	WOM	RPT
ULV	**0.776**						
HDV	0.747	**0.71**					
MTV	0.479	0.472	**0.7**				
CMI	0.665	0.652	0.62	**0.74**			
CMS	0.647	0.697	0.475	0.735	**0.731**		
WOM	0.546	0.532	0.408	0.657	0.6	**0.823**	
RPT	0.559	0.505	0.271	0.463	0.475	0.509	**0.823**

Note: Diagonal values in bold are square roots of AVE values.

5.3. CFA

CFA was conducted to validate scales for the measurement of specific constructs proposed in the conceptual model ($\chi2$ = 559.977, df = 274, *p* < 0.001, TLI = 0.96, CFI = 0.96, RMSEA = 0.04). The Chi-square ratio ($\chi2$/df) was 2.04, which falls between 1 and 3. The TLI and CFI values were greater than 0.90, whereas the RMSEA value was below 0.08, reflecting an acceptable model that fits

the following criterion suggestions proposed by Bagozzi and Yi [105]. The CFA results indicated a satisfactory model fit.

5.4. Structural Model

The results of the structural model analysis show that the overall model fit was highly qualified and satisfactory ($\chi2/df$ = 2.2, $p < 0.001$, GFI = 0.88, NFI = 0.9, TLI = 0.94, CFI = 0.95, RMSEA = 0.04) [105,106]. SEM was conducted to test the hypotheses after the overall model fit was confirmed. Figure 2 demonstrates the results of the proposed research model and standardized path coefficients for all the hypotheses. Table 5 provides the results of the hypothesis testing. Utilitarian (β = 0.434, $p < 0.001$), hedonic (β = 0.374, $p < 0.001$), and monetary (β = 0.399, $p < 0.001$) values separately exerted a significantly positive effect on community identification, thereby supporting H1a, H1b, and H1c. Utilitarian (β = 0.204, $p < 0.001$) and hedonic (β = 0.341, $p < 0.001$) values also had significantly positive effects on community stickiness, thus confirming H2a and H2b. Moreover, community identification was positively related to community stickiness (β = 0.429, $p < 0.001$), hence H3 was supported. Community identification was found to have a significant positive influence on word of mouth (β = 0.444, $p < 0.001$) and repurchase intention (β = 0.252, $p < 0.001$), thereby confirming H4a and H4b. Similarly, community stickiness exerted a significant positive effect on word of mouth (β = 0.247, $p < 0.001$) and repurchase intention (β = 0.271, $p < 0.001$), thus supporting H5a and H5b.
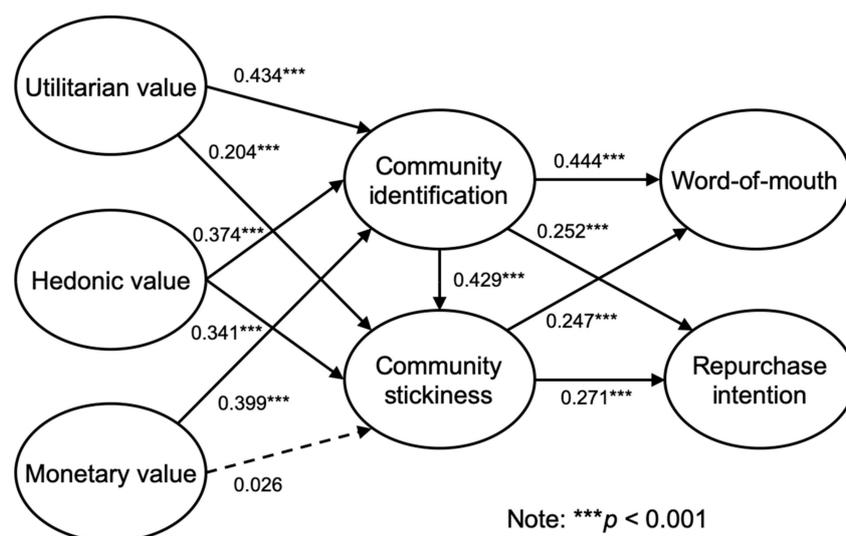

Figure 2. Results of Hypothesis Testing.

Table 5. Results of hypothesis testing.

	Hypothesis	**Path**	*t*-**Value**	**Result**
H1a	Utilitarian value → Community identification	0.434 ***	8.22	supported
H1b	Hedonic value → Community identification	0.374 ***	7.18	supported
H1c	Monetary value → Community identification	0.399 ***	7.01	supported
H2a	Utilitarian value → Community stickiness	0.204 ***	3.90	supported
H2b	Hedonic value → Community stickiness	0.341 ***	6.23	supported
H2c	Monetary value → Community stickiness	0.026	0.49	not supported
H3	Community identification → Community stickiness	0.429 ***	5.96	supported
H4a	Community identification → Word-of-mouth	0.444 ***	6.59	supported
H4b	Community identification → Repurchase intention	0.252 ***	3.81	supported
H5a	Community stickiness → Word-of-mouth	0.247 ***	4.00	supported
H5b	Community stickiness → Repurchase intention	0.271 ***	4.12	supported

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

6. Discussion

The results of the present study confirm the significance of perceived value on consumers' engagement in an OBC, which is accordant with the proposition of previous research that consumers are motivated to participate in OBCs to acquire desired values [44,45,55]. The findings of this study exhibit that utilitarian value, hedonic value, and monetary value have positive impact on consumers' identification with an OBC (H1a, H1b, and H1c). The significant effects of these three perceived values on OBC identification indicate that consumers tend to strongly identify with the organizations which can offer them membership benefits [32,63]. Whenever consumers perceive they can acquire more value from engaging in a brand fan page, they are more likely to identify with it, which is concordant with past studies [32,42,61]. Except monetary value, both utilitarian value and hedonic value are shown to have positive effects on OBC stickiness (H2a and H2b). Consumers are predisposed to spend more time at or frequently visit an OBC which can offer them more perceived value [20,49].

This study reveals a positive relationship between OBC identification and OBC stickiness (H3). As indicated in previous studies, consumers tend to stick to an OBC when they perceive belonging to the group [19,54]. The results of this study demonstrate that OBC identification has positive influences on consumers' word of mouth (H4a) and their repurchase intention (H4b), which is parallel to the results of past studies [42,80,81]. Consumers are predisposed to recommend an OBC or repurchase the products of a brand when they identify with the OBC. Moreover, consumers' stickiness to an OBC is shown to have positive impact on their word of mouth (H5a) and repurchase intention (H5b). The findings imply that consumers tend to generate positive word of mouth and repurchase a brand when they prolong their duration time on or frequently revisit an OBC. The positive effect of OBC stickiness on customer loyalty is coincident with previous research [54,70,92]. Surprisingly, this study fails to explore a significant relationship between monetary value and OBC stickiness, which is contrary to the findings of Lin [73]. The reason may be the primary motive for consumers to participate in a fan page, that is, to receive and exchange information and experiences, or to communicate with businesses or other consumers, rather than to obtain coupons, free trials, or other promotion incentives. The result is similar to that of Kang et al. [20], who demonstrated that monetary benefits (i.e., discounts or special price breaks) have no significant effects on consumers' active participation in Facebook fan pages.

7. Conclusions

Despite the growing academic interests in online brand communities, most studies are focused on investigating brand communities utilizing the platforms of websites but relatively neglect those using social media platforms, e.g., Facebook. Additionally, research concerning the issues of Facebook brand fan page engagement still remains limited. The objectives of this research are to conduct an empirical study and to achieve a comprehensible silhouette of consumers' brand fan page engagement behavior by integrating the perspectives of co-production and social identity theory. Our results provide theoretical and managerial implications for researchers and practitioners.

7.1. Theoretical Implications

Past research on brand fan page mainly focused on identifying the motives of fan page engagement [20,55] and exploring the consequences of engagement behavior [56,107]. Relatively scant research has employed holistic viewpoints to study consumer engagement behavior toward brand fan pages. The present study differentiates from previous literature by adopting the aspects of co-production and social identity theory to study: (1) what values consumers perceive from engaging in an OBC, (2) how these values influence consumers' identification with and stickiness to the OBC, and (3) whether community identification and stickiness can lead to consumers' supportive behavior toward the OBC (i.e., positive word of mouth and repurchase intention). By investigating consumer behavior during the whole participation process, this research adds to the theoretical body of knowledge about building consumer–brand relationships through the use of Facebook fan pages. Previous research

maintains that contributions of an organization to the accomplishment of an individual's goal lead to organizational identification [39,63]. Our findings confirm the significant impact of perceived value (e.g., utilitarian, hedonic, and monetary values) on OBC identification, which indicates that consumers are predisposed to identify with a brand fan page which can offer them desired values. As proposed by past studies that customer perceived value is positively associated with intention to stick [73], the results indicate that utilitarian and hedonic values have positive influences on consumers' stickiness to a brand fan page. Moreover, OBC identification is found to enhance consumers' stickiness to a brand fan page. The results of our study further prove the existence of behavioral identification [41]. Consumers are more likely to generate positive word of mouth and repurchase intention when they are identified with and sticky to a brand fan page.

7.2. Managerial Implications

An SNS-based OBC is a new medium to build and bind the relationships among customers and between customers and companies. The ways on how to create a virtual context for consumers and company employees to socialize, discuss, and share knowledge and information and offer consumers the value they pursue are critical for building a successful brand fan page. Our results confirm the importance of perceived value on enhancing consumers' identification with and their stickiness to online brand communities. Therefore, practitioners should provide consumers with sufficient and useful information to help consumers solve problems, or validate purchase decisions to increase their perceived utilitarian value. To enhance consumers' perceived hedonic value, practitioners can create a visually appealing content, establish an environment with elements of sensory pleasure, or stimulate mental and emotional interaction between consumers and brands to make the engagement experience pleasurable. Whenever consumers perceive utilitarian and hedonic values derived from engaging in a fan page, they likely identify with and are sticky to the brand community. Furthermore, practitioners can offer consumers monetary benefits, such as discounts, special price breaks, coupons, or free gifts, to fulfill their economic needs and thereby enhance their identification with the brand fan page. By increasing community identification and stickiness, practitioners can cultivate customer loyalty (i.e., repurchase intention and positive word of mouth).

7.3. Limitations and Future Research

Similar to all empirical studies, this research has certain limitations. First, only three kinds of customer perceived value, namely, utilitarian, hedonic, and monetary values were investigated. Other perceived values, such as social, information, and epistemic values, can be added to validate the effectiveness of establishing a brand fan page as a communication tool to manage consumer–brand relationships. Second, this study surveyed a sample of users of PTT, which is the largest BBS website in Taiwan, and collected data within a month. The particular characteristics of the sample may have potential influences on users' behavior. Future research can employ randomly selected samples and prolong the survey period to ensure the generalizability of our findings and to increase the external validity our study. Third, most of the voluntary participants were female (98.5%) and the biased distribution of the sample might limit the generalizability of this study only for beauty and cosmetics female consumers. Future research can duplicate our research by employing male consumers to see whether gender would moderate brand fan page engagement behavior in the beauty and cosmetics industry. Finally, only one type of OBC was examined, that is, beauty and cosmetics. The reason is that beauty and cosmetic issues are popular in Taiwan. Approximately six million consumers login to online beauty and cosmetic communities to discuss and post comments annually. Future research can also examine other types of products or services, such as apparel, jewelry, computer, or simultaneously investigate multiple product categories to further understand brand community engagement behavior.

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