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Building brand loyalty through user engagement in online brand communities in social networking sites

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Abstract

Purpose – The purpose of this paper is to explore the concept of user engagement in the context of online brand communities. A research model is proposed to explain how brand loyalty is developed through user engagement.

Design/methodology/approach – The research model was empirically tested with an online survey study of 185 current Facebook users.

Findings – Results revealed that user engagement influenced brand loyalty both directly and indirectly through online community commitment. Users tend to focus on the benefits (rather than the costs) derived from the usage when they engage in an online brand community.

Research limitations/implications – The selection of respondents is bound to the Hong Kong area, while Facebook members are globally distributed. In addition, this study involved a cross-sectional design instead of investigating the development of brand loyalty from a long-term perspective.

Practical implications – The results inform e-marketers the importance of user engagement behaviors for building brand loyalty through online communities. Strategies that encourage members to engage in online brand communities on social networking sites such as Facebook are also provided.

Originality/value – The concept of user engagement in online brand communities is still poorly understood, underscoring the need for theoretically based research of user engagement. This paper enriches the knowledge in the area of brand engagement by presenting a research model that introduces the concept of user engagement in social media research and empirically examines its role in building brand loyalty in online brand communities.

Keywords Social networking (e.g. Facebook, second life), User participation, Virtual community, Customer relationship management

Paper type Research paper



1. Introduction

Social media tools have provided members with globally available communication channels to facilitate the sharing and distribution of information by interactively collaborating with each other in online communities through blogs, social networking sites (SNSs) and other social tools (Chen *et al.*, 2010; Ou *et al.*, 2010). In particular, the rising popularity of SNSs has created a new social platform for members to connect and share their enthusiasm about their favorite brands with their friends, personal contacts and other acquaintances (Cheung and Lee, 2012; Trusov *et al.*, 2009). Members can freely join their favorite brand communities in SNSs and engage in these online brand communities through ongoing communication processes (e.g. providing positive comments on pictures and videos related to the brand or company, co-creation, social sharing and the like). In recent years, there has been a great deal of interest (ref) in the role of SNSs in building customer relationship (Casalo *et al.*, 2010; Shen *et al.*, 2010). In a recent report (2009) by Forrester Research Inc., 95 percent of marketers claimed that they would invest in social media or at least maintain the current level of investment, despite the current downturn in the global economy. By 2014, it is estimated that companies will spend \$3.1 billion annually on social media (Mashable, 2009) (<http://mashable.com/2009/07/08/social-media-marketing-growth/>). Among existing social media tools, Facebook is the most popular SNS. Many brands have created online brand communities on Facebook Fan Pages for advertising, promoting communication and understanding between a company and its consumers, as well as building brand loyalty (de Valck *et al.*, 2009).

Both commercial companies and professional consulting firms have invested considerable resources in developing various marketing strategies related to user engagement in online brand communities in SNSs. There is a strong professional focus on operational issues of engagement. For example, Peterson and Carrabis (2008) derived a total engagement index by adding the values for each engagement category, including click depth (content clicked on), loyalty (the level of long-term interaction the visitor has with the brand, site or product(s)), recency (the rate at which the visitor returns to the site over time), duration (time spent on site), interactivity (actions taken, such as content downloading, posting, attending a video/audio cast), feedback (propensity to solicit additional information or supply direct feedback) and brand awareness. In addition, the concept of user engagement in online brand communities and the managerial issues of engagement (e.g. ROI evaluation, effective-efficient budget allocation and internal marketing/communication practices) have received significant practitioner attention (Graffigna *et al.*, 2011).

Despite this recent attention, academic investigation of the “engagement” concept and of “user engagement” in online brand communities to date is lagging (Brodie *et al.*, 2013). Furthermore, academic researchers have not yet analyzed how companies build and maintain relationships with customers through promoting user engagement in online brand communities in SNSs. As a consequence, our theoretical understanding of the role of SNSs in customer relationship management is limited. Therefore, this study has two primary objectives: first, to explore the concept of user engagement in the context of online brand communities; and second, to develop and empirically test a research model that explains why members actively engage in online brand communities on Facebook and how their engagement behaviors affect brand loyalty.

This research represents a relatively unexplored area in the IS literature and will enrich existing studies of user engagement in online brand communities in SNSs. The results of this study will also help professional marketers to arrive at a broader

theoretical understanding of the drivers and consequences of user engagement in this new social platform. The results will provide them with important guidelines for building brand loyalty through online social networks, as well as for formulating social media strategies that encourage members to actively engage in online brand communities on Facebook. Ultimately, understanding why and how individuals participate and engage in new social platforms can help businesses to stay competitive in the global market.

The remainder of the paper is structured as follows. The next section addresses the theoretical foundation of the research model. The third section presents the research model and hypotheses. The fourth section describes a survey with members of Facebook brand communities. The fifth section presents the results of our empirical study. Finally, the paper is concluded by discussing implications for both research and practice.

2. Theoretical background

In this section, the concept of engagement is first defined. A review of the prior literature on user engagement in online communities is then provided.

2.1 *The concept of engagement*

Engagement is an important concept; however, it is understood in a very vague and unsystematic way. In the academic literature, although many studies with constructs carry the “engagement” label, the definition, dimensionality and operationalization of engagement are inconsistent and mixed (e.g. Kauffman *et al.*, 2010; Kidd, 2011). For instance, some studies measured engagement as a synonym of other apparently similar, much better established concepts like involvement, activation, empowerment, commitment, retention and loyalty (Kidd, 2011; Zhang *et al.*, 2013). In the relationship marketing literature, engagement is mostly concerned with customers who are or can be engaged by a brand. In particular, these studies focus on how customer engagement is linked to a comprehensive brand strategy. Engagement in this line of research is usually conceptualized in three different ways (Cheung *et al.*, 2011):

- Customer engagement as a psychological process that will lead to the formation of loyalty. Bowden (2009) proposed a framework for the process of engagement, with a focus on the underlying mechanisms by which loyalty forms for new customers of a service brand as well as the mechanisms by which loyalty may be maintained for repeat purchase consumers of a service brand.
- Customer engagement as behavioral manifestation. Van Doorn *et al.* (2010) defined engagement as “the behavioral manifestation from a customer toward a brand or a firm which goes beyond purchase behavior (p. 254).” Verhoef *et al.* (2010) and Bijmolt *et al.* (2010) also defined engagement as behavioral manifestation and further elaborated on their definition and identified a number of related behaviors such as word-of-mouth, blogging and providing customer ratings.
- Customer engagement as a psychological state that is characterized by a degree of vigor, dedication, absorption and interaction. Patterson *et al.* (2006) drew on a variety of parent disciplines including social psychology and organizational behavior and defined engagement as a psychological state that is characterized by a degree of vigor, dedication, absorption and interaction in brand interactions.

2.2 User engagement in online communities

Today, as more consumers become adept at using the internet, organizations are developing online communities through a company's web site, online portal or SNS. An online brand community is typically defined as "a specialized, non-geographically bound community, based upon social relationships among admirers of a brand in cyberspace" (Jang *et al.*, 2008). However, theoretical understandings of brand loyalty in online brand communities are limited. Only a few researchers have empirically shown that brand loyalty can be developed through user engagement in online brand communities (Dholakia *et al.*, 2004; Jang *et al.*, 2008; Shang *et al.*, 2006).

The most prominent study of user engagement in online brand communities was undertaken by Hennig-Thurau *et al.* (2004). They built on the framework of Balasubramanian and Mahajan (2001) and identified five main motivational categories of user participation in online discussion forums: focus-related utility (concern for other consumers, helping the company, social benefits and exerting power); consumption utility (post-purchase advice seeking); approval utility (self-enhancement and economic rewards); moderator-related utility (convenience and problem-solving support); and homeostase utility (expressing positive emotions and venting negative feelings). Sun *et al.* (2006) proposed an integrated model to explore the antecedents and consequences of user participation in music-related communities. They found that innovativeness, internet usage and internet social connection are significant factors in engagement. The few available studies about determinants of engagement mostly focus on the benefits and ignore the costs of user engagement in these online social platforms, mostly have their foundations in social exchange theory and suggest that consumers evaluate the costs and benefits and make a rational decision about their engagement. Thus, the current study draws on social exchange theory and attempts to explore the relative impacts of both benefit and cost factors on user engagement in online brand communities in SNSs.

3. Research model and hypotheses

Numerous customer behaviors have been examined in the previous literature, including word-of-mouth (De Matos and Rossi, 2008), customer recommendations and referrals (Ryu and Feick, 2007; Senecal and Nantel, 2004), blogging and web postings (Hennig-Thurau *et al.*, 2004). These behavioral constructs are likely to reflect different behavioral manifestation of user engagement (van Doorn *et al.*, 2010). For instance, Van Doorn *et al.* (2010), Verhoef *et al.* (2010) and Bijmolt *et al.* (2010) have defined engagement as a behavioral manifestation that have a brand or firm focus, beyond purchase, resulting from motivational drivers and further identified several related behaviors such as word-of-mouth, blogging and providing customer ratings. Behavioral engagement reflects individual participation and involvement in activities (Li *et al.*, 2013). Prior research on brand communities has found that positive behavioral intentions involve community participation intentions and community recommendation intentions (Algesheimer *et al.*, 2005). Consistent with the prior literature on user engagement in online brand community, we define user engagement as "individual participation and promotion behavior" in online brand communities in SNSs. Specifically, this study attempts to enrich the existing literature by exploring the role of user engagement behaviors in online brand communities in SNSs, as well as identifying the relationship between user engagement and brand loyalty.

3.1 The hypothetical model

Based on the preceding literature review, this study develops a framework presenting the drivers and consequences of user engagement and investigating their interrelationships. Figure 1 depicts the model of this study. First, the factors that affect user engagement are divided into two categories: perceived benefits and perceived costs. Second, the consequences of user engagement are examined by investigating the formation of online community commitment and brand loyalty. In the following sub-sections, nine hypotheses are introduced accordingly.

3.2 Antecedents of user engagement

Social exchange theory (Blau, 1964) suggests that all human actions are ultimately directed toward self-interest. People consider both benefits and costs before making a rational decision about their actions. In our research context, SNS users are motivated to participate and promote online brand communities when they expect that they will receive benefits in return. Particularly, prior online community studies have found that members are more willing to participate and share in online communities when economic incentives are offered (e.g. Hennig-Thurau *et al.*, 2004). In addition, researchers have found that the positive aspects of a community's influence will lead to positive behavioral intentions, such as community recommendation intentions and community participation intentions (Algesheimer *et al.*, 2005). In the context of SNSs, researchers have found that meeting new people is a key motivator that drives people to use Facebook (Ellison *et al.*, 2007):

H1. Perceived benefits are positively associated with user participation in online brand communities in SNSs.

H2. Perceived benefits are positively associated with user promotion in online brand communities in SNSs.

There are two costs, cognitive cost and executive cost, associated with user engagement in online brand communities in SNSs (Tong *et al.*, 2007). Cognitive cost refers to the fact that members need to recall detailed past experiences and mentally organize them into posts/messages on Facebook Fan Pages. This complex cognitive

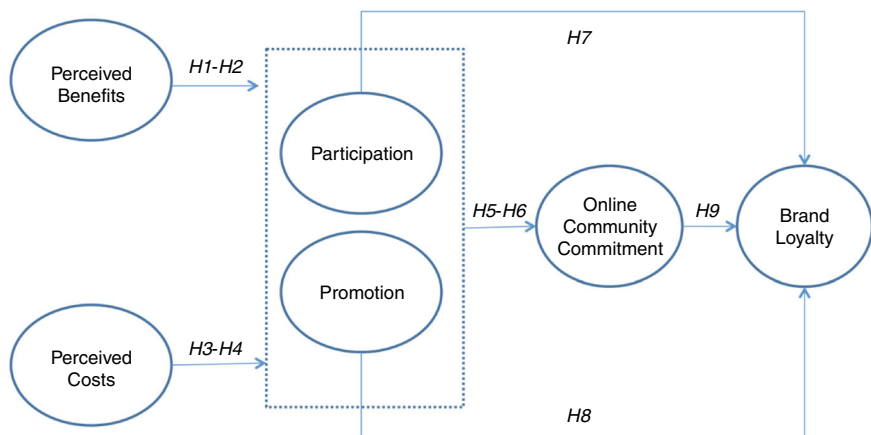


Figure 1.
Research model

process may discourage user participation and promotion of online brand communities in SNSs. In addition, members may need to spend a significant amount of time to codify their tacit opinions into explicit posts/messages. The amount of time required to be committed to the process of engagement is another important factor that inhibits user engagement:

- H3.* Perceived costs are negatively associated with user participation in online brand communities in SNSs.
- H4.* Perceived costs are negatively associated with user promotion in online brand communities in SNSs.

3.3 Consequences of user engagement

3.3.1 Formation of online community commitment. Prior studies have found that user engagement behaviors in online communities enhance interpersonal relationships and the sense of community (Kim *et al.*, 2008; Madupu and Cooley, 2010). By actively participating in an online brand community-related activities, including posting messages, replying to comments and spreading positive word-of-mouth statements about a particular brand community, members can easily recognize and interact with other like-minded people. Through social interactions with other members in a particular online brand community, members are more likely to develop similar values and norms. This will thus enhance their commitment toward the focal online brand community (Bagozzi and Dholakia, 2006; Dholakia *et al.*, 2004):

- H5.* User participation in online brand communities in SNSs is positively associated with online community commitment.
- H6.* User promotion in online brand communities in SNSs is positively associated with online community commitment.

3.3.2 Brand loyalty. In today's highly competitive business environment, keeping customers happy and maintaining a long-term relationship with them has long been an important business strategy. According to the relationship marketing literature, brand loyalty is one of the key relationship marketing outcomes. This concept can be conceptualized into behavioral loyalty and attitudinal loyalty (Jacoby and Kyner, 1973). Behavioral loyalty means that consumers will continue to purchase products or services from the same supplier. Attitudinal loyalty refers to consumers' commitment or preferences when considering unique values associated with a brand (Chaudhuri and Holbrook, 2001). In this study, we conceptualize brand loyalty as attitudinal loyalty that focusses on a feeling of attachment to certain brands and companies.

According to self-perception theory (Bem, 1972), people observe their own behavior and therefore determine their attitude. Since user participation and promotion (spreading the word-of-mouth about a Facebook Fan Page) is performed in a sense of public commitment (the ongoing communication processes on the Facebook Fan Page makes the effect even more obvious than behaviors in traditional brand communities), members will infer themselves to conform toward the initial overt commitment (participation and promotion) with respect to the brand and company and confirm their favorable attitudes. Thus, it is expected that user participation and promotion in online brand communities in SNSs lead to the development of brand loyalty:

- H7.* User participation in online brand communities in SNSs is positively associated with brand loyalty.

H8. User promotion in online brand communities in SNSs is positively associated with brand loyalty.

Online community commitment refers to the psychological attachment to an online brand community (Bettencourt, 1997; Morgan and Hunt, 1994). The concept of online community commitment is especially important as members can easily switch to alternative online social platforms with just a few clicks (Zhang *et al.*, 2009). However, once a member feels commitment to an online community, it is very likely that s/he will develop a positive attitude toward the brand. This is consistent with social identity theory, since once members are committed to an organization, they will commit themselves to support the brand and organization (Dutton and Dukerich, 1991):

H9. Online community commitment is positively associated with brand loyalty.

4. Research method

The research model was tested using a sample of Facebook Fan Page members in Hong Kong. Facebook is appropriate for the current study as it is one of the most popular SNSs (Roblyer *et al.*, 2010). In addition, many companies have established fan pages on Facebook to build and maintain customer relationships (Jahn and Kunz, 2012). Thus, it is appropriate to use Facebook Fan Pages for the current study.

In this section, the data collection method, measures and demographic statistics of our sample are described.

4.1 Data collection

Our target respondents were individuals who have joined and participated in Facebook Fan Page. A Facebook event was created and an invitation e-mail with a URL to the online questionnaire was sent to over 1,000 members. Data were collected with a convenience sample using the snowball sampling technique. The participation was voluntary. To increase the response rate, a lucky draw for supermarket vouchers as an incentive for participation was offered. Several screening questions were used to ensure that the respondents were active Facebook members and had joined and participated in Facebook Fan Pages. Members were asked to fill the survey based on the experience of using the Facebook Fan Page that they had most recently joined and screened out those who had been loyal to the brand before joining the given Facebook Fan Page. In total, 243 members clicked the URL of the online questionnaires, and 185 validated members answers completed the online questionnaires were achieved after deleting those with missing values.

4.2 Sample profile

The respondents were asked to complete the questionnaire based on their experience with a particular Facebook Fan Page. All members are physically located in Hong Kong. Among the 185 respondents, 51 percent were female and 49 percent were male. A majority of our respondents (78 percent) were aged between 17 and 25, 15.2 percent were aged 26-35 and only 3.3 percent were aged 16 or below. In total, 61 percent of our respondents had an education level of bachelor degree or above.

According to statistics for Facebook in Hong Kong (www.allin1social.com/facebook/country_stats/hong-kong), the two age segments with the largest numbers of members are 25-34 and 18-24, and the female to male ratio was 54/46 in the past three months.

Thus, the sample collected in this study is generally representative and includes the two most populated age segments.

4.3 Measures

The constructs of interest in this study included members' perceived benefits and perceived costs of using a Facebook Fan Page, participation, promotion, online community commitment and brand loyalty. All measures were borrowed from prior literature (see Appendix). Minor changes in the wordings were made so as to fit the current study about Facebook Fan Page. All constructs were measured using multi-item perceptual scales and involved seven-point Likert scales, anchored from strongly disagree (1) to strongly agree (7).

4.4 Common method bias

First, we examined common method bias by performing the Harman's single-factor test (Podsakoff *et al.*, 2003). The measurement items were subjected to an exploratory factor analysis. The results suggest that no single factor explained most of the variance, indicating the common method bias is not a serious threat in this study. Second, we applied the procedure recommended by Pavlou *et al.* (2007). The correlations between variables in our data ranged from 0.17 to 0.71 (see Table II), indicating that there was no systematic bias in the data. Third, following Liang *et al.* (2007), we employed a common method factor whose indicators included all items in the partial least squares (PLS) model. The variance explained by a common method factor and the substantive factors were compared to determine whether the majority of covariance was explained by the common method factor. The results demonstrated that the common method factor only explained 2 percent of the overall covariance, confirming that the common method bias is not a threat to the results of the current study.

5. Data analysis and results

The PLS approach was used to perform the statistical analysis. The PLS technique provides a better explanation for complex relationships in respect of covariance-based structural equation modeling technique (Fornell and Larcker, 1981; Henseler *et al.*, 2009) and is widely adopted by researchers (Chin *et al.*, 2003; Hair *et al.*, 2011; Marcoulides *et al.*, 2009). Furthermore, it does not require data to have a multi-variate normal distribution and it is less demanding with respect to the sample size. Following the two-step analytical procedures (Turel and Serenko, 2012), the measurement scales for the psychometric properties were first assessed and then the structural model was evaluated. Using this two-step approach, the conclusions on structural relationships are drawn from a set of measurement instruments with desirable psychometric properties.

5.1 Measurement model

Examination of the measurement model involves evaluations of convergent validity and discriminant validity of the constructs in the current model. Convergent validity indicates the extent to which scores on one scale correlate with scores on other scales theoretically designed to assess the same construct. It is assessed by using the following three criteria: the composite reliability (CR) should be at least 0.70 (Chin, 1998), the average variance extracted (AVE) should be more than 0.50 (Fornell and Larcker, 1981) and all item loadings should be higher than 0.707 (Chin, 1998). As shown in Table I, all three criteria of convergent validity met the recommended thresholds, with the CRs ranging from

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Table I.
Psychometric
properties of
measures

Construct	Item	Loading	Mean	SD
Perceived costs CR = 0.85; AVE = 0.66	PC1	0.78	3.17	1.40
	PC2	0.76	3.32	1.43
	PC3	0.88	3.08	1.43
Perceived benefits CR = 0.91; AVE = 0.68	PB1	0.75	3.46	1.72
	PB2	0.89	4.04	1.66
	PB3	0.86	4.08	1.56
	PB4	0.83	3.79	1.63
	PB5	0.79	3.71	1.62
Participation CR = 0.87; AVE = 0.63	PP1	0.76	3.31	1.74
	PP2	0.87	3.23	1.75
	PP3	0.80	3.49	1.72
	PP4	0.75	3.55	1.84
Promotion CR = 0.95; AVE = 0.90	PM1	0.95	4.09	1.82
	PM2	0.94	3.61	1.88
Online community commitment: CR = 0.96; AVE = 0.85	CC1	0.92	4.09	1.42
	CC2	0.92	3.97	1.62
	CC3	0.93	4.06	1.51
	CC4	0.91	4.04	1.56
Brand loyalty CR = 0.94; AVE = 0.83	BL1	0.89	3.95	1.66
	BL2	0.94	4.24	1.62
	BL3	0.90	4.22	1.74

0.85 to 0.96, and the AVEs from 0.63 to 0.90. The item loadings were all greater than the 0.707 recommend cut-off.

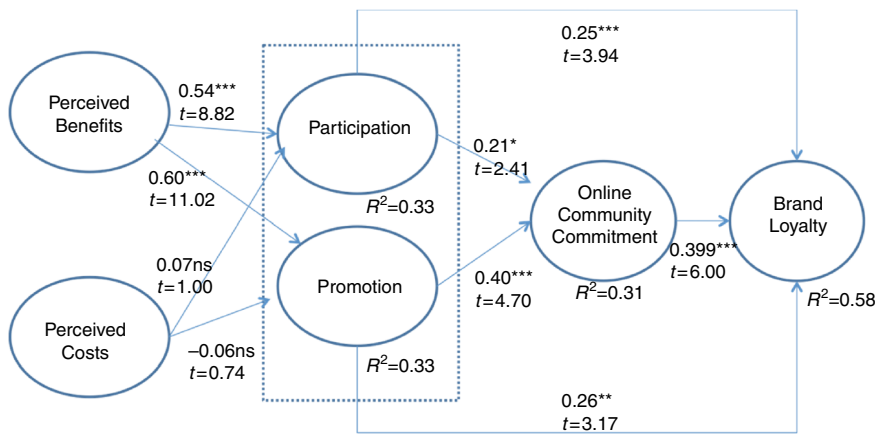
Discriminant validity is the extent to which the measurement is not a reflection of other constructs. It is verified by low correlations between the measure of interest and the measures of other constructs (Fornell and Larcker, 1981). Discriminant validity of the measures is also demonstrated by having the squared root of the AVE of each construct higher than its correlations with all other constructs. As shown in Table II, the square root of AVE of each construct, located on the diagonal of the table and in italics, is higher than the correlations between it and all other constructs. Therefore, the discriminant validity of the measures used in the current study is demonstrated.

5.2 Structural model

The structural model analysis was estimated using the PLS procedure (bootstrap re-sampling approach). Figure 2 depicts the results of the hypothesized structural model test, including the overall explanatory power (R^2 value), assessed path coefficients with significant paths indicated by asterisks and associated t -values of the paths. The structural model explains 58 percent of the variance in brand loyalty,

Table II.
Correlation matrix
and psychometric
properties of key
constructs

	BL	CC	PP	PB	PC	PM
Brand loyalty (BL)	<i>0.91</i>					
Online community commitment (CC)	0.65	<i>0.92</i>				
Participation (PP)	0.59	0.45	<i>0.80</i>			
Perceived benefits (PB)	0.60	0.71	0.57	<i>0.82</i>		
Perceived costs (PC)	0.17	0.34	0.32	0.45	<i>0.81</i>	
Promotion (PM)	0.63	0.53	0.60	0.57	0.21	<i>0.95</i>



Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 2. Results of the research model

31 percent of the variance in online community commitment, 33 percent of the variance in participation and 33 percent of the variance in promotion. The results indicate that all the paths are statistically significant at the 0.05 significance level, except for the path from perceived costs to engagement behaviors.

Perceived benefits is an important variable influencing participation and promotion, with path coefficients at 0.54 and 0.60, respectively. The results provide support for *H1* and *H2*. Both participation and promotion exhibit strong and significant effects on online community commitment, with path coefficients of 0.21 and 0.40, respectively, supporting *H5* and *H6*. Meanwhile, participation and promotion also have direct influences on brand loyalty, with path coefficients of 0.25 and 0.26, respectively. Likewise, online community commitment has a strong impact on brand loyalty with a path coefficient of 0.40. This provides support for *H7*, *H8* and *H9* (see Appendix).

6. Discussions and conclusion

Brand community building has been recognized as an effective approach for developing and maintaining customer relationships. Prior studies have found that brand communities facilitate the development of brand loyalty and long-term relationships with potential customers (Muniz and O'guinn, 2001). The present study explored the role of user engagement in online brand communities and its impact on brand loyalty. In this study, a research model was proposed to explain how brand loyalty is developed through user engagement in online social platforms.

Social networking tools such as Facebook Fan Page have enormous potential for enhancing brand loyalty. They can be deployed to help companies build brand communities commitment through encouraging engagement behaviors in these online social platforms. In this study, user engagement behaviors in online brand communities on Facebook are essential ingredients that foster brand loyalty. The results also suggested that perceived benefits are crucial in affecting user engagement behaviors. Members are more likely to repeat behaviors that lead to positive rewards and achievements.

However, perceived costs do not demonstrate any significant relationship with user engagement behaviors. One possible explanation is that most respondents in the

current study are experienced Facebook members. They use Facebook on a daily basis, and thus, the cognitive and executive costs do not seem to be high for this group of members. van Doorn *et al.* (2010) have posited that different antecedents of engagement behaviors can moderate the effect of each other on engagement behaviors. A *post hoc* analysis was performed to test possible moderating effects of perceived costs. The results indicated that perceived costs can significantly negatively moderate the effect of perceived benefits on promotion, although the moderating effect of perceived benefits on participation is not significant ($-0.12, p < 0.1$). Furthermore, the hierarchical process was also used to compare the R^2 value for the interaction model with that for the main effects model, which excluded the interaction construct. The effect size for the interaction was 0.02, suggesting small interaction effects (Cohen, 1988).

6.1 Research implications

This study contributes to existing brand community research and user engagement literature in several ways. First, the current study makes a theoretical contribution by improving our theoretical understanding of user engagement through developing and testing a research model explaining brand loyalty through user engagement in online brand communities in SNSs. Though many researchers have highlighted the importance of user engagement in social media (Graffigna *et al.*, 2011), the concept of user engagement still suffers from a lack of consistency in its definition, forms and operationalization. Some researchers have provided the conceptual framework of engagement behaviors without attempting any empirical validation (van Doorn *et al.*, 2010; Verhoef *et al.*, 2010). In the current investigation, the concept of user engagement in SNSs was carefully defined and its measurement items were also empirically validated. Specifically, this study went beyond conceptualization and applied social exchange theory and the relationship marketing literature to examine the phenomenon, which enriches the existing literature on user engagement behaviors.

Second, the role of user engagement in online brand communities was explored. Building on social exchange theory and the relationship marketing literature, both the antecedents and consequences of user engagement were identified and empirically tested in a research model. In particular, the perceived benefits and perceived costs were identified as key antecedents of user engagement, whilst user engagement influenced brand loyalty both directly and indirectly through online community commitment. The measurement model was well-validated and the structural model explained over 50 percent of the variance. Although the results indicated that perceived costs had no significant impacts on either participation or promotion, the *post hoc* analysis revealed that perceived costs negatively moderated the effect of perceived benefits on promotion. The finding conformed to the position from the conceptual model of van Doorn *et al.* (2010) that different antecedents of engagement behaviors can also moderate the effect of each other on each other. That is to say, the deeper conceptualization and empirical research of this study timely addresses this issue and enriches the existing literature.

6.2 Managerial implications

Apart from the theoretical implications, the findings of this study also provide some important insights for e-marketers. In particular, the results provide some insights for e-marketers to utilize online brand communities in social media as a channel to enhance relationships with their existing customers or initiate relationships with their potential customers. One of the key findings shows that user engagement is an essential

factor influencing brand loyalty both directly and indirectly through online brand communities. This finding provides important insights to practice. Specifically, if e-marketers plan to build their own online brand communities in SNSs, they should develop an effective marketing strategy that encourages user engagement in the online communities. As suggested in the current investigation, perceived benefits are key antecedents of user engagement in online brand communities. Therefore, e-marketers are recommended to encourage active participation in their online brand communities in SNSs through demonstrating the benefits to their members. For instance, they should provide their members with some economic incentives (e.g. coupons, free gifts and free access to resources). They should also ensure a harmonious online environment where their members can freely interact and chat with other members in these online social spaces. It should be noted that promotion has a stronger effect than participation on online brand community commitment which ultimately influences brand loyalty, suggesting it is the key in the formation of brand loyalty. Members may only frequently participate in online brand communities because of the rewards of incentives provided; however, they will be more likely to promote the platform to others without any rewards when the perceived costs are low. In this case, it is important for e-marketers to understand the interplay among perceived benefits, perceived costs and engagement behaviors. That is to say, they may encourage members' participation by providing their various benefits and increasing the number of members by ensuring that a web site is convenient and easy to use.

6.3 Limitations and conclusion

The current study is subject to some limitations. First, the selection of respondents is bound to the Hong Kong area, while Facebook members are distributed globally. Future research may extend to other regions and make a comparison of the results in different locations to see if there is any cultural bias. Second, this study has not taken the actual purchase and word-of-mouth behavior into consideration. The power of brand commitment in predicting actual behavior is obviously an important area requiring more attention. A longitudinal study is highly recommended for future research on this topic. Third, this study only focussed on the user-based angle (perceived benefits and costs), examined two major engagement behaviors (participation and promotion) and used a quantitative research method to examine their causal relationships. Exploring the larger questions about brand loyalty and brand community with only Likert scale items seems limiting. A qualitative approach would significantly enhance our ability to explore the questions about brand loyalty and online community, which is highly recommended in future studies.

User engagement in online brand communities has drawn increasing attention in both practice and research. This research model was built and tested in order to enhance our knowledge by exploring how brand loyalty is developed through user engagement in these online social platforms. It is expected that this study will provide some insights among researchers to further investigate the role of user engagement in social media.

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Appendix. List of measures

Perceived costs (modified from Cyr and Choo, 2010):

- PC1. It requires a lot of time to participate in the Facebook Fan Page.
- PC2. It requires a lot of effort to participate in the Facebook Fan Page.
- PC3. I am ready to spend all the time and energy required to fully participate in the Facebook Fan Page.

Perceived benefits (modified from Hennig-Thurau et al., 2004):

- PB1. I receive an economic reward for participating in the Facebook Fan Page.
- PB2. I believe a chat among like-minded people in the Facebook Fan Page is a nice thing.
- PB3. It is fun to communicate this way with other people the Facebook Fan Page.
- PB4. I meet nice people through the participation in the Facebook Fan Page.
- PB5. I participate in the Facebook Fan Page because I receive economic incentives.

Participation (modified from Koh and Kim, 2004):

- PP1. I leave messages on the wall of the Facebook Fan Page.
- PP2. I post my comments on the Facebook Fan Page.
- PP3. I help other people by providing them with information about the product / brand on the Facebook Fan Page.
- PP4. I join events organized through the Facebook Fan Page.

Promotion (modified from Algesheimer et al., 2005):

- PM1. I recommend the Facebook Fan Page to my friend.
- PM2. I send invitations to ask others to become a fan to the Facebook Fan Page.

Online community commitment (modified from Chung and Shin, 2010):

- CC1. I feel the Facebook Fan Page as a friend.
- CC2. I feel the Facebook Fan Page as a part of living.
- CC3. I am attached to the Facebook Fan Page.
- CC4. I feel a sense of belonging to the Facebook Fan Page.

Brand loyalty (modified from Bennett and Rundle-Thiele, 2002):

- BL1. I am committed to purchasing from the brand.
- BL2. Purchasing from the brand would be likely.
- BL3. I would recommend the brand to other people.

Table A1.
Summary of results

Hypothesis	Path	Path coefficient	Conclusion
<i>H1</i>	Perceived benefits to participation	0.54*** ($t = 8.02$)	<i>H1</i> is supported
<i>H2</i>	Perceived benefits to promotion	0.60*** ($t = 11.02$)	<i>H2</i> is supported
<i>H3</i>	Perceived costs to participation	0.07 ($t = 1.00$)	<i>H3</i> is not supported
<i>H4</i>	Perceived costs to promotion	-0.06 ($t = 0.74$)	<i>H4</i> is not supported
<i>H5</i>	Participation to online community commitment	0.21** ($t = 2.41$)	<i>H5</i> is supported
<i>H6</i>	Promotion to online community commitment	0.40*** ($t = 4.07$)	<i>H6</i> is supported
<i>H7</i>	Participation to brand loyalty	0.25*** ($t = 3.94$)	<i>H7</i> is supported
<i>H8</i>	Promotion to brand loyalty	0.26*** ($t = 3.17$)	<i>H8</i> is supported
<i>H9</i>	Online community commitment to brand loyalty	0.40*** ($t = 6.00$)	<i>H9</i> is supported

Notes: ** $p < 0.05$; *** $p < 0.01$

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