

THE ROLE OF REGULATORY FIT IN VIRTUAL BRAND COMMUNITIES

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ABSTRACT

In our current digital era, virtual brand communities (VBCs) play an important role in building and strengthening companies' brands and in maintaining customer relationships. In this research, the authors collected primary and secondary data from two VBCs to demonstrate the role of regulatory fit in consumers' VBC participation. The authors found that the regulatory fit between promotion focus and brand ideal self-congruence, not the fit between prevention focus and brand ought self-congruence, had significant positive impacts on utilitarian benefit and hedonic benefit. Further, the regulatory non-fit between promotion focus and brand ought self-congruence and that between prevention focus and brand ideal self-congruence had significant negative impacts. The authors then discussed the implications of these findings.

Keywords: Virtual brand communities; Regulatory fit; Regulatory focus; Brand self-congruence

1. Introduction

A virtual brand community (VBC) is an important platform through which marketers and retailers can influence consumer decision-making via sociological mechanisms as opposed to economic processes [Dholakia et al. 2004; Horng 2016; Keng et al. 2015; Li et al. 2016; Muñiz and O'Guinn 2001]. VBCs can empower companies to co-create value with customers, facilitate product innovation, and achieve favorable customer value, satisfaction, and loyalty [Dholakia et al. 2009; Nambisan and Baron 2007]. The rise of social media significantly changes how firms manage their brands and how consumers interact with the brands [Carlson et al. 2008; Wang et al. 2015; Zhou et al. 2012].

Research related to this critical marketing tool has focused on two main streams. The first stream investigates what motivates consumers to participate in VBCs. The research draws on theories such as use and gratification theory, co-creation theory, social capital theory, social exchange theory, and social identity theory to study the factors that drive consumers to participate in VBCs [Algesheimer et al. 2005; Horng 2016; Nambisan and Baron 2009, 2010]. Research shows that consumers seek and acquire various benefits (utilitarian and hedonic) through interacting with other VBC members [Nambisan and Watt 2008; Nambisan and Baron 2007].

The second stream of research investigates how a VBC enhances brand commitment, preferences, and purchases [Bagozzi and Dholakia 2006; Carlson et al. 2008; Keng et al. 2015; Li et al. 2016]. A brand can benefit from its affiliated VBC through the relationship that a consumer develops in the VBC as that relationship may help the consumer develop a relationship with the brand [Wirtz et al. 2013]. A VBC is an effective platform for firms to disseminate information and knowledge pertaining to their brands [Nambisan and Baron 2009; Sun et al. 2014]. Consumers who engage in a VBC are likely to share similar interests in a brand, and their interactions with other VBC members may cultivate their attachments and identifications with that brand [Bagozzi and Dholakia 2006; Zhou et al. 2012].

Despite these findings, several research gaps remain. First, it is not clear why some consumers in a VBC are able to acquire the anticipated benefits while others fail to do so. A possible explanation may be that consumers with

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different goal orientations engage in different activities to acquire these benefits [Chitturi et al. 2007, 2008]. The past literature is unclear on how these different orientations affect consumers in pursuing and experiencing benefits. Second, we have mixed knowledge about how brand affects customer interactions in a VBC [Bagozzi and Dholakia 2006; Carlson et al. 2008]. Carlson et al. (2008) found that brand identification strengthened consumer commitment to the brand, while Bagozzi and Dholakia (2006) noted that there was no significant relationship between brand identification and brand behavior. We posit that consumers who choose to participate in a VBC are likely to be influenced by how they identify themselves with the brand in the past. The interrelated relationships among consumer orientations, brand identification, and the consumer's future participation in VBCs are yet to be explored.

In this study, we draw on regulatory fit theory [Higgins 1997] to synthesize the above two streams of literature to understand how regulatory orientation [Higgins 1997, 2000] directs consumers in the pursuit of benefits that will impact their future VBC participation. This study extends the VBC literature by providing a more holistic framework to understand the roles of self-expression, brands, and actual participation in VBCs [Wirtz et al. 2013].

2. Conceptual Background

2.1. Regulatory Focus Theory

Regulatory focus theory [Haws et al. 2010] explains how consumers approach gains or avoid losses in the pursuit of goals by means of two self-regulatory orientations, that is, promotion and prevention [Higgins 1997]. Promotion-focused individuals emphasize the pursuit of hopes, aspirations, and achievements and are particularly sensitive to the presence of positive outcomes (gains) and against the absence of positive ones (non-gains). In contrast, prevention-focused individuals pay attention to duties and obligations in the process of achieving goals, emphasizing the absence of negative outcomes (non-losses) and avoiding the presence of negative consequences (losses).

While earlier research views prevention and promotion as a continuum, more recent studies suggest that these two orientations are independent of each other and coexist [Haws et al. 2012; Haws et al. 2010]. The two dimensions differ in their relative strengths in determining an individual's regulatory orientation. As promotion focus increases and prevention focus decreases, promotion focus becomes the dominant factor and the individual will pursue achievements and aspirations. On the other hand, when prevention focus dominates, the individual will seek obligations.

Regulatory orientations lead to different goals and influence the pursuit of experiential benefits in different ways [Haws et al. 2012; Haws et al. 2010]. These orientations may have different impacts on an individual's VBC participation. When considering a new high-tech product or brand, consumers who participate in a VBC may exhibit different goals depending upon whether they are promotion- or prevention-focused.

Promotion-focused consumers may be motivated to seek product knowledge so that they can influence their friends as if they were experts. Consequently, they may be more motivated to engage in knowledge sharing and acquisition. In addition, promotion-focused individuals may seek to enhance their image and status in VBCs [Haws et al. 2012; Higgins 1997].

In contrast, prevention-focused individuals may try to minimize the presence of negative outcomes by avoiding conflicts in their VBC interactions [Chitturi et al. 2008; Higgins 1997]. They are likely to have a stronger sense of obligation and responsibility for collective action in their VBCs, since they are more relationship-based [Muñiz and O'Guinn 2001]. Therefore, these individuals may invest effort to strengthen their affiliations, feelings of "we-ness," and kinships with in-group members to shield them from negative psychological outcomes. In other words, their goal to participate in a VBC is to avoid losses, such as the loss of safety, reputation, and responsibility in the VBC rather than obtain gains of recognition and status.

2.2. Regulatory Fit Theory

A subsequent development of regulatory focus theory is regulatory fit theory [Higgins 2000], which suggests that there is a fit or match between an individual's regulatory orientation (prevention or promotion) and the strategic approaches that the individual follows to achieve goals. More concerned about advancement and growth, a promotion-focused individual may feel a fit when an available means or approach is congruent to his/her attempt at attaining positive outcomes; a non-fit occurs when there is a vigilance task that the individual has to adapt to in order to avoid losses [Hong and Lee 2008]. Similarly, a prevention-focused individual may experience fit when he/she adopts strategic means that allow safety and security; a non-fit occurs when there is an eager approach for the prevention-focused individual to choose the attainment of gains [Hong and Lee 2008]. Whenever different strategic approaches sustain an individual's goal orientation, a right feeling or fit occurs [Aaker and Lee 2006]. Fit creates the right feelings of correctness and importance, whereas non-fit decreases the motivation to engage in an activity and impairs self-regulation [Hong and Lee 2008].

Fit doesn't directly lead to a decision, but it changes the significance of the reaction to the decision [Avnet and Higgins 2006]. The right feeling enhances confidence and assessment of the object and, therefore, increases a person's engagement in a task [Aaker and Lee 2006]. When a goal means sustains the regulatory orientation, people feel confident about their reactions, and they are fluent in information processing [Avnet and Higgins 2006; Lee et al. 2010]. Positive reactions may become more positive, and negative reactions may become more negative. When the goal means conflict with the regulatory orientation, the person may be less motivated and less engaged in an action [Higgins 2005].

There are two ways to achieve fit. First, fit can emerge when people engage in activities and thought processes that sustain their goal orientations. These activities and thought processes may include delight versus satisfaction [Chitturi et al. 2008], feelings versus reasons [Avnet and Higgins 2006], perceived ease versus perceived efficiency [Keller 2006], high-level versus low-level construal [Lee et al. 2010], and distant versus imminent [Mogilner et al. 2008]. These activities may enhance or decrease a person's goal orientation (prevention or promotion), depending on how the activities and processes correspond with goal orientations [Aaker and Lee 2006]. Avnet and Higgins [2006] asked participants to evaluate two brands based on either affective or cognitive response because previous studies found that promotion-focused people relied more on affect and prevention-focused people replied more on reasoning when they were asked to make judgment.

Second, an individual's goal orientation can be enhanced by exposure to some objects that match his/her concerns [Motyka et al. 2014]. A brand, as a carrier of the symbolic value of a product, is often communicated in a way to match an individual's identity and goal orientation [Park et al. 2013]. For example, once a sunscreen lotion is framed with a message like "enjoy life and bask in the warm rays of the sun," it is consistent with promotion orientation; once the message is framed as "Be safe! Know that you are risk free from sunburns, feeling completely relaxed," it matches the prevention orientation [Lee and Aaker 2004]. Florack and Scarabis [2006] find that the brand with reliability and utilitarian features matched the prevention goal of security and safety, and the brand with attractive and hedonic attributes matched the promotion goal of dream and aspiration.

2.3. Brand Self-Congruence

The literature suggests that individuals attempt to find cues in brands to express themselves and that the appropriate malleable expression of self in these brands will influence the individuals' attitudes and behaviors [Markus and Kunda 1986]. Once a brand is integrated into self-view, it can be seen as a reflection of an individual's personality, motivations, and social patterns [Hosany and Martin 2012].

Brand self-congruence means the degree to which a consumer sees his or her own self integrated with and connected to a given brand's personality or image [Malär et al. 2011]. It suggests that a consumer uses a brand to represent the private self to themselves and the public self to others [Stokburger-Sauer et al. 2012]. As such, a brand has the ability to symbolize and communicate the consumer's identity, including knowledge resources (e.g., information cue) and social resources (e.g., social status) [Reimann et al. 2012]. These resources facilitate the consumers' comprehension of their internal and external self-expressions, that is, ideal self and ought self [Park et al. 2010]. In other words, a brand offers resources for an individual to seek his/her desired self and helps in the realization of the ought self [Park et al. 2013].

Ideal self-congruence reflects the fit between brand personality and the ideal self [Malär et al. 2011]. Ideal self is a person's representation of the attributes that the person or his/her significant others would like the person ideally to possess (i.e., dream, aspiration, or hope) [Haws et al. 2010]. A brand has the ability and resource to represent dream, advancement, and growth (e.g., Technology giant Apple is perceived as creativity and dreams in some scenarios) [Batra et al. 2012], which is considered the strategic means consistent with promotion orientation. In contrast, ought self-congruence reflects the perception of the fit between brand personality and the ought self. Ought self is the representation of the attributes that a person or his/her significant others think that he/she ought to possess (i.e. duty, obligation or responsibility) [Pham and Avnet 2004]. Here, a brand that is associated with safety and duty (e.g., Apple is also considered to be reliable and highly functional) can be seen as an approach to sustain prevention orientation. Consumers are increasingly using external entities to express their consistent and stable identities, and the fit between a brand's symbolic meanings and a consumer's identities facilitates the consumer's commitment to the activities related to the brand [Stokburger-Sauer et al. 2012].

3. Research Hypotheses

3.1. Experienced Benefits and Consumer's Future Participation in VBC

This study defines consumer participation as the extent to which consumers commit their future time and frequent contributions to a VBC. When consumers are more involved in their VBCs, they post not only more comments but also more valuable and reliable information that can benefit other members' knowledge of a given brand or product. Following previous studies [Chitturi et al. 2007; Dhar and Wertenbroch 2000; Nambisan and

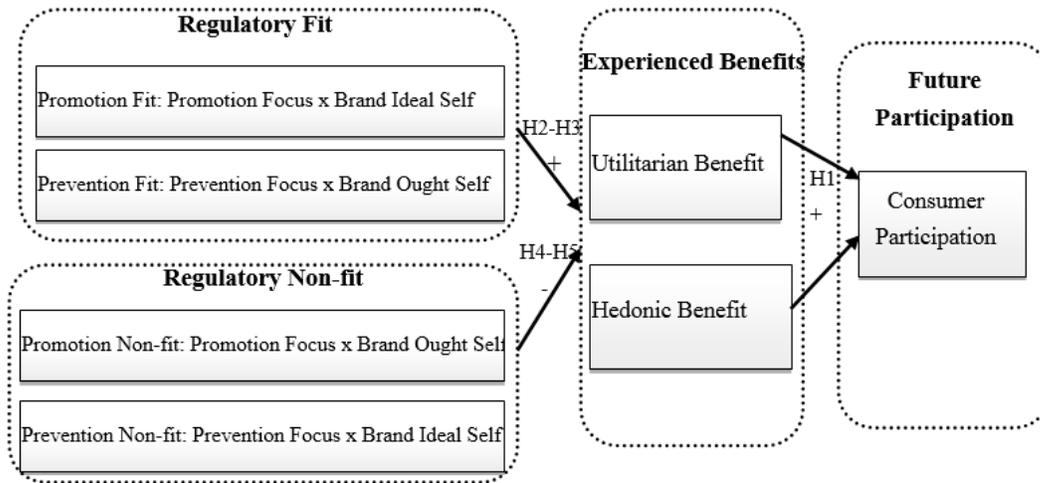


Figure 1 Conceptual Model

Baron 2009], we investigate consumer participation from the perspective of consumer experience and posit that consumer participation is driven by two types of experienced benefits: utilitarian benefit and hedonic benefit. The research model is shown in Figure 1.

Utilitarian benefit is the extrinsic benefit that a consumer expects or derives from participating in a VBC. For example, a consumer searches for information about a product and develops knowledge about its underlying technologies and usage [Lin 2008; Nambisan and Watt 2008; Nambisan and Baron 2009]. In contrast, hedonic benefit is intrinsic in nature and can be derived from the interesting, pleasurable, and mentally stimulating experiences and interactions gained from VBC participation [Muñiz and O'Guinn 2001; Nambisan and Watt 2008]. Nambisan and Baron (2009) and Nambisan and Watt (2008) posit that a VBC is an “information pool” or a “knowledge hub.” Thus, positive utilitarian benefits, such as acquiring knowledge in VBCs, developing oneself by means of contributing knowledge and answering questions from other members, and building a good reputation and gaining recognitions from other members, reinforce future participation in VBCs [Horng 2016; Jin et al. 2015; Nambisan and Baron 2007, 2009; Pan et al. 2015]. Others suggest that a VBC is a space for its members to entertain each other and to be entertained [Dholakia et al. 2004; Keng et al. 2015; Nambisan and Watt 2008; Nambisan and Baron 2009]. The literature has established that there is a direct impact of hedonic benefit on consumer participation [Nambisan and Watt 2008; Nambisan and Baron 2007]. Therefore, we hypothesize:

H1: *Utilitarian benefit (a) and hedonic benefit (b) are positively associated with a consumer's future participation in VBC.*

3.2. Regulatory (non) Fit: The Interplay of Regulatory Focus and Brand Self-Congruence

Promotion-focused consumers are more apt to participate in various activities to gain experiential benefits, whereas prevention-focused individuals are less likely to do so [Chitturi et al. 2008]. Brand self-congruence highlights how an individual's connection with a specific brand expresses his/her different self [Hollenbeck and Kaikati 2012], and, therefore, may interact with regulatory orientations to create different extents of regulatory fit or non-fit that would affect the pursuits of different type of benefits. Regulatory fit is, therefore, conceptualized as a match between brand self-congruence and regulatory orientations [Avnet and Higgins 2006].

Because of different types of brand self-congruence and regulatory orientations, various combinations of regulatory fit and non-fit conditions may arise (Figure 1). In particular, we suggest that regulatory fit can appear in two forms: promotion-focused individuals who see a brand matching their ideal self (promotion-fit) and prevention-focused individuals who view a brand compatible to ought self (prevention-fit). Similarly, regulatory non-fit can display in two ways: promotion-focused individuals who see their ought-selves in a brand (promotion-non-fit) and prevention focused individuals who view a brand that reflects their ideal selves (prevention-non-fit).

Promotion-fit consumers may engage in a VBC to pursue their goals of gaining positive outcomes such as experiential benefits. Self-verification theory posits that consumers are motivated to verify their core self-views [Malär et al. 2011]. A brand may help a consumer enhance the view of the self and encourage the consumer to communicate such values to others [Matzler et al. 2011]. When a promotion-focused consumer finds that a brand is

compatible with their ideal self-image, it creates a positive perception of regulatory fit. If a brand is perceived as more attractive and hedonic to embody ideal self, it offers resources to signify advancements and aspirations that promotion-focused consumers seek to achieve [Florack and Scarabis 2006]. They may feel close to their ideal self, thus a correctness and importance feeling may ensue [Aaker and Lee 2006]. Therefore, a brand may energize a consumer's motivational state to a higher level of cognitive and affective response, encouraging him/her actively to participate in VBC activities [Malär et al. 2011; Wu et al. 2015]. Further, this perception will strengthen the consumer's view of the brand and its affiliated VBC more positively. Consequently, the consumer is more motivated to pursue both utilitarian and hedonic benefits.

H2: *The regulatory fit between promotion focus and brand ideal self-congruence (promotion-fit) is positively associated with (a) utilitarian benefit and (b) hedonic benefit.*

On the other hand, because prevention-focused consumers are sensitive to losses instead of gains (e.g. avoiding conflicts with other VBC members) [Higgins 1997], it seems logical to argue that they are less motivated to participate in any VBCs for obtaining experiential benefits. However, when a brand is framed with an emphasis on one's ought self, it plays more emphasis on duty and reliability related attributes [Chernev 2004]. If safety, security, and the absence of negative outcomes attributes are embodied in a brand [Chernev 2004; Higgins 1997], the brand conveys cues to the consumer to build the identity of the ought self [Park et al. 2013]. Prevention-focused consumers may find the brand in alignment with ought selves and, therefore, develop a clarity of their values. Such a fit also creates a right feeling and increases the consumer's identification and attachment to the brand and brand-related activities [Malär et al. 2011]. Prevention-focused individuals may feel safe and good in a VBC once the brand complies with their values, which in turn enhances their active engagement in various VBC activities. This alternative form of regulatory fit motivates prevention-focused consumers to pursue experience benefits. Thus, we hypothesize:

H3: *The regulatory fit between prevention focus and brand ought self-congruence (prevention fit) is positively associated with (a) utilitarian benefit and (b) hedonic benefit.*

Unlike the two types of regulatory fit mentioned above, there also exist two types of non-fit between regulatory focus and brand self-congruence. Promotion-focused consumers are oriented toward gaining status and approaching inspirations and achievements in VBCs. If a VBC presents these promotion-focused consumers with a given brand that reminds them of their responsibilities and need for duty and safety [Higgins et al. 1994], a regulatory non-fit emerges and, therefore, may create discomfort and unpleasantness among these consumers. Such a non-fit may negatively influence the consumers' cognitive processes for goal attainment in the VBC [Avnet and Higgins 2006]. Prior studies have found that high cognitive impediment resulting from non-fit situations reduces the motivations of promotion-focused consumers to complete their tasks [Lee et al. 2010], which may make them passively and less engaged in processing information and sharing knowledge in the VBC. These negative feelings will reduce these consumers' pursuit of the utilitarian benefits presented in the VBC. Similarly, the consumers are unlikely to experience enjoyment and pleasantness in their interactions in the VBC. Therefore, we hypothesize

H4: *The regulatory non-fit between promotion focus and brand ought self-congruence (promotion non-fit) is negatively associated with (a) utilitarian benefit and (b) hedonic benefit.*

On the other hand, prevention-focused consumers are those who emphasize the fulfillment of duties and obligations in their pursuit of goals [Higgins 1997]. If a brand in a VBC is positioned in a way to advocate that an individual consumer shall achieve dreams and hopes and strive for unaccomplished goals, the messages conveyed in the brand to these prevention-focused consumers are misaligned with the consumers' focus on duties and obligations of participating in the VBC. Therefore, these consumers may have unpleasant feelings and encounter obstacles in their evaluation of the benefits that they expect to derive from VBCs. The gap created between prevention focus and brand ideal self-congruence induces a sense of tension, unpleasantness, and not feeling right [Malär et al. 2011; Park et al. 2013]. Such a non-fit inhibits prevention-focused consumers from pursuing various benefits in their participation in VBCs [Higgins 2000, 2005].

H5: *The regulatory non-fit between prevention focus and brand ideal self-congruence (prevention non-fit) is negatively associated with (a) utilitarian benefit and (b) hedonic benefit.*

4. Research Method

4.1. Sample and Data Collection

The current study was a segment of a large research project that examined customer loyalty of active smartphone users. Part of the research findings of the project, data collection process, and sample characteristics were reported in a prior study [Wang et al. 2015]. We chose smartphone as the product because it is one of the most popular products for global consumers in the digital age. To be specific, we selected two smartphone brands for Chinese consumers, i.e., Meizu, which is an indigenous Chinese brand (<http://bbs.meizu.com>), and Apple, which is a global

brand that sells well in China (<http://iphonebbs.cnmo.com>). Examining two different brands provides us stronger confidence to generalize the empirical findings to different contexts.

There were about 3 million and 4 million registered members in the two VBCs respectively when data were collected. We randomly selected 2,000 active members of these two VBCs. We first sent out email invitations to these members and asked them to participate in a web-based survey that was hosted on a different web site. To increase response rate, we took the following steps. First, we invited several experts, including five researchers and 20 VBC members to ensure the quality of the survey. Second, we conducted a pre-test by collecting data from 60 members from the two VBCs who were not included in the final sample. The feedback from these respondents was considered in revising the survey. Third, we had a personalized short introduction at the beginning of the survey to greet each respondent that used the respondent's registered name from the databases. Fourth, we stated in the introduction section that we would pay 10 RMB to the respondent's cell phone (approximately U.S. \$1.70 for 30- to 50-minutes talking time) for each successful completion of the survey. Finally, we sent one reminder as a follow-up. We closed the survey after it was posted for one month. Once a respondent answered the survey, we collected that respondent's identification number from his/her VBC. ID number was used to obtain objective data about consumer participation and other demographical information.

We found no significant differences between respondents and non-respondents in terms of gender, age, and employment industry. To assess common method bias in our data, we followed the literature using Harman's one-factor model approach [Harman 1967]. Six factors were extracted, and the first factor accounted for 37% of the total variance. We also used objective data to capture the focal dependent variable, consumer participation. We, therefore, concluded that common method bias was unlikely a concern in our study.

A total of 167 members completed the survey (Table 1) without any missing data in their identification numbers, representing a response rate of 8.7% that was similar to other VBC studies that used the similar research method [Nambisan and Baron 2009; Zhou et al. 2012]. Sivo et al. [2006] observed that the low response rate was because of the difficulty to access and manage the response and nonresponse directly.

Table 1. Respondents' Profile

	Apple	Meizu
Gender		
Female (Percentage)	13 (7.78)	11 (6.59)
Male (Percentage)	60 (35.93)	83 (49.70)
Age (in Years)		
30 and below (Percentage)	58 (34.73)	84 (50.30)
Above 30 (Percentage)	15 (8.98)	10 (6.00)
Industry		
Computer (Percentage)	51 (30.54)	77 (46.11)
Non-computer (Percentage)	22 (13.17)	17 (10.18)
Community involvement		
Member Title (from 1(new) to 10 (honorable))	2.82	4.25
Tenure (Number of months)	13.01	15.70
Number of Friends	2	29
Total	73	94

4.2. Measures

Our measures are reported in Table 2. We adopted these measures from the prior literature whenever possible and created new measures when necessary.

We used a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree") to measure variables. These measures were developed in the prior literature to gauge the psychometric properties of the research constructs. In particular, the scales of promotion and prevention orientations were adopted from Haws et al. [2010]. A sample item for promotion focus was "I see an opportunity for something I like, I get excited right away." The two aspects of brand self-congruence (ideal and ought) were from Malär et al. [2011]. First, we asked the respondents to take their time to think about a brand (either Apple or Meizu) as if it were a person and describe it using words that were typically used to describe human characteristics (such as reliable, gentle, etc.). Second, we asked respondents to reflect on how they would see themselves and describe themselves. After these steps, respondents answered two questions that indicated whether the brand was consistent with their selves. We also adopted the scales from Nambisan and Baron [2009] to measure utilitarian benefit and hedonic benefit.

Table 2. Measures

Items	Loading	AVE	CR	α
<i>Promotion focus</i> [Haws et al. 2010]		.50	.79	.75
Please rate your reaction in your life along the following dimensions:				
I feel like I have made progress toward being successful in my life.	.60			
When I see an opportunity for something I like, I get excited right away.	.60			
I frequently imagine how I will achieve my hopes and aspirations.	.70			
I see myself as someone who is primarily striving to reach my “ideal self” — to fulfill my hopes, wishes, and aspirations.	.88			
<i>Prevention focus</i> [Haws et al. 2010]		.53	.82	.79
Please rate your reaction in your life along the following dimensions:				
Not being careful enough has gotten me into trouble at times. (Reversed)	.53			
I worry about making mistakes.	.68			
I frequently think about how I can prevent failures in my life.	.82			
I see myself as someone who is primarily striving to become the self I “ought” to be—fulfill my duties, responsibilities and obligations.	.83			
<i>Brand ideal self-congruence</i> [Malär et al. 2011]		.84	.91	.92
Respondents were given the following instructions: Take a moment to think about brand x. Describe this brand using personality characteristics such as reliable, gentle, etc. Now think about how you would like to see yourself (your ideal self). What kind of person would you like to be? Once you’ve done this, indicate your agreement or disagreement with the following statements:				
The personality of brand x is consistent with how I would like to be (my ideal self).	.88			
The personality of brand x is a mirror image of the person I would like to be (my ideal self).	.95			
<i>Brand ought self-congruence</i> [Malär et al. 2011]		.90	.95	.94
Respondents were given the following instructions: Take a moment to think about brand x. Describe this brand using personality characteristics such as reliable, gentle, etc. Now think about how you would like to see yourself (your ought self). What kind of person ought you to be? Once you’ve done this, indicate your agreement or disagreement with the following statements:				
The personality of brand x is consistent with how I ought to be (my ought self).	.98			
The personality of brand x is a mirror image of the person I ought to be (my ought self).	.92			
<i>Utilitarian benefit</i> [Nambisan and Baron 2009]		.84	.94	.94
When participating in x (Meizu or Apple) community, what benefits you acquire? Please give us your opinion on the following statements.				
Enhance my knowledge about the product and its usage.	.91			
Obtain solutions to specific product usage related problems.	.93			
Enhance my knowledge about advances in product, related products, and technology.	.99			
<i>Hedonic benefit</i> [Nambisan and Baron 2009]		.82	.95	.94
When participating in x (Meizu or Apple) community, what benefits you acquire? Please give us your opinion on the following statements.				
Spend some enjoyable and relaxing time	.91			
Derive fun and pleasure	.96			
Entertain and stimulate my mind.	.92			
Derive enjoyment from problem-solving, idea generation, and so on.	.82			

Consumer participation was often measured using objective data collected from VBCs [Nambisan and Baron 2009; Wang et al. 2015]. In this study, we collected data about the total amount of hours spent and the number of postings on a VBC in a span of six months. We first collected the objective data that measured the amount of time a consumer spent on a VBC and the number of postings at the time when the consumer completed the survey (Time 1). We then collected the same data again after six months using the same consumer’s identification number (Time 2). To reduce skewness, the indicators were log transformed. We used the changes in the indicators to measure consumer participation.

To account for possible nuisance effects, we included several control variables, such as gender (dummy variable, male was coded as 1), age (dummy variable, age above 30 was coded as 1), industry (dummy variable, computer

related industry was coded as 1), a customer's title (from new (1) to honorable (10)), tenure (the number of months since the customer registered in the VBC), the number of friends in a VBC, and community type (dummy variable, Apple was coded as 1), that might influence consumer participation [Nambisan and Baron 2009; Thompson and Sinha 2008].

5. Analyses and Results

In the process of analyzing data, we adopted a combination of two statistical approaches, i.e., the structural equation modeling (SEM) approach to estimate the reliability and validity of measures and the hierarchical regression approach to test research hypotheses. Following the SEM approach, we conducted confirmatory factor analysis (CFA) to assess the psychometric properties of the scales that are used to measure our latent research constructs. The hierarchical regression method enabled us to analyze the data in a flexible manner to reveal complicated relationships among the research constructs [Tukey 1954].

5.1. Scale Validation

As all the constructs were adapted from established studies, we conducted CFA in EQS [Byrne 1994], an alternative SEM package, which is similar to LISREL and AMOS, to check the measurement model of the six latent factors. We eliminated items that had low construct validity from the original scales of regulatory orientations [Haws et al. 2010]. The results provided a satisfactory fit to the data: $\chi^2(168) = 217.66$, normed fit index (NFI) = .94, comparative fit index (CFI) = .99, root mean squared error of approximation (RMSEA) = .04.

As shown in Table 2, almost all of the composite reliability (CR) and Cronbach's alpha (α), was greater than the threshold value of 0.70, showing acceptable reliability. Each standardized item loading was significant at the 0.001 level, and average variance extracted (AVE) exceeded the recommended minimum of 0.50, showing satisfactory convergent validity. We also found that the AVE of each construct in our model was higher than its squared correlation with other constructs, demonstrating high discriminant validity.

5.2. Hypotheses Testing

The correlations and descriptive statistics of all the variables are shown in Table 3.

To test hypotheses, we first mean-centered the variables to reduce the concern of multicollinearity. We found that variance inflation factors (VIFs) were below 3, so we concluded that multicollinearity was not an issue in the current study. The results of the analyses are in Table 4. In order to test H1a and H1b, we ran two regression models where consumer participation was measured by the total amount of hours spent and the number of postings respectively. Model 1.1 and Model 1.2 shows that utilitarian benefit was positively related to consumer participation (Total time: $b = .10$, $p < .05$; Number of postings: $b = .14$, $p < .05$), supporting H1a. In contrast, the effect of hedonic benefit was insignificant, failing to support H1b.

Model 2.1 and Model 3.1 show the main effects on utilitarian benefit and hedonic benefit, while Model 2.2 and Model 3.2 include the interaction effects. ΔR^2 between Model 2.1 and 2.2 and that between Model 3.1 and 3.2 were significant, indicating the existence of interaction effects ($\Delta R^2_{(14, 152)} = .05$, $p < .05$; $\Delta R^2_{(14, 152)} = .06$, $p < .05$). A further examination of Model 2.2 and Model 3.2 show that the regulatory fit between promotion focus and brand ideal self-congruence had a positive effect on utilitarian benefit ($b = .30$, $p < .01$) and hedonic benefit ($b = .32$, $p < .01$), supporting H2a and H2b, respectively. The regulatory fit between prevention focus and brand ought self-congruence had no significant effect on utilitarian benefit ($b = .04$, $p > .05$) and hedonic benefit ($b = .07$, $p > .05$). Thus, H3a and H3b were not supported. Further, the regulatory non-fit between promotion focus and brand ought self-congruence was negatively associated with utilitarian benefit ($b = -.13$, $p < .05$) and hedonic benefit ($b = -.11$, $p < .05$), supporting H4a and H4b, respectively. The regulatory non-fit between prevention focus and brand ideal self-congruence negatively affected utilitarian benefit ($b = -.21$, $p < .01$) and hedonic benefit ($b = -.19$, $p < .01$), supporting H5a and H5b. We plotted Figure 2 to further illustrate these interaction effects.

6. Discussion, Implications, and Future Directions

6.1. Discussion and Theoretical Implications

Our research helps bridge the two streams of VBC studies and makes the following contributions. First, we use regulatory fit theory [Avnet and Higgins 2006] to integrate the prior VBC research, which focuses on either users or brands but not both. This integration allows us to understand the interplay between a consumer's goals and brand self-congruence on the consumer's pursuits of benefits and subsequently future participation in VBCs. Although extant studies have emphasized the importance of brand self-relationships and consumer engagement in VBCs [Dholakia et al. 2004; Zhou et al. 2012], few studies consider the interplay between an individual's brand self-congruence and regulatory orientations. Our research addresses this limitation by examining different representations of self-concepts (ought and ideal) in a brand and demonstrates that perceived brand self-congruence plays different roles for consumers who have different regulatory orientations.

Table 3. Descriptive Statistics and Correlations

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Total time	1.77	.81	1													
2. Number of postings	1.89	1.04	.80	1												
3. Utilitarian benefit	5.91	1.14	.20	.18	1											
4. Hedonic benefit	5.88	1.03	.08	.03	.70	1										
5. Promotion focus	5.69	.95	.04	.02	.24	.20	1									
6. Prevention focus	5.74	.99	-.04	-.02	.33	.31	.56	1								
7. Brand ideal self-congruenc	4.88	1.63	.17	.15	.45	.44	.10	.09	1							
8. Brand ought self-congruen	4.84	1.64	.10	.07	.49	.48	.03	.10	.77	1						
9. Gender	.86	.35	.05	.11	-.03	.00	-.10	-.07	-.06	-.02	1					
10. Age	.47	.50	-.30	-.24	-.11	-.14	-.04	-.04	-.16	-.16	.05	1				
11. Industry	.23	.42	-.14	-.16	.01	.02	.12	-.14	.05	.04	.02	-.01	1			
12.Title	3.63	2.09	.53	.59	.09	.04	.03	.01	.09	.05	.03	-.04	-.10	1		
13. Tenure	14.53	13.65	.07	-.01	-.19	-.06	-.16	-.01	-.11	-.08	.04	.07	-.01	.27	1	
14. Friends	17.34	61.26	.24	.23	.01	-.01	.06	.09	.01	.00	-.12	-.08	-.01	.51	.29	1
15. Community type	.56	.50	.60	.54	.03	-.08	-.07	-.04	.03	-.01	.09	-.42	-.14	.34	.10	.23

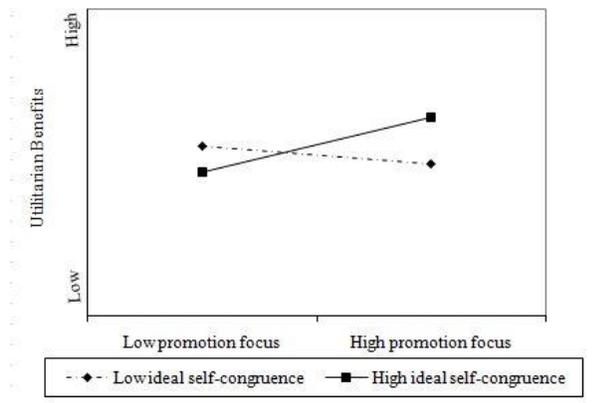
Note: significant at .05 level if the absolute value is higher than .16.

Table 4. Regression Results

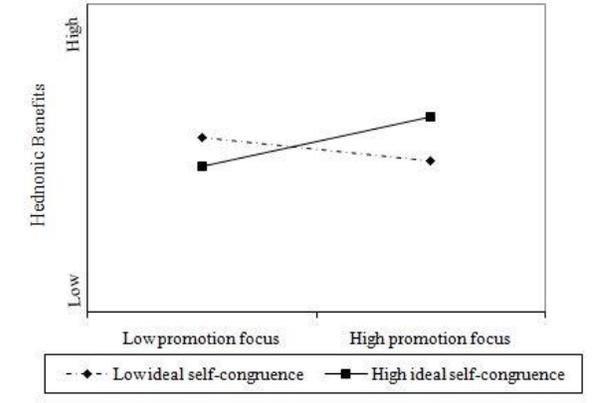
	Model 1.1		Model 1.2		Model 2.1		Model 2.2		Model 3.1		Model 3.2	
	Participation: Total Time		Participation: Postings		Utilitarian benefit		Hedonic benefit		Hedonic benefit		Hedonic benefit	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Main effects												
Promotion focus					.02	.21	.09	.20	.14	.19	.20	.18
Prevention focus					-.00	.16	-.01	.15	-.24	.15	-.25	.14
Ideal self-congruence					.10	.18	.12	.17	.04	.16	.02	.16
Ought self-congruence					.06	.04	.06	.04	.04	.04	.04	.04
Utilitarian benefit	.10*	.05	.14*	.07								
Hedonic benefit	-.01	.06	-.10	.08								
Interaction effects												
Promotion x ideal							.30**	.09			.32**	.08
Prevention x ought							.04	.06			.07	.06
Promotion x ought							-.13*	.06			-.11*	.05
Prevention x ideal							-.21**	.08			-.19**	.07
Control variable												
Gender	.02	.13	.20	.17	.02	.21	.09	.20	.14	.19	.20	.18
Age	-.15	.10	-.16	.13	-.00	.16	-.01	.15	-.24	.15	-.25	.14
Industry	-.08	.10	-.17	.14	.10	.18	.12	.17	.04	.16	.02	.16
Title	.16**	.03	.27**	.03	.06	.04	.06	.04	.04	.04	.04	.04
Tenure	-.00	.00	-.01*	.00	-.01*	.01	-.01**	.01	-.00	.01	-.00	.01
Friends	-.00	.00	.00	.00	-.00	.00	-.00	.00	-.00	.00	-.00	.00
Community Type	.68**	.11	.68**	.14	.07	.17	.07	.17	-.29	.16	-.28	.15
R ²	.51		.53		.37		.42		.33		.39	
ΔR^2							.05* _(14,152)			.06* _(14,152)		

Note: n=167; β : unstandardized coefficients, S.E.: standard errors. *p < .05; **p < .01

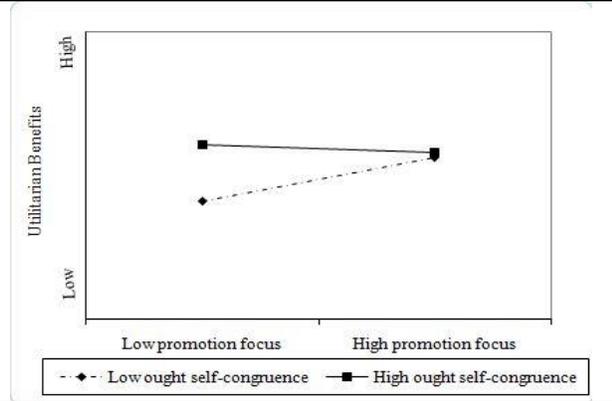
A: Promotion and Ideal-self Congruence on Utilitarian Benefits



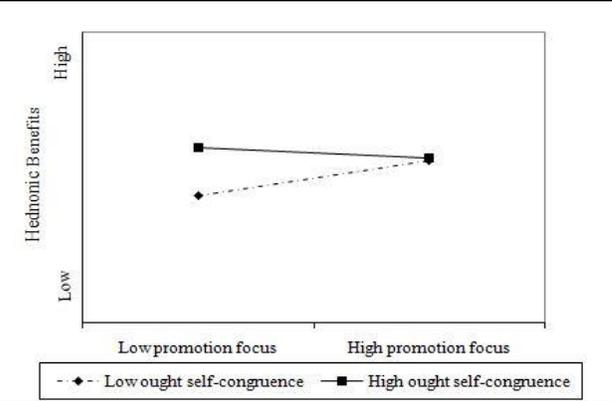
B: Promotion and Ideal-self Congruence on Hedonic Benefits



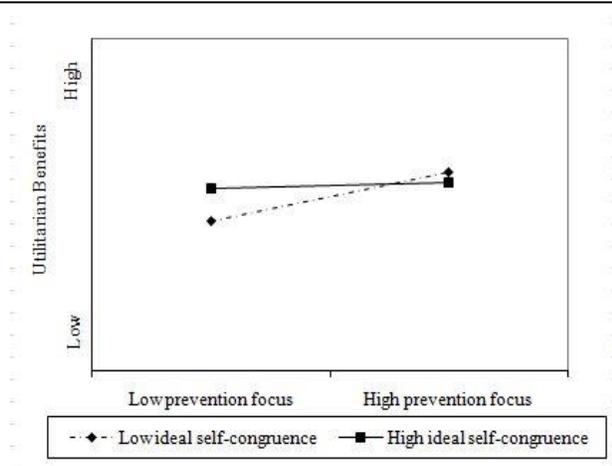
C: Promotion and Ought-self Congruence on Utilitarian Benefit



D: Promotion and Ought-self Congruence on Hedonic Benefit



E: Prevention and Ideal-self Congruence on Utilitarian Benefit



F: Prevention and Ideal-self Congruence on Hedonic Benefit

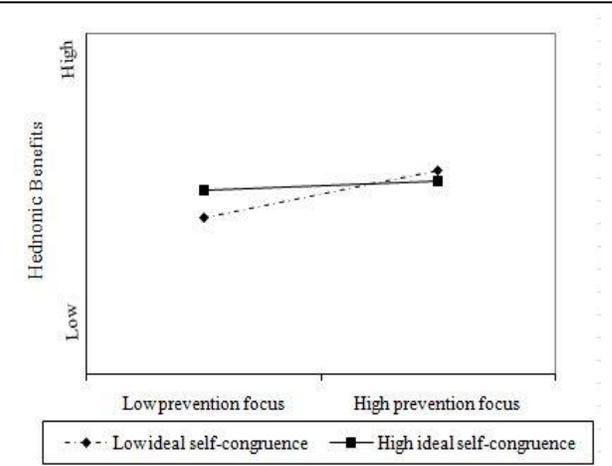


Figure 2. Interaction Effects

Second, while previous research tends to show that promotion-focused individuals are more likely to emphasize hedonic benefit (gains-related) [Chitturi et al. 2007, 2008], we found that brand self-congruence can moderate such an effect. As brand ideal self-congruence increases, promotion-focused consumers seek not only hedonic benefit but also utilitarian benefit. However, when a brand elicits promotion-focused consumers' ought selves, they reduce the pursuits of hedonic and utilitarian benefit. In addition, the findings also provide a more fine-grained explanation as to when prevention-focused consumers reduce the pursuits of utilitarian and hedonic benefits (i.e., when they identify a given brand that advocates ideal selves).

However, we did not find any significant effect of the interaction between prevention focus and ought self-congruence on either utilitarian or hedonic benefit. We posit that even though brand ought self-congruence aligns with the orientation of prevention-focused consumers in their participation in VBCs, these consumers may still feel insecure in expressing their opinions and presenting themselves in VBCs to fulfill their responsibilities and maintain healthy relationships with others. Whether consumers seek benefits (utilitarian or hedonic) also depends on a collaborative and harmonious community culture that motivates consumers to actively interact with each other and prevent hostile comments from peer consumers [de Almeida et al. 2014]. Therefore, consumers' pursuits of benefits in VBCs cannot be accomplished without a healthy community culture.

Third, we collected both objective data from the databases on the VBCs and subjective data reported by VBC consumers, rather than only depending on subjective data. This research design reduces the concerns of common method bias. In addition, we used two items to measure consumer participation, instead of a single-item measure [Dholakia et al. 2004; Nambisan and Baron 2009]. The regression models using the two different indicators to measure consumer participation reported consistent results. The robustness check increased our confidence in the empirical results. We suggest that this may be the direction for future VBC studies to follow. When big data are getting harnessed by companies to seek business opportunities and innovative consumer ideas, the rich data in VBCs should be fully explored.

It was also found that utilitarian benefits motivated consumers to participate in the community, consistent with the arguments for the hypothesis. However, we did not find a significant relationship between hedonic benefit and consumer participation, which was different from previous studies [Nambisan and Baron 2007, 2009]. The possible reason is that our research context was based on two communities where the brand was a cell phone. The two types of cell phones had different levels of user experience, which might have cancelled out when the two VBCs were pooled together. In addition, the utilitarian value might be the dominant factor for a consumer to participate in the VBC, while a consumer's experience with the VBC was not as important. There might be less focus on the design quality of the VBC so that a user's subjective experience of interacting in the VBC was interrupted. The evaluation of hedonic benefit was, therefore, attenuated because of this lower level of experience in the VBC.

6.2. Managerial Implications

Apart from the theoretical contributions, this study also offers insights to practitioners. First, marketers should be aware that individuals identify with a given brand and its VBCs differently [Algesheimer et al. 2005] so that they should position brand communication differently depending on the goals (promotion vs. prevention) of VBC members. For instance, for promotion-oriented members, a brand message can be customized to appeal to ideal selves to encourage pursuits of both utilitarian and hedonic benefits that ultimately elevate future participation. Second, brand managers can stress the congruence and avoid incongruence between the brand and consumers' selves to help raise the level of benefits sought by these consumers. Thus, managers should not only design features for promotion-focused consumers to show their statuses and images in order to pursue their ideal selves but also offer spaces for prevention-focused consumers to help them feel secure to pursue their ought selves. Third, as evidenced by prior studies, a consumer's regulatory orientation is malleable [Haws et al. 2012]. Based on these insights, marketers could design community messages or activities to shift consumers into, for instance, a promotion-focused mode, before sending out ideal self-congruence messages. Finally, our results also indicate that utilitarian benefit rather than hedonic benefit affects consumer participation. Therefore, managers should design their VBCs with an objective to strive for utilitarian benefit (e.g., knowledge about product usage, product specifications, and technology). Managers should further reward members who post knowledge-related comments and blogs, as these postings are a critical source of utilitarian benefit sought by other members.

6.3. Limitations and Future Directions

Although this research takes the initiative to apply regulatory fit theory to investigate consumer behaviors in VBCs, several limitations need to be addressed here. First, our data were collected from two smartphone VBCs, Meizu and Apple. Using only one product may limit the generalizability of our findings. Future research could examine other products. For example, consumers in other VBCs, such as traveling or automobile communities, are more likely to seek hedonic and social benefits [Wang and Fesenmaier 2004], which may influence the relationship between consumer regulatory focus and experiential benefits. Second, future studies could consider other

community-related factors, such as community culture, governance, reward, size, and consumer- versus marketer-generated community, to improve the generalizability of the research model. Third, given the nature of existing VBC membership, the variance of brand self-congruence could be limited. An experiment with assignment to VBCs that are brand self-congruent versus incongruent may help better identify the causal relationships between the variables of interest. Finally, better refinement of measures is needed to ensure the face and content validity of our key constructs, such as prevention and promotion orientations.

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