Efficacy Beliefs and Customer Collaboration in Online Collaborative Communities: A Relationship Marketing Perspective

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ABSTRACT

Drawing upon the perspectives of self-efficacy and relationship marketing, this study attempts to examine how efficacy beliefs affect customer collaboration intention in online collaborative communities. Community commitment and community trust serve as key constructs that mediate the relationships between efficacy beliefs and customer collaboration intention. After collecting 476 valid responses from collaborative gaming communities in a globally-leading Massive Multiplayer Online Game (MMOG), the results show that self-relevant and community-relevant efficacy beliefs relate positively to community commitment and community trust. Community commitment and community trust have positive impacts on customer collaboration intention, respectively. Finally, research implications and limitations are also discussed.

KEYWORDS: Customer collaboration, Online collaborative community, Self-efficacy, Collective efficacy, Commitment, Trust

INTRODUCTION

Recently, digital marketing practitioners have emphasized the practice of customer collaboration in online communities, such as Wikipedia, Linux, and Threadless. In these online collaborative communities, crowdsourcing (Brabham, 2013; Howe, 2008) and collective intelligence (Malone, Laubacher, and Dellarocas, 2010; Surowiecki, 2004) are often revitalized through customer participation and collaboration in online activities, such as online learning (Alavi, 1994; Ingram and Hathorn, 2004) and knowledge sharing (Wasko and Faraj, 2004). Therefore, customer collaboration in online collaborative communities becomes significantly influential on the Internet economy (Howe, 2008; Malone et al., 2010).

However, it appears to be difficult to maintain the quality of conjoint outcomes and customers' active participation in online collaborative communities. Successful collaboration in an online collaborative community often depends on the competences of both individual customers and the whole community (Malone et al., 2010; Surowiecki, 2004). According to Bandura (1986, 1997), efficacy beliefs may be classified into self-efficacy and collective efficacy that refer to those beliefs about an individual's and a group's capabilities to perform a task. Both efficacy beliefs are found to influence personal and conjoint performance in several contexts(Feltz and Lirgg, 1998; Schaubroeck, Lam and Xie, 2000). However, little of research has simultaneously examined the consequences of efficacy beliefs in online collaborative communities.

To address these issues, this study attempts to investigate the antecedents of customer collaboration intention in online collaborative communities by drawing upon the perspectives of self-efficacy (Bandura, 1986, 1997) and relationship marketing (Morgan and Hunt, 1994). This study first identifies two types of efficacy beliefs in online collaborative communities: self-relevant and community-relevant efficacy. Then, we develop a conceptual model to examine how efficacy beliefs that a customer perceives influence his or her participation n in an online collaborative community. In the proposed model, community commitment and community trust serve as two key components of relationship quality and mediate the relationships between efficacy beliefs and customer collaboration intention. The proposed model is tested in the context of online gaming communities in a globally-leading Massive Multiplayer Online Game (MMOG), which is characterized by the nature of online collaboration. Our findings will help digital marketing practitioners understand how to improve cusotmer participation and maintain collaboration quality, leading to sustainable advantage of online collaborative communities.

RESEARCH FRAMEWORK AND HYPOTHESES DEVELOPMENT

Our research framework is based on self-efficacy theory and relationship marketing theory. This study argues that self-efficacy theory can be integrated with relationship marketing theory to predict cusotmer collaboration intention in online collaborative communities for two reasons. First, past research suggests that an individual's self-efficacy can generate positive consequences, which will improve his or her performance in organizations (Gist, 1987; Gist and Mitchell, 1992). Second, relationship marketing literature has recognized commitment and trust as intervening roles that mediate between certain antecedents and behavioral outcomes (Morgan and Hunt, 1994). In the model, we propose that self-relevant and community-relevant efficacy beliefs will positively relate to relationship quality (community commitment and community trust), which in turn to improve customer collaboration intention in online collaborative communities. Next, we will develop our hypotheses in detail.

Efficacy Beliefs

According to self-efficacy theory (Bandura, 1977, 1997), efficacy beliefs are classified into self-efficacy and collective efficacy that are recognized to be influenced by different sources of efficacy information (Zaccaro, Blair, Peterson, and Zazanis, 1995). First, self-efficacy is often regarded as a summary of one's judgment toward his or her capabilities to perform a specific task (Gist and Mitchell, 1992). Given the adequate levels of skills and incentives, one's perceived self-efficacy is likely to determine "people's choice of activities, how much effort they will expend, and of how long they will sustain effort in dealing with stressful situations (Bandura, 1977, p. 194)." Furthermore, Bandura (1986, 1997) has also proposed the concept of collective efficacy by extending self-efficacy theory to explain the choice and performance of a group. Collective efficacy is defined as a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments (Bandura, 1986, 1997).

Efficacy Beliefs and Relationship Quality

Berry (1983) suggest that the core of relationship marketing lies in "the attraction, retention, and enhancement of customer relationships" in order to sustain long-term profitability. One important construct that captures the overall nature of relationships between exchange partners is relationship quality. It is generally agreed that commitment and trust are two key components of relationship quality (Morgan and Hunt, 1994). First, commitment is essential for developing successful relational exchange (Gundlach, Achrol, and Mentzer, 1995). Past organizational behavior research has also suggested that an employee's organizational commitment involves his or her strong belief in and acceptance of the organization's goals, willingness to exert considerable effort on behalf of the organization, and definite desire to maintain organizational membership (Porter, Steers, Mowday, and Boulian, 1974). Second, trust is another necessary ingredient for long-term social exchange (Doney and Cannon, 1997; Ganesan, 1994). Past research has indicated that trust encompasses the confidence, reliability, and integrity that one places in his or her exchange partner (Gundlach and Murphy, 1993; Morgan and Hunt, 1994). Trust is also regarded as a type of expectation that reduces the fear that one's exchange partner will act in an opportunistic way (Singh and Sirdeshmukh, 2000).

According to self-efficacy theory (Bandura, 1989), an individual who has a strong belief in his or her capabilities is likely to exert more effort to overcome the challenge. In an online collaborative community, a customer who has a high sense of efficacy is likely to have more opportunities to interact with community members and participate in collaborative activities. He or she tends to obtain numerous valuable resources from successful community activities. The enrichment of the resources is likely to make the player feel socially indebted to others and the community (Gouldner, 1960). Such indebtedness leads to his or her commitment to the community. Thus,

H1. Self-relevant efficacy will relate to community commitment positively.

Self-efficacy theory suggests that community-relevant efficacy represents shared beliefs in capabilities of a social entity (Bandura, 1986, 1997). Thus, a customer who has great confidence in

an online collaborative community is likely to feel supported by other members in community activities (Preece, 1999; Rheingold, 1993). Such support can create a sense of community (Blanchard and Markus, 2004), increasing the customer's commitment to the community. Prior research has pointed out the positive relationship between collective efficacy and professional commitment (Ware and Kitsantas, 2007).

H2. Community-relevant efficacy will relate to community commitment positively.

Furthermore, a customer who has strong belief in community members' capabilities may eliminate his or her fear of the failure of community activities. A collective goal can be only achieved when each member feels confident in the whole community. Relationship marketing literature also indicates that shared beliefs about goals, values, behaviors or capabilities can be regarded as an antecedent of trust (Morgan and Hunt, 1994). Therefore,

H3. Community-relevant efficacy will relate to community trust positively.

Relationship Quality and Customer Collaboration Intention

Relationship marketing research suggests that commitment often involves an intention to maintain a valued relationship in the future (Moorman et al., 1992). When a customer is committed to an online collaborative community, he or she tends to feel morally obligated to participate in collaborative activities (Gruen et al., 2000). Thus,
H4. Community commitment will relate to customer collaboration intention positively.

On the other hand, past research has suggested that virtual collaboration with anonymous members in a virtual setting requires a member's beliefs that his or her partners are reliable and integral (Hsiao and Chiou, 2012). When the uncertainty of opportunism is eliminated by community trust in an online collaborative community, a customer is more likely to collaborate with community members. Therefore,
H5. Community trust will relate to customer collaboration intention positively.

The Other Relationship

Trust is regarded as a major determinant of relationship commitment because "mistrust breeds mistrust and such would also serve to decrease commitment in the relationship and shift the transaction to one or more direct short-term exchanges (McDonald, 1981, p. 834)." In an online collaborative community, a customer is less possibly to feel committed to the community unless community trust is already established (Garbarino and Johnson, 1999).
H6. Community trust will relate to community commitment positively.

METHODOLOGY

Data Collection

The research setting in this study is online gaming communities in a globally-leading MMOG. We recruited and invited voluntary participants from three online forums related to the target MMOG to participate in our survey. A total of 476 valid responses were collected. Among these respondents, the average age was 24.03 (SD = 3.95), and 57.98% of them had participated in their current communities for more than six months.

Measures

For most of the construct considered, established scales were used and modified to accommodate the research context. Items for all measures were anchored on 7-point Likert scales (1 = strongly disagree and 7 = strongly agree). The scale of self-relevant efficacy was modified from Bandura (1986) and Hsu et al. (2007). The scale of community-relevant efficacy was measured by three items following Bandura (1997) and Feltz and Lirgg (1998). The construct of community

commitment was assessed with four items derived from Gruen et al. (2000) and Mathwick et al. (2008). Three items for community trust were adapted from Chiu et al. (2006) and Hsiao and Chiou (2012). Finally, three self-reported items for customer collaboration intention were developed from our long-term observation and participation in community activities in the target MMOG. The scale was similar to those in past research (Garbarino and Johnson, 1999).

Data Analysis

Following Anderson and Gerbing (1988), confirmatory factor analysis (CFA) was used to assess construct validity in the measurement model. Then, the full structural equation model was estimated to test our hypotheses. All analyses were conducted by using AMOS 5.0 (Arbuckle, 2003).

RESULTS

Confirmatory Factor Analysis

To assess the uni-dimensionality of the scales, we performed a confirmatory factor analysis on five research constructs. The results revealed that the overall fit of the five-factor model was χ^2 (94) = 371.77 (p < 0.01); CFI = 0.97; NFI = 0.96; SRMR = 0.051. These fit statistics were satisfactory as prior studies have recommended (Bollen, 1989; Hu and Bentler, 1995; McDonald and Marsh, 1990). Thus, our measurement model fit the data well.

Then, we used composite reliability (CR) and average value extracted (AVE) to evaluate internal consistency of constructs. Fornell and Larcker (1981) suggest that the estimates of CR above 0.70 and AVE above 0.50 are considered acceptable. The results showed that the CR and AVE values for all constructs in our research model were higher than the recommended levels, indicating satisfactory internal consistency.

We assessed convergent validity by examining whether the item loadings were significant (Anderson and Gerbing, 1988). The results showed that item loadings listed in the appendix were significant for their hypothesized constructs, supporting satisfactory convergent validity. Finally, we followed Fornell and Larcker's (1981) suggestion to evaluate discriminant validity. The results showed that the square root of AVE was greater than pairwise correlation coefficients for each construct, in supports for discriminant validity of our measures.

Hypothesis Testing

Before testing our hypotheses, we first performed a full structural model. The overall fit of the structural model was χ^2 (97) = 377.21 (p < 0.01); CFI = 0.97; NFI = 0.96; SRMR = 0.055. The model fit was excellent. The results revealed that there was a significantly positive relationship between self-relevant efficacy and community commitment (γ = 0.11, p < 0.01), in support for H1. As we expected, community-relevant efficacy had positive and significant effects on community commitment (γ = 0.45, p < 0.01) and community trust (γ = 0.57, p < 0.01), supporting H2 and H3. Moreover, the results showed that both community commitment (γ = 0.58, p < 0.01) and community trust (γ = 0.24, p < 0.01) affected customer collaboration intention, respectively. Thus, H4 and H5 received empirical supports. Finally, H6 expected that community trust will relate to community commitment positively. The results showed that community trust was positively related to community commitment (γ = 0.36, p < 0.01), in support for H6.

DISCUSSION AND IMPLICATIONS

Recently, online collaborative communities have met the difficulties in managing virtual interaction and value co-creation among customers. Since the success of customer collaboration in online collaborative communities often involves each member's beliefs about both individual and collective capabilities, this study confirms that a customer's efficacy beliefs may be key determinants of perceived relationship quality in his or her online collaborative communities positively. Specifically, self-relevant efficacy has a positive impact on community commitment, whereas community-relevant efficacy is associated positively with community commitment and community trust. The results also

show that a customer's community commitment and community trust are likely to determine his or her collaboration intention in online collaborative communities.

This study contributes to online community literature in several aspects. This study extends current literature by proposing the concept of collective efficacy to explain customer collaboration intention in online collaborative communities. Our simultaneous examination of self-relevant and community-relevant efficacy beliefs is more appropriate for highlighting the nature of crowdsourcing and collective intelligence in online collaborative communities. Next, community-relevant efficacy is similar to cognitive social capital which refers to shared understanding in a social entity. Our findings are contributory greatly for current development of social capital theory by providing additional evidence for the positive relationship between cognitive and relational aspects of social capital in online communities. Finally, although virtual collaboration was applied to numerous online behaviors, past research has put less emphasis on collaborative gaming activities. Thus, our framework will contribute to theoretical advance in online game studies.

This study has several implications for online community managers. First, this study indicates that a customer's self-efficacy is a key determinant of his or her commitment toward a collaborative community. When recruit new members, online collaborative community managers are recommended to assess skills or capabilities of performing community tasks well. The newcomers with high self-efficacy tend to feel committed toward their communities. Second, this study recommends practices that should be implemented to increase a customer's perceptions toward the capabilities of an online collaborative community. Online community managers can establish an achievement-rating system that records the extent to which a collaborative community accomplishes its collective tasks successfully. Finally, online collaborative community managers are suggested to design community-based activities that facilitate members to interact with each other frequently. Frequent interaction in an online collaborative community would deepen a customer's understandings about other members, leading to the customer's greater commitment and trust toward the community.

REFERENCES

References available upon request.