Investigating the development of brand loyalty in brand communities from a positive psychology perspective

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ABSTRACT

Based on the flow theory from positive psychology, we propose that flow could be generated by brand community characteristics and plays an important role in influencing brand community members' attitudes toward a brand. Specifically, we propose a model that identifies brand community characteristics (i.e., community cohesiveness and information quality) that produce flow and explore how flow impacts brand identification and brand loyalty. Members from 31 automobile brand communities participated in this survey study, and 580 validated questionnaires were returned. Structural Equation Model was used to test the research hypotheses. The results show that community cohesiveness and information quality positively influence flow. Flow positively influences members' brand identification and, subsequently, impacts brand loyalty. The mediating role of flow in building brand identification is also demonstrated.

1. Introduction

In recent years, marketers have been using brand communities (e.g., Jeep, Apple, HTC smartphones) to build brands (McWilliam, 2000). A brand community can be defined as a "…group of consumers with a shared enthusiasm for the brand and a well-developed social identity, whose members engage jointly in group actions to accomplish collective goals and/or express mutual sentiments and commitments" (Bagozzi and Dholakia, 2006, p. 45). It provides consumers with a variety of information pieces, such as products, user experience and competition between companies. It can also be used to enhance brand loyalty and commitment (Muniz & O'Guinn, 2001). While prior research identified the important impact brand communities have on product marketing and brand equity (Laroche, Habibi, Richard, & Sankaranarayanan, 2012; Zaglia, 2013), few managers understand how to achieve these benefits (Fournier & Lee, 2009). There is much left to explore about the mechanism underlying the influence of brand communities on consumer behavior and branding. Therefore, our research attempts to achieve this end.

Brand community research has started to identify the importance of consumers' psychological processes in regard to developing successful brand communities (e.g., Carlson, Suter, & Brown, 2008; Schouten, McAlexander, & Koenig, 2007). Researchers have shown that positive feelings from participating brand community activities can be transferred to the brand (McAlexander & Schouten, 1998). Some researchers further argued that consumer experience should be the center of a brand community (rather than the brand), and unfolded the relationships within a brand community (McAlexander, Kim, & Roberts, 2003; McAlexander, Schouten, & Koenig, 2002; Muniz & Schau, 2005). According to the flow theory (Csikszentmihalyi, 1997) in positive psychology, an individual experiences a feeling of full engagement, fun and enjoyment when performing an activity. Such positive consumer experiences lead to positive affect and satisfaction. Flow, which occurs during the process of participating in brand community activities, or "the psychology of optimal experience" (Csikszentmihalyi, 1990) is not just about positive experiences. It requires individuals' active participation and can motivate people both individually and in the community. Flow has been shown to enhance customer relationships with a brand and its brand community (Schouten et al., 2007). Thus, among the positive transformative consumer experiences, we propose that flow plays an important role in developing a successful brand community.

A substantial number of human-computer interaction studies examined the antecedents and consequences of flow after Hoffman and Novak (1996) introduced the conceptual framework of flow in the online environment. While the majority of these studies used a unidimensional flow, recent studies have demonstrated the importance of

using a multi-dimensional flow (e.g., Hamari & Koivisto, 2014; Kaur, Dhir, Chen, & Rajala, 2016; Procci, Singer, Levy, & Bowers, 2012). Today, many brand communities involve both online and face-to-face social interactions and are known as small-group-based communities (Dholakia, Bagozzi, & Pearo, 2004). Given the hybrid interaction format, a multi-dimensional construct of flow is an ideal way to capture the flow experience. In addition, previous research focused on individual factors that lead to flow and, as such, neglected contextual factors (Csikszentmihalyi, 2014). Csikszentmihalyi (2014) indicated that, in addition to personal skills, social structure influences the occurrence of flow. Little is known about whether and what brand community characteristics produce flow. Thus, we investigate brand community characteristics that produce flow. In sum, we attempt to address the following questions: (1) Do brand community characteristics generate flow, and if so, which ones? and (2) What is the role of flow in the brand loyalty building process?

The results of this study contribute to the flow, branding, and brand community literature. First, by extending the application of the flow theory to the branding domain, we provide evidence of flow in small-group-based communities. Although flow has been examined and applied in many domains (e.g., education, sports, and human-computer interaction), little is known about its role in brand communities. Notably, we provide evidence of the appropriateness of using a multi-dimensional flow in small-group-based brand communities. Second, although flow has been shown to influence brand loyalty (Schouten et al., 2007), it has not yet been identified how flow occurs in brand communities. As such, we identify the brand community characteristics that produce flow. Extending the flow theory, we show how contextual factors influence flow in the context of brand communities. Third, we demonstrate the important role of flow in the effects of community cohesiveness (CC) and information quality (IQ) on brand identification, and brand loyalty. Our results show that flow mediates the effects of CC and IQ on brand identification, which subsequently leads to brand loyalty. Moreover, our findings provide managerial implications for building successful brand communities and developing brand loyalty.

2. Research framework and theoretical background

According to the flow theory, flow occurs in a situation where an activity's perceived challenges are matched by a person's perceived skills (Csikszentmihalyi, 1990). In addition to personal skills, social structures influence the ease with which people experience flow (Csikszentmihalyi, 2014). Nakamura and Csikszentmihalyi (2014) stated that "Rather than focusing on the person, abstracted from context, flow research has emphasized the dynamic system composed of person and environment, as well as the phenomenology of person-environment interactions" (p. 241). In the same vein, it is likely that a brand community's environment would affect members' flow experiences. Moreover, in event marketing, researchers have shown that flow influences positive emotions, event image, and brand image (Drenger, Gaus, & Jahn, 2008). In brand communities, Schouten et al. (2007) demonstrated that flow caused by activity participation could enhance members' ties to a brand community. Therefore, this study proposes that brand community characteristics will determine flow, and flow will lead to brand identification and brand loyalty.

2.1. Flow

Flow is defined as an optimal psychological experience when performing activities (Csikszentmihalyi, 1997) and is characterized into nine dimensions: clear goals, unambiguous feedback, a challenge-skill balance, action-awareness merging, concentration on the task at hand, sense of control, loss of self-consciousness, transformation of time, and autotelic experience (Jackson & Marsh, 1996). Flow theory has been widely applied in different areas, such as education (Rathunde & Csikszetnmihalyi, 2005), music (de Manzano, Theorell,

Harmat, & Ullén, 2010), sports (Jackson & Marsh, 1996), marketing (e.g., Drenger et al., 2008; Novak, Hoffman, & Yung, 2000; Schouten et al., 2007), and web activities (Chen, Wigand, & Nilan, 1999). After Hoffman and Novak (1996) proposed the conceptualization of flow in the online environment, a substantial number of studies in human-computer interaction have investigated antecedents and consequences of flow (see a review in Hoffman & Novak, 2009). Many prior studies adopted a unidimensional flow. The importance of adopting the multi-dimensional flow has received attention and been used in the study contexts of video gaming (Procci et al., 2012) and gamification (Hamari & Koivisto, 2014). Since our study focuses on automobile brand communities that involve both online and offline activities, a multi-dimensional construct is appropriate to capture the flow experience. We aim to identify determinants of flow in the brand community context.

2.2. Brand community

A brand community refers to a social aggregation of brand users and their relationship to the brand itself (McAlexander et al., 2002). A successful brand community can turn a dying business into a healthy business. For example, the Harley-Davidson Motor Company was once close to going out of business; however, today, it is thriving due to its commitment to building a brand community (Fournier & Lee, 2009). Consumers value the brand and their relationships with other members in the community; thus, they become members of the brand community (Carlson et al., 2008; Jang, Olfma, Ko, Koh, & Kim, 2008). A brand community may be geographically concentrated or virtually online (Scott & Rajiv, 2008). Researchers have classified virtual communities as small-group-based communities, in which members usually have both online and face-to-face social interactions, and network-based communities, in which members' interactions are exclusively online (Dholakia et al., 2004). We focus on the former type.

Early brand community studies explored characteristics and processes. For example, Muniz and O'Guinn (2001) used a customer-customer-brand triad perspective in order to understand brand communities whereas McAlexander et al. (2002) proposed a customer-centric model to examine brand communities based on the relationships between the customer and brand, customer and company, customer and product, and among fellow customers. Since then numerous brand community studies have emerged. One research stream has focused on investigating the impact of community characteristics on consumers' attitudes and behaviors toward the brand community and brand (e.g., Habibi, Laroche, & Richard, 2014; Jang et al., 2008; Luo, Zhang, Hu, & Wang, 2016; Relling, Schnittka, Ringle, Sattler, & Johnen, 2016), and tactics and motivations to participate in communities (Liao, Huang, & Xiao, 2017; Ouwersloot & Odekerken-Schröder, 2008). For example, Jang et al. (2008) investigated the impact of brand community characteristics (i.e., IQ, system quality, interaction, and reward) on community commitment and brand loyalty. Extending the customer-centric model (McAlexander et al., 2002), Habibi et al. (2014) examined the impact of the four different relationships on brand trust. Luo et al. (2016) studied how different community interactions (e.g., product-information interaction, interpersonal interaction, and human-computer interaction) influence harmonious community relationships and customers' identification. According to the theory of organizational socialization, Liao et al. (2017) identify three socialization tactics (i.e., member education, interaction support, and participation feedback) that can encourage membership continuance intention. A second stream of research explores the social and value creation processes in brand communities (e.g., Laroche et al., 2012; Schau, Muniz, & Arnould, 2009; Zaglia, 2013). Extending Muniz and O'Guinn's (2001) research, Laroche et al. (2012) studied the impact of social media based brand communities on shared consciousness, rituals, traditions, value creation practices, brand trust, and brand loyalty. Using the social practice theory, researchers identified value-creating

practices (Schau et al., 2009) and their influence on community commitment and brand loyalty (Luo, Zhang, & Liu, 2015). Drawing on the social network theory and social identity theory, Zaglia (2013) explored how to cultivate consumers' interactions in brand communities. Black and Veloutsou (2017) explore co-creation of brand identity, consumer identity, and brand community identity, as well as the interactions among the three entities. Kornum, Gyrd-Jones, Zagir, and Brandis's (2017) study shows a nested system of identities in the interplay between brand identities and community identities.

A third research stream examines the importance of the psychological processes that underlie consumers' attitudes and behaviors toward brand communities (e.g., Bagozzi & Dholakia, 2006; Brodie, Ilic, Juric, & Hollebeek, 2013; Carlson et al., 2008; López, Sicilia, & Moyeda-Carabaza, 2017; Zhou, Zhang, Su, & Zhou, 2012). Bagozzi and Dholakia (2006) integrated the social (i.e., social identity and subjective norms) and psychological (i.e., attitudes, emotions, and perceived behavioral control) aspects of behavior in order to study consumers' participation in brand communities. Carlson et al. (2008) demonstrated that a psychological sense exists in brand communities for those individuals who do not engage in any brand community social interactions. Zhou et al. (2012) studied the mechanism of generating brand relationships in brand communities. López et al. (2017) examined how members manage their competing needs for being affiliated with the brand community and for being seen as distinctive by others. Schouten et al. (2007) found that flow created from participating in brand community activities can build strong brand loyalty, specifically among automobile owners. Extending Schouten et al.'s (2007) study, we propose that brand community characteristics can produce flow, which then leads to brand identification. This identification then results in brand loyalty.

2.3. Brand community characteristics

Muniz and O'Guinn (2001) observed three markers in brand communities. The first marker is a shared consciousness in which members feel a strong connection with one another and are aware of differences from those individuals not in the community. The second marker consists of rituals and traditions, as members have common rituals and traditions that occur through sharing their stories and experiences. The third marker is a sense of moral responsibility and arises because members have a sense of duty and obligation to the community. As Muniz and O'Guinn (2001), p. 427 stated, "brand communities carry out important functions on behalf of the brand, such as sharing information, perpetuating the history and culture of the brand, and providing assistance. They provide social structure to the relationship between marketer and consumer."

Previous studies have examined the impact of brand community characteristics on brand community participation and brand equity. The brand community characteristics that have been proposed and examined include shared consciousness, rituals and traditions, obligations to society (Laroche et al., 2012), interaction (Jang et al., 2008; Madupu & Cooley, 2010), relationship quality (McAlexander et al., 2002; Ouwersloot & Odekerken-Schröder, 2008), social networking (Laroche et al., 2012; Luo et al., 2015; Schau et al., 2009), subjective norm (Bagozzi & Dholakia, 2002, 2006), group norm (Bagozzi & Dholakia, 2002), normative community pressure (Algesheimer, Dholakia, & Herrmann, 2005), entertainment value (Dholakia et al., 2004; Madupu & Cooley, 2010), reward (Jang et al., 2008), and IQ (Jang et al., 2008; Madupu & Cooley, 2010). Based on the reasons outlined below, we decided to examine community cohesiveness (CC) and information quality (IQ) in this study.

Consumers obtain hedonic and utilitarian values from their participation in brand communities (McAlexander et al., 2002; Schau et al., 2009). CC and IQ can provide hedonic and utilitarian values, respectively. They also influence group formation (Ellemers, Kortekaas, & Ouwerkerk, 1999). When members agree with community objectives and have good relationships with the members, they are willing to give back and contribute more to the community (Johnson & Fortman, 1988). Brand communities provide a platform for members to build connections with others (Muniz & O'Guinn, 2001). Relationship quality among members facilitates their connections with a brand (Algesheimer et al., 2005) and influences their commitment to a brand community (Jang et al., 2008). Thus, CC influences the development of a brand community (Rozell & Gundersen, 2003). On the other hand, "brand communities represent an important information source for consumers" (Muniz & O'Guinn, 2001, p. 426). Obtaining and exchanging information is a main motive for brand community participation (Kim, Choi, Qualls, & Han, 2008). IQ in brand communities influences consumers' responses and experiences (Andersen & Srinivasan, 2003) as well as motivation to participate in brand communities (Madupu & Cooley, 2010). Thus, CC and IQ are two important characteristics to consider.

2.3.1. CC

After joining a community, members feel closely connected to other members (Muniz & O'Guinn, 2001; Rozell & Gundersen, 2003) and are responsible for integrating and retaining members, as well as assisting other members in the consumption of the brand (Muniz & O'Guinn, 2001). McMillan and Chavis (1986) indicated that a mature community causes members to generate belongingness and emotional security, and the members consider themselves part of the community. As such, group integration is formed and satisfies the need of both the group and individual, resulting in a condition called group cohesiveness. When group cohesion is high, members tend to use the group characteristics to define themselves (Hogg & Terry, 2000).

2.3.2. IQ

IQ refers to the quality of the information that the members obtain from the community and can be measured through three dimensions: accuracy, completeness and currency (DeLone & McLean, 2003; Nelson, Todd, & Wixom, 2005). Brand communities provide relevant information about the brand. The IQ influences members' community commitment and brand loyalty (Jang et al., 2008).

2.4. Brand identification

Brand identification is an extension of the social identity theory. Social identification refers to the agreement between members and their group (Ashforth & Mael, 1989). An individual shares common characteristics and beliefs with other members in the group (Balmer, 2008; Dutton, Dukerich, & Harquail, 1994). When an individual identifies with a group, he puts more effort in to achieving the group's objectives because he considers himself part of the group (Kuenzel & Halliday, 2008). Similarly, consumers develop identification with organizations (Bergami & Bagozzi, 2000; Bhattacharya & Sen, 2003). Bhattacharya and Sen (2003) suggested that consumers build a relationship with a brand through brand identification. Consumers define or categorize themselves by their brand consumption as the brand satisfies their self-definitional needs (Dutton et al., 1994).

3. Research hypotheses

3.1. Effects of CC and IQ on flow and brand identification: the mediating role of flow

Brand community members perceive their links to the community through their interactions with one another in the community (McMillan & Chavis, 1986). These interactions influence their perceptions toward and experience in the community (Algesheimer et al., 2005). Social interactions between community members have been shown to influence the flow experience (Lee, 2009). CC is a type of social support provided by members. Makikangas, Bakker, Aunola, and Demerouti (2010) found that the levels of job resources (e.g. social

support) and flow at work were positively correlated. In the same vein, high CC is likely to increase social support and, thus, flow occurs (Csikszentmihalyi, 1990). Members in the same community have communal needs, beliefs, values and goals. High CC indicates positive interactions between members. Goals will be more likely to be clearly communicated. Members tend to continue their relationship with and participate in the community (Peteroy, 1980). They have a strong connection with one another and share consumption experiences within the community (Muniz & O'Guinn, 2001). As such, high CC is likely to enhance clear goals, unambiguous feedback and the challenge-skill balance, which are considered of importance to flow (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2014).

Brand communities could be regarded as an alternative form of large groups, based on the deindividuation effect (Diener, Lusk, DeFour, & Flax, 1980). When group cohesion escalates, feelings of unity, anonymity and normality increase. Such feelings lead to "minimal self-consciousness, behavior [that] becomes spontaneous, subjective feeling that time is passing quickly, and unusual experience" (Forsyth, 2006, p. 581), which are consistent with the dimensions of flow (e.g., concentration, loss of self-consciousness, autotelic experience and transformation of time). Thus, it is expected that CC has a positive impact on flow.

H1. CC has a positive impact on flow.

McMillan and Chavis (1986) indicated that a shared emotional connection is an important characteristic of a mature community and relies on interactions between members. Positive interactions facilitate social processes and the development of community goals and cultures in a highly cohesive community. When members share communal goals and cultures, they are more likely to consider themselves part of the brand community (Dholakia et al., 2004). In a high cohesiveness community, the emotional connection with the brand community influences members' behaviors (Lieberman, Yalom, & Miles, 1973). As such, members tend to use brand community characteristics to define themselves (Hogg & Terry, 2000). They are more likely to identify with the brand. We expect CC to have a positive impact on brand identification.

H2. CC has a positive impact on brand identification.

The purpose of building a brand community is not only to develop relationships with consumers, but also to provide information to them. Some members participate in a brand community in order to gain product information (Ouwersloot & Odekerken-Schröder, 2008). Thus, brand community IQ influences members' use experiences, willingness to participate (Andersen & Srinivasan, 2003; Nelson et al., 2005), and attitudes toward the brand community (Brown, Broderick, & Lee, 2007). Prior research has shown that IQ of a website positively influences flow (Hausman & Siekpe, 2009) because the informative content is likely to grab consumers' attention. In the same vein, if members could receive accurate, complete, and current information from the brand community, then flow is likely to occur. For example, when an automobile community member accepts a challenge task to participate in a road trip, high IQ can facilitate unambiguous feedback and a challenge-skill balance, which generate flow. Thus, we expect IQ to have a positive impact on flow.

H3. IQ has a positive impact on flow.

IQ not only enhances members' intentions to participate in a brand community (Jang et al., 2008), but also influences relationship quality (McAlexander et al., 2002). When IQ of a brand community is high, members trust the information provided by other members. They are likely to spend more time interacting and sharing their passion for the brand with other members. As such, their identification with the brand will develop. Therefore, we expect IQ to have a positive impact on brand identification.

H4. IQ has a positive impact on brand identification.

Individuals experience the highest levels of happiness while in flow (Csikszentmihalyi, 1997). Flow experience during a brand encounter positively increases positive emotions and brand image (Drenger et al., 2008), and brings a favorable brand experience (Shim, Forsythe, & Kwon, 2015). The greater the attractiveness of a brand to consumers, the stronger the consumers identify with the brand (Dutton et al., 1994). Researchers have also shown a direct positive effect of flow on brand identification in virtual brand communities (Sha, Wen, Gao, & Wang, 2009). Thus, it is expected that when flow occurs during activity participation in a brand community, members feel fully engaged and enjoy the activities that cause them to develop higher brand identification.

H5. Flow has a positive impact on brand identification.

Based on our theoretical justification, CC and IQ have direct effects on flow (Csikszentmihalyi et al., 2014; Hausman & Siekpe, 2009). Flow also influences brand identification (Sha et al., 2009). We posit that flow will mediate the effects of CC and IQ on brand identification.

H6. Flow mediates the effect of CC on brand identification.

H7. Flow mediates the effect of IQ on brand identification.

3.2. Effect of brand identification on brand loyalty

Brand loyalty is defined as the degree of a consumer's emotional attachment to a brand (Aaker, 1991) and indicates that consumers will make repeated purchases and recommend the brand to others (Gronholdt, Martensen, & Kristensen, 2000). Researchers have shown that consumer-brand relationships (Luo et al., 2015), consumers' engagement (Brodie et al., 2013), and social influence in brand communities (O'Donnell & Brown, 2012) influence brand loyalty. Social identity facilitates the development of an individual's citizenship behavior to a group (Bergami & Bagozzi, 2000). When members have a strong identification with a group, they consider themselves to be part of the group and are likely to be a group supporter (Mael & Ashforth, 1992). Such a relationship will lead to long-term preferences toward the group. Researchers have indicated that high company identification makes consumers loyal to a company's existing products and gives them a willingness to try new products (Bhattacharya & Sen, 2003). When consumers are more identified with a brand, they tend to have stronger commitment (Tuškej, Golob, & Podnar, 2013; Zhou et al., 2012) and loyalty to the brand (Stokburger, 2010). In the sports team context, Karjaluoto, Munnukka, and Salmi (2016) showed that the more fans identify with a team, the higher team loyalty they are. In the same vein, we expect brand identification to have a positive effect on brand loyalty.

H8. Brand identification has a positive impact on brand loyalty.

4. Methodology

4.1. Sample, survey development, and data collection

Using a list of automobile clubs in Taiwan gathered from a Taiwanese sports agency, we selected respondents from 47 automobile brand communities. Using snowball sampling, the surveys were distributed with the assistance of the existing members of these brand communities. Following the procedure used in the established cross-cultural research, a translation–back translation procedure (Brislin, 1986) was used to translate the survey questions from English to Chinese and then back to English. We also talked to brand community members to ensure the questions were clear. The survey consisted of six sections, including five sections measuring CC, IQ, flow, brand identification, and brand loyalty, and one section focusing on demographic

and screening questions.

A total of 797 surveys were distributed. However, 217 surveys from 16 brand communities were invalid, resulting in 580 usable surveys from 31 brand communities.[1] Each participant was involved with only one of the brand communities. In addition to incomplete surveys, the reason for the invalid surveys was mainly that the respondents' membership duration was less than six months and the respondents had not participated in any face-to-face brand community activities within the past year.

Of the respondents 91.2% were male and 8.8% were female. In addition, 77.8% of the respondents were between the ages of 26 and 40 and 64.7% of the respondents had at least a college degree. The average time that the respondents had been involved in the brand community was 2.5 years. On average, they participated in seven activities, including brandfests, car racing, (off) road trips, and social gatherings, per year and interacted with members 3.55 times per week.

4.2. Measures

All of the constructs included in the proposed model were measured using multi-items scales drawn from previous studies.

4.2.1. CC

Adapted from Rozell and Gundersen (2003), this construct was measured using a six-item scale to assess the extent of the member's perception of his/her connection with the community (Cronbach's alpha = 0.90).

4.2.2. IQ

Adapted from Nelson et al. (2005), this construct was measured using an eight-item scale to assess community information for three dimensions: accuracy, comprehensiveness and immediacy (Cronbach's alpha = 0.94).

4.2.3. Flow

Researchers have advocated the use of a multi-dimensional construct to measure flow for complete conceptualizations of flow (Chen et al., 1999; Jackson & Marsh, 1996; Kaur et al., 2016; Li & Browne, 2006). Following this research stream, the flow measure was adapted from Jackson and Marsh (1996), consistent with Csikszentmihalyi's componential view of flow (Jackson & Csikszentmihalyi, 1999). It measures flow as a state and is frequently used in various contexts, particularly in the sports context (Engeser & Schiepe-Tiska, 2012). It is suited for our automobile brand communities. We used six dimensions that are more relevant to our study context. It consists of 17 items measuring six dimensions (i.e., a challenge-skill balance, clear community goals, unambiguous feedback, concentration on the task at hand, loss of self-consciousness and autotelic (enjoyable) experience) of a member's experience when participating in the community (Cronbach's alpha = 0.93).

4.2.4. Brand identification

Following previous research (Kuenzel & Halliday, 2008), this construct was adapted from Mael and Ashforth (1992) and uses a five-item scale to measure the extent to which the member feels like they have received a personal insult when someone criticizes the brand, usually says 'we' rather than 'they' when talking about the brand, feels like they have received a personal compliment when someone praises the brand, and feels embarrassed when a story in the media criticizes the brand

(Cronbach's alpha = 0.89).

4.2.5. Brand loyalty

The measure, adapted from Gronholdt et al. (2000), consists of three items measuring the member's intention to repurchase the product from the brand, intention to buy other products from the brand, and intention to recommend the brand to other consumers (Cronbach's alpha = 0.91).

4.3. Results

This research conducted two analysis phases. First, the measurement model is estimated with confirmatory factor analysis to test reliabilities and validities of the research constructs. Then, the structural model is used to test the strength and direction of the proposed relationships between constructs.

4.3.1. Measurement model

In Table 1, each of the composite reliability values exceeded the threshold value of 0.80 recommended by Hulland (1999), which suggests that for each of the constructs, there is a reasonable degree of internal consistency between the corresponding indicators. Results also supported for the convergent and discriminant validity. As evidence of convergent validity shown in Table 1, the measurement model of constructs showed a good fit (goodness-of-fit index (GFI) = 0.90, normed fit index (NFI) = 0.93, comparative fit index (CFI) = 0.97, and standardized root mean square residual (SRMR) = 0.05). Each item loaded significantly on its respective construct. The average variance extracted (AVE) values all exceeded.50 (Bagozzi & Yi, 1988). Table 2 showed the evidence of discriminant validity exists when the square root of the AVE in each construct exceeds the coefficients representing its correlation with other constructs (Fornell & Larcker, 1981).

4.3.2. Structural model

The fit of the data to the proposed model was adequate (χ^2/df = 1.917, p < 0.001; GFI = 0.90, AGFI = 0.88, NFI = 0.93, CFI = 0.97, and SRMR = 0.06). The results showed that CC positively affected flow (γ_{11} = 0.41, t = 7.54, p < 0.001), but not brand identification (γ_{21} = 0.07, t = 1.09, p > 0.5). H1 was supported but H2 was not supported. The results also showed that IQ positively affected flow (γ_{12} = 0.27, t = 5.20, p < 0.001) and brand identification (γ_{22} = 0.15, t = 2.44, p < 0.05), providing support for H3 and H4. Flow positively affected brand identification, supporting H5 (β_{21} = 0.16, t = 2.74, p < 0.01). As anticipated, brand identification positively affected brand loyalty (β_{42} = 0.47, t = 10.46, p < 0.001), providing support for H8. The results are shown in Fig. 1.

4.3.3. Tests of mediation effects

In order to test the mediating effect of flow on the relationship between CC, IQ and brand identification, we conducted a series of regression analyses using CC (or IQ) as the independent variable (IV), flow as the mediator and brand identification as the dependent variable (DV) (Baron & Kenny, 1986). We ran tests of the mediation effect of flow for CC and IQ, separately. First, we regressed the mediator on the IV. Then we regressed the DV on both the IV and the mediator variable. The results showed that CC significantly influenced flow (β = 0.456, p < 0.001) and IQ significantly influenced flow (β = 0.268, p < 0.001). In addition, CC (β = 0.321, p < 0.001) and IQ (β = 0.225, p < 0.001) influenced brand identification. However, this effect was reduced when flow was included in the regression eq. (CC: 0.197, p < 0.01; IQ: 0.154, p < 0.001) while the effect of flow on brand identification remained significant (CC: β = 0.273, p < 0.001; IQ: β = 0.263, p < 0.001). The Sobel tests (Baron & Kenny, 1986) confirmed that the reduction of CC and IQ effects were significant (CC: z = 3.150, p < 0.001; IQ: z = 3.845, p < 0.001), suggesting that flow mediated the impact of CC and IQ on brand identification. The

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[1] The 31 brand communities include Audi Club, BMWCCTTaiwan Club, C2 Fans Club, Daihatsu Club, Ford Sport Club, Honda Club, VTEC SPIRIT, FIT CLUB, Hyundai Club, 555 Club, LandRover Club, Lexus Club,Lexus Club, Mazda Club, Mazda3 Club, Mitsubishi Family, Colt Plus Club, Nissan Club, Livina Club, Tiida Club, Opel Zafira, Peugeot 307 Club, Peugeot Club, RFC Club, SAAB 93 Family, Ssangyong Club, Taiwan Impreza Fans Club, GV Club, Taiwan Swift Club, YARIS Club, Toyota Motor Club, and VWBC Forum.

Table 1
Scale items and reliabilities.

Constructs	MLE estimates		Composite reliability	Average of variance extracted
	Factor loading	Measurement error		
Community cohesiveness			0.95	0.76
1. I felt that I was a genuine member of the group.	0.76	0.22		
2. During group meetings, I got to participate whenever I wanted to.	0.75	0.27		
3. Other members of the group really listened to what I had to say.	0.71	0.26		
4. I liked the group I was in.	0.89	0.09		
5. I enjoyed interacting with this group very much.	0.88	0.10		
6. Compared to other groups, this group worked well together.	0.70	0.24		
Information quality				
Accuracy			0.92	0.80
1. This community produces correct information.	0.86	0.21		
2. There are few errors in the information I obtain from his community.	0.89	0.21		
3. The information provided by this community is accurate.	0.91	0.18		
Completeness			0.83	0.71
4. This community produces comprehensive information.	0.89	0.23		
5. This community provides me with all the information I need.	0.86	0.40		
Currency			0.91	0.78
6. This community provides me with the most recent information.	0.93	0.15		
7. This community produces the most current information.	0.93	0.15		
8. The information from this community is always up to date.	0.82	0.38		
Flow				
Challenge-skill balance			0.96	0.90
1. My abilities matched the high challenge of the situation.	0.92	0.08		
2. I felt I was competent enough to meet the high demands of the situation.	0.93	0.08		
3. The challenge and my skill were at an equally high level.	0.89	0.13		
Clear goals			0.95	0.91
4. I had a strong sense of what I wanted to do.	0.91	0.08		
5. My goals were clearly defined.	0.90	0.09		
Unambiguous feedback			0.97	0.91
6. It was really clear to me that I was doing well.	0.86	0.11		
7. I had a good idea while I was performing about how well I was doing.	0.93	0.06		
8. I could tell by the way I was performing how well I was doing.	0.89	0.08		
Concentration on the task at hand				
9. My attention was focused entirely on what I was doing.	0.83	0.15	0.92	0.80
10. I had total concentration.	0.81	0.16		
11. I was completely focused on the task at hand.	0.81	0.18		
Loss of self-consciousness			0.90	0.74
12. I was not worried about my performance during the event.	0.80	0.36		
13. I was not concerned with how I was presenting myself.	0.89	0.23		
14. I was not worried about what others may have been thinking of me.	0.91	0.20		
Autotelic experience			0.96	0.90
15. I really enjoyed the experience.	0.80	0.16		
16. The experience left me feeling great.	0.94	0.05		
17. I found the experience extremely rewarding.	0.94	0.05		
Brand identification			0.89	0.61
1. When someone criticizes the brand, it feels like a personal insult.	0.75	0.44		
2. When I talk about this brand, I usually say 'we' rather than 'they.'	0.74	0.39		
3. This brand's successes are my successes.	0.85	0.32		
4. When someone praises this brand, it feels like a persona compliment.	0.85	0.27		
5. If a story in the media criticized this brand, I would feel embarrassed.	0.71	0.54		
Brand loyalty			0.85	0.66
1. I will repurchase the product from this brand.	0.95	0.17		
2. I will purchase other products from this brand.	0.93	0.25		
3. I will recommend this brand to other consumers.	0.77	0.79		

Table 2
Correlation coefficients and discriminant validity.

Constructs	Means	Standard deviations	CC	IQ	FL	BI	BL	AVE
CC	4.16	0.58	0.87					0.76
IQ	5.88	0.89	0.57	0.94				0.88
FL	3.84	0.52	0.51	0.46	0.87			0.75
BI	3.54	0.76	0.24	0.26	0.26	0.78		0.61
BL	5.49	1.25	0.23	0.28	0.20	0.47	0.81	0.66

Note: CC: Community Cohesiveness; IQ: Information Quality; FL: Flow; BI: Brand Identification; BL: Brand Loyalty; Diagonal elements are the square root of the average variance extracted (AVE) of each construct; Pearson correlations are shown below the diagonal.

results were confirmed using another mediation testing approach (Preacher & Hayes, 2008).[2] H6 and H7 were supported.

5. Discussion and managerial implications

Our purpose in completing this research was to propose and

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[2] A bootstrapping mediation analysis at a 95% confidence interval (CI) with 5000 bootstrapped samples revealed that CC and IQ impacted brand identification through flow. Path a (IV to mediator) = 0.370 (CC), 0.205 (IQ), b (Direct effects of mediator to DV) = 0.246, c (Direct effect of IV on DV) = 0.094 (CC to brand identification), 0.171 (IQ to brand identification), c' (Total effect of IV on DV) = 0.185 (CC to brand identification), 0.221 (IQ to brand identification), and ab (Indirect effects of IV on DV through the proposed mediators) = 0.091 (CC), 0.050 (IQ). The 95% CI of ab did not include 0 (CC: 95% CI [0.022, 0.165]; IQ: 95% CI [0.011, 0.103]).
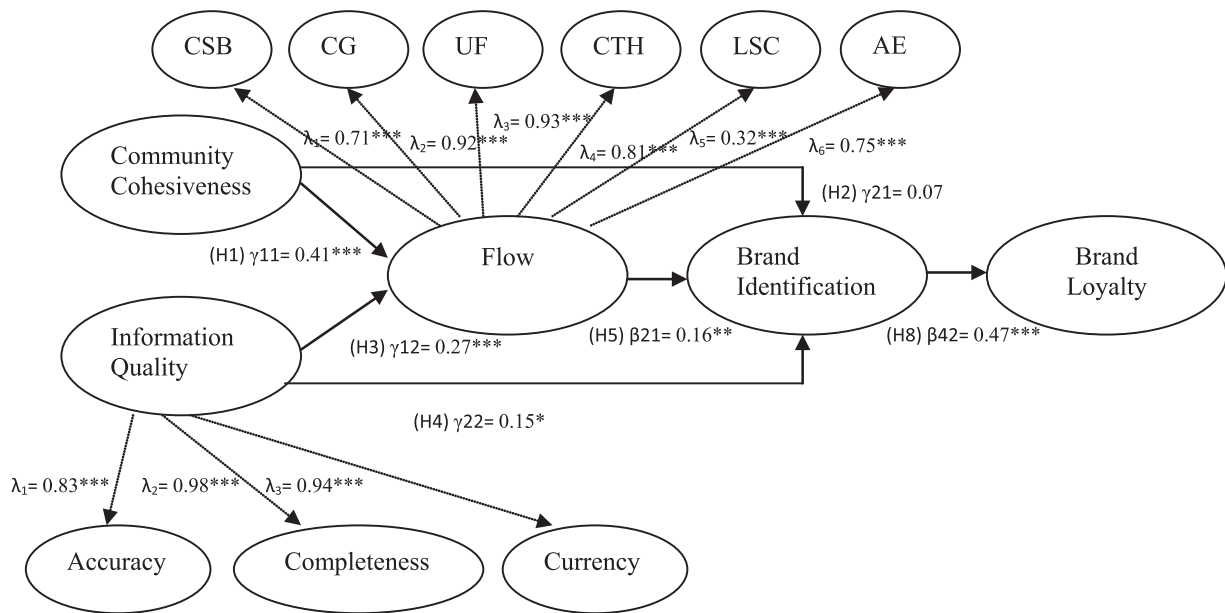
Fig. 1. The hypothesized model

Notes: 1. Fit Index: χ2/df = 1.917, p < 0.001; GFI = 0.90, AGFI = 0.88, NFI = 0.93, CFI = 0.97, and SRMR = 0.06

SMCflow experience = 0.38, SMCbrand identification = 0.10, SMCbrand loyalty = 0.22

2. GFI: Goodness-of-fit index, AGFI: Adjusted goodness-of-fit index, NFI: Normed fit index, SRMR: Standardized root mean square residual, SMC: squared multiple correlation, *p < 0.05, **p < 0.01, ***p < 0.001.

3. CSB: Challenge-Skill Balance; CG: Clear Goals; UF: Unambiguous Feedback; CTH: Concentration on the Task at Hand; LSC: Loss of Self-Consciousness; AE: Autotelic Experience.

empirically test the role of flow in the effect of brand community characteristics on brand identification and loyalty. The findings support our hypotheses that CC and IQ of a brand community affect flow and, subsequently, result in brand identification and loyalty. Specifically, the results showed that CC and IQ positively influenced flow. This finding is consistent with Csikszentmihalyi's (1990) argument that, when an individual understands the group culture and has a clear idea of the group's goal, he is more likely to experience flow. When CC increases, members become engaged in sharing their authentic experiences and goal-related feedback, and are more likely to feel that they are part of the community. Thus, they are more likely to experience flow. In addition, when members receive immediate and accurate information (or feedback) from the brand community, they are more likely to experience flow. Consistent with the technology acceptance model (Davis, 1989), IQ influences members' perceptions. When the brand community provides high quality information, members perceive that they have control over the issues or challenges at hand and, thus, the information facilitates the occurrence of flow (Li & Browne, 2006). In addition to the direct effect on flow, IQ directly influenced brand identification. Our results also showed that flow positively influenced brand identification and, subsequently, led to brand loyalty. Flow experiences make the brand community attractive to members and, thus, members develop identification with the brand. Once members have a high identification with a brand, they perceive that they are part of the brand community and are more brand loyal. Our findings showed that flow mediated the effects of CC and IQ on brand identification.[3] The results revealed the important mediating role of flow in developing brand identification in brand communities.

The results from our research contribute to the branding, brand community, and flow theory literature in four respects. First, we advance our knowledge in the brand community field with a focus on consumer experience-centric perspective (McAlexander et al., 2002; McAlexander et al., 2003; Muniz & Schau, 2005), and verified the experiential benefits proposed by Bruhn, Schnebelen, and Schäfer (2014). Our findings provide additional evidence that transcendent consumer experience such as flow facilitates brand building (Schouten et al., 2007). Second, this study strengthens the legitimate position of flow in the branding and brand community literature. Few studies have connected the flow concept to the branding and brand community literature. The concept has been applied to and examined in various domains, such as leisure activities, daily experiences, creativity and well-being, sports, learning in educational settings, human–computer interaction, game-based learning, and media use (Engeser & Schiepe-Tiska, 2012). However, little is known about its role in branding and the brand community. Schouten et al. (2007) showed that flow influences loyalty in a brand community; however, they did not identify antecedents of flow or focus on the multi-dimensional aspect of flow. The results of our study show that brand community characteristics (i.e., CC and IQ) produce flow and provide additional support of using the multi-dimensional flow.

Third, our study identified two external antecedents of flow: CC and IQ. This is echoing Csikszentmihalyi (2014), who argued that previous research focused on individual factors and neglected the contextual factors that produce flow. Our findings could enrich the research stream on contextual antecedents of flow. Forth, our study demonstrates the important role of flow in building brand loyalty in brand communities. Unlike previous research that focused on the direct impact of brand community characteristics on members' commitments to and identification with the community and the brand (e.g., Jang et al., 2008; Laroche et al., 2012), we showed the mediating role of flow from consumer experience-centric perspective in regard to building brand identification in the brand community. This brand identification results in brand loyalty. Flow, the peak experience, which occurred while participating in the brand community, played an important role in producing positive outcomes toward the brand. Previous research

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[3] It is noted that the results from the structural model suggest that flow fully mediates the effect of CC on brand identification as the effect of CC on brand identification was not significant (H2). The mediation analysis results suggest that flow partially mediates the effect of CC on brand identification. Such a difference exists might be due to the fact that Structural Equation Model considers direct and indirect effects among all of the variables in the model simultaneously whereas the mediation analysis focuses on the IV, the mediator, and the DV. More empirical studies are needed to investigate this mediation effect.

indicated that consumers identify with a company when the company is attractive (Bhattacharya & Sen, 2003). Similarly, we showed that when brand community characteristics produce flow, brand identification increases. Our findings also provide additional support that brand identification leads to brand loyalty in the brand community context (e.g., Carlson et al., 2008).

Our findings have considerable managerial implications for brand managers in developing successful brand communities. First, our findings suggest CC and IQ are two antecedents of flow. Brand managers have to dedicate efforts to enhancing CC. As shared consciousness, which refers to a strong connection between community members, is one of the most important characteristics of brand communities, brand managers should implement initiatives to strengthen this connection. Social cohesion literature suggests various ways to enhance group cohesiveness. For instance, brand managers could regularly hold or sponsor face-to-face social and challenge activities so that community members can gather, share information, and experience enjoyable interactions. Such face-to-face gatherings facilitate interactions between members and help develop strong social relationships and positive interpersonal ties, which serve as a basis of CC (Friedkin, 2004). Merely trying to expand the community as much as possible might not be the best strategy.

On the other hand, brand managers must provide complete and accurate information about their brand and products. As brand communities serve as a knowledge exchange and sharing platform for members, they become critical information resources. As such, they should provide accurate, immediate and current company and product information to consumers. If members can get information or find solutions in the brand community, they gain positive experiences and develop identification with the brand. Even when the companies themselves do not develop brand communities, the companies need to monitor the information shared within the community and ensure that it is accurate and current. The companies may also provide immediate information and solutions when consumers have product problems. These actions initiated by marketers also enables the company to get a better understanding of customer needs and makes it easier for customers to predict the company's future behaviors (Doney, Barry, & Abratt, 2007). Moreover, it helps to resolve disputes, reduce information asymmetries and mold the perceptions and expectations of the interaction partners. The aforementioned strategies will facilitate the occurrence of flow and, eventually, lead to brand identification and loyalty.

In addition to the practical strategies mentioned above to optimize the brand community environment, our findings indicate that flow plays an important role in building brand identification and brand loyalty. It is noted that flow involves skill-challenge balance. The occurrence of flow requires members' active participation. Thus, brand community activities that offer challenges are essential. In the meantime, brand managers could provide "flow sharing opportunities" for members to share how they are fully engaged in brand community activities. Flow sharing could be mobilized as a facilitator by building a well-organized, easy to use social media platform. Members' experiences of flow cascade with others in the brand community. Such a contagious experience is not only important for themselves, but also benefits community members, and the development of a successful brand community.

6. Limitations and future research

Our research has some limitations. First, we only considered a select number of brand community characteristics. In future studies, researchers may want to identify other possible brand community characteristics that might also produce flow. For example, the SAP Community Network, which has over 2.5 million members, provides incentives to community contributions. It would be interesting to examine whether and how a reward system in the brand community

influences flow and brand loyalty. Second, we did not control for members' involvement and expertise. Moreover, because we adopted snowball sampling, the samples would not be representative of each brand community in order to perform any comparisons between the communities. Future research may want to control for or manipulate some of these variables in order to see how they influence the observed effects in our study. Third, this research investigated automobile brand communities in Taiwan. Thus, the samples from this specific brand community in Taiwan may limit the generalizability of the findings. Companies in various industries from consumer products (e.g., Being Girl operated by Procter & Gamble) to beverages (e.g., My Starbucks Idea run by Starbucks) attempt to leverage of power of brand communities. Future research should examine the robustness of the proposed model across brand communities in different industries.

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