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Social identity dimensions and consumer behavior in social media

Tien Wang

Institute of International Management, National Cheng Kung University, Tainan, Taiwan, ROC

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ABSTRACT

As technological advancements continue to evolve, consumer use and purchase behavior also change in response to the emergence of new tools such as social media. Given that more marketers have shifted their focus toward engaging customers in the development of their marketing mix via social media platforms, such as Twitter and Facebook, finding important factors that drive consumer use and purchase behavior in this environment is of practical and academic importance. Use behavior contributes to fundamental user base, whereas purchase behavior generates firm revenue. For firms, finding a common factor that influences both behaviors would help increase marketing effectiveness. Based on a literature review, this study identifies social identity as the common factor in the social media context. Furthermore, existing research suggests that social identity has multiple dimensions including cognitive, affective, and evaluative. However, whether these three dimensions exert the same influences on these two important behaviors is not clear yet. The present study attempts to fill this research gap and examine the various effects of cognitive, affective, and evaluative dimensions on use and purchase behaviors. The result shows that these three dimensions have various effects on focal behaviors. The findings indicate that affective dimension has an effect on use behavior, while the cognitive and evaluative dimensions have an influence on purchase behavior. Evaluative identity has a stronger influence than its cognitive counterpart. The three dimensions are distinct and non-substitutable by other parts. Implications are elaborated in the discussion section.

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1. Introduction

The rapid proliferation and growing popularity of social media, such as online social networking sites (SNS), have been accompanied by rapid changes in consumer behavior (Lin & Lu, 2011). As of July 2012, people spend approximately 6.5 h a day on social media to socialize, share, and communicate with members of their social network (Popkin, 2012). This behavioral change toward dependence on social media has magnified dramatically. A recent study based on 170,000 Internet users in the United States revealed that an average user spends 1.72 h on social networking and another 0.81 h on microblogging each day, which respectively account for 28% and 13% of all online activities (Bennet, 2015). Such a phenomenon is more pronounced for members of “Generation Z,” who live in the digital era (Wallace, 2015). A study on this younger generation, aged between 8 and 18, shows that teens, on average,

spend more than 6.5 h on screen media, whereas tweens spend more than 4.5 h (Wallace, 2015). These studies show that social media has become an integral part of the lives of many people, both adults and children (Bennet, 2015; Robb, 2015). Approximately 45% of surveyed teens use social media everyday (Robb, 2015) and some even check for more than 100 times on a daily basis (Hadad, 2015). A report shows that teen girls spend 1 h and 32 min on social media, 40 min more than boys who on average spend 52 min (Robb, 2015). A similar pattern is also observed in Taiwan, a leading economy in Asia. According to a study by the Market Intelligence & Consulting Institute (MIC), 92% of the 2187 respondents of returned surveys from its online panel have used social media recently. Among the various online social media services, Facebook still dominates the local market followed by Google+ for social networking, while YouTube is on top as the leading online multimedia platform (MIC, 2014) for videos. Although consumers are used to incorporate social media into their daily lives to satisfy their need for networking and affiliation, majority fail to conduct consumption behavior through this new avenue (Yang, 2011).

This trend of consumer behavior change coupled with the novel

E-mail address: twang@mail.ncku.edu.tw.

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potential of social media to stick users with the platform have been well recognized by marketers, who now embrace it as a tool to enhance customer acquisition and management to increase sales prospects. Moreover, equipped with analytical capability, social media service providers are able to provide highly sophisticated data for advertisers to effectively target customers and tailor their product and service offerings to individual preferences. The social media giant Facebook is reported to have advertising revenue as a massive portion of its sales (DiChristopher, 2015). Nonetheless, the dependence on advertising as primary revenue source shows that majority of users do not contribute directly to social media revenues through their purchase behavior. If managers of social media firms are able to identify a common factor that simultaneously influences social media use and consumer purchase behavior, they may cultivate their large customer base and convert users to purchasers. Investing in this common factor helps online service providers in the social media sector to generate additional value from active users. Thus, this approach also enhances marketing effectiveness and is of practical and academic significance.

Social media emerges and then significantly spreads exponentially because of its social networking ability, which satisfies the need of users to maintain their social identity. In a recent study, approximately 61%, 36%, and 21% of teens report that they frequently check their social media accounts to see whether their posts are getting likes, if they are left out by friends, and if their friends say negative things about them, respectively (Hadad, 2015). Prior research has recognized the social aspect of social media and empirically examined the role and effect of social identity in driving consumer online behavior. For example, Dholakia, Bagozzi, and Pearo (2004) examined online use intention and reported that virtual community members with a stronger sense of social identity are more likely to have a stronger desire to participate in an online community. Similarly, Lee, Kim, and Kim (2011) conducted another study and provided supporting evidence on the direct effect of social identification motivation on the intention to engage in online communities. This line of research supports the proposition that social identity encourages online use behavior.

The proliferation of social media also fosters a new form of commerce, namely, social commerce, which engages online social interactions and transactions through Web 2.0 social media technologies (Huang & Benyoucef, 2013; Liang & Turban, 2012). As social commerce represents a combination of social and commercial activities, theories that address social interaction and process can effectively detect the underlying mechanism of consumer consumption behavior in the social media context (Liang & Turban, 2012). Prior studies have shown that social identity theory contributes to purchase behavior in various consumption situations. Madrigal (2001) investigated the direct and indirect effects of social identity on purchase intentions in a corporate sponsorship context. In a broader commercial context, customer identification toward a company has been reported to contribute to a higher level of desired behavioral outcomes such as customer loyalty and willingness to purchase (Ahearne, Bhattacharya, & Gruen, 2005; Bhattacharya & Sen, 2003; Homburg, Wieseke, & Hoyer, 2009; Huang, Phau, & Lin, 2010). Thus far, most studies on social identity examined purchase behavior in a physical, offline context. Although investigations on the direct effect of social identity on online consumer purchase behavior appear to be limited, the reported relationships between affective factors, including emotional support and commitments, as well as online social commerce intention, partially support our proposition that social identity plays a key role in driving the purchasing intention of online users (Gupta, Kim, & Shin, 2010; Liang, Ho, Li, & Turban, 2011). Jointly, these research efforts support our proposition that social identity has dual effects on both usage and consumption intentions.

On the basis of this research line, the present study intends to address a research gap by taking one step forward to explore and examine the dimensional effect of social identity on the two behavioral intentions, use and purchase. To the best of our knowledge, no study has been conducted on the direct effect of the various dimensions of social identity on consumer behavior in a social commerce context. Moreover, by investigating both behaviors simultaneously, this study is able to compare the direction and relative magnitude of the dimensional effect on outcome behaviors.

2. Literature review and research hypotheses

2.1. Social identity and its dimensions

Social identity theory suggests that people define themselves based on personal and social aspects (Tajfel, 1982). Personal identity depicts a person's distinct characteristics, including personal traits and abilities. The social aspect (i.e., social identification) refers to the perception of belonging to a human group (Ashforth & Mael, 1989). Tajfel (1981) defined social identity as "that part of an individual's self-concept, which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership" (p. 255). This commonly accepted definition indicates the following three necessary components for an individual to develop identification with a group: (a) cognitive, (b) evaluative, and (c) affective dimension. Cognitive dimension of social identity refers to an individual's awareness of membership and involves a self-categorization process. The self-categorization process a person applies to identify groups might result in multiple group memberships and social identities. For example, people may classify themselves based on their work affiliation, nationality, and/or gender (Luhtanen & Crocker, 1992). Prior literature suggests that the nature of one's group membership, assigned vs. self-selected membership, influences a member's in-group behavior. The value connotation related to this membership awareness represents the evaluative aspect of social identity (Ellemers, Kortekaas, & Ouwerkerk, 1999). This evaluative component represents the group self-esteem. The affective component involves emotional investment in this identification. Although prior study indicated that cognitive and evaluative components are considered more necessary than the affective component and that the affective element often co-varies with the evaluative component in the case of natural groups, the three dimensions are non-interchangeable and may exert different behavioral consequences (Ellemers et al., 1999; Lam, Ahearne, Hu, & Schillewaert, 2010). Despite the distinctions among these three dimensions, most existing literature failed to address this uniqueness, and social identification was commonly measured and treated as a unidimensional construct (Ellemers et al., 1999). The merit of this operationalization on social identification is that this research line on the overall effect of social identity generally supports positive associations with participation behavior, i.e., the intention to use social media in this study (Dholakia et al., 2004; Lee et al., 2011) and buying intention (Ahearne et al., 2005; Bhattacharya & Sen, 2003; Homburg et al., 2009; Huang et al., 2010). Therefore, in light of the definition and spirit of the affective, cognitive, and evaluative dimension of social identity, this study proposes that each dimension exerts a positive effect on both use and purchase intention.

H1a. The affective dimension of social identity positively influences social media members' (a) use and (b) purchase behavior.

H1b. The cognitive dimension of social identity positively influences social media members' (a) use and (b) purchase behavior.

H1c. The evaluative dimension of social identity positively influences social media members' (a) use and (b) purchase behavior.

2.2. Relative dimensional effects on online behavior

In a study by [Ellemers et al. \(1999\)](#), the cognitive aspect was reported to be relatively independent of the evaluative aspect, and the affective component is the primary driver that “affects people's tendency to behave in terms of their group membership” (p. 385). In natural social settings, people may cognitively associate themselves with a specific group (i.e., self-categorization) without behaviors in terms of that membership. For example, employees may self-classify themselves as members of their company, although they do not act in a certain way specific to the company. They may have no emotional attachment to the organization either. Several empirical findings have supported the observation that different identification aspects have varying effects on work-related outcome variables, such as attitude and intention to retire ([Van Dick & Wagner, 2002](#)). However, to the best of our knowledge, no study has investigated the distinctiveness of the discussed social identity dimensions on consumer online behavior in a consumer context. To explore the relative strength of each dimension in influencing use and purchase intention, we derive our proposition based on empirical evidence generalized from relevant fields given the lack of literature in this regard. Prior research suggested that mere categorization into a social group is not always accompanied by emotional commitment to the group; thus, in-group behavior is not a natural outcome. When members emotionally commit to a social group, they are more likely to perform in-group behaviors, such as patronage to online communities in the social media context. In addition, empirical evidence from a recent survey of young social media users suggests that users who are emotionally involved with an online group are more likely to actively use social media than those with less emotional involvement ([Hadad, 2015](#)). Therefore, this study hypothesizes that

H2. Compared with other dimensions, the affective dimension of social identity has a stronger effect on use behavior in social media context.

Because social commerce evolves from social interactions developed in social media platforms, purchase behavior is less likely to occur without use behavior being observed. Compared with inactive users, active members are more likely to engage in purchase behavior. In other words, this study regards purchase behavior as in-group behavior of members to satisfy their need to identify with the group in the social media context. Considering the spirit of evaluative dimension of social identity, this research supposes that once the group member forms a positive value connotation to the social group and evaluates this membership to be valuable, this individual is more likely to conduct in-group behavior as a support to the group and to increase self-worth. Therefore, this study postulates that:

H3. Compared with other dimensions, the evaluative dimension of social identity has a stronger effect on purchase behavior in social media context.

The cognitive dimension represents a conscious awareness of one's membership in a social group. Without this membership awareness, individuals have no foundation on which to define their social identity. In other words, this dimension should precede the other two dimensions. Once this base is well established, the desired outcome behaviors may then be observed. However, existing research findings or empirical evidence on the distinctive effect on different behaviors are lacking. Therefore, this study

examines this question on an exploratory basis and proposes that the cognitive dimension has a similar effect on both behaviors.

H4. The cognitive dimension of social identity has a similar effect on both purchase and use behavior in the social media context.

3. Research methodology

To manifest the growing importance of social media, this study conducts research in the SNS context, a classification of social media. In addition, the focus is on both use and purchase behaviors. The main research proposition suggests social identity as a common driver with three dimensions that may trigger both behaviors with various magnitudes. Drawing on the social identity theory, a general expectation is positive linkage between social identity dimensions and behaviors. In addition, this study anticipates distinct cognitive, emotional, and evaluative identity effects on use and purchase behaviors. This section describes the data collected to test the influence of these three social identity dimensions and the relative magnitude of these effects.

3.1. Measurement items

The research model employed in this study examines the effects of cognitive, affective, and evaluative identification on use and purchase behaviors. The cognitive dimension of social identity refers to a person's self-categorization as a group member ([Dholakia et al., 2004](#)). Affective identification is a person's emotional attachment to the group ([Ellemers et al., 1999](#); [Van Dick & Wagner, 2002](#)). The evaluative aspect of social identity refers to the assessment of self-worth that results from group membership ([Dholakia et al., 2004](#)). All measurement items were adapted from previous studies. As shown in [Table 1](#), cognitive dimension is assessed on the basis of three items. Affective and evaluative dimensions are evaluated on the basis of four items. All items of these three constructs are measured on a seven-point Likert scale. Two behavioral outcomes (use and purchase) are operationalized as formative constructs ([Venkatesh, Brown, Maruping, & Bala, 2008](#)).

3.2. Data collection and methodology

We employed a questionnaire survey to obtain data for analysis. Qualified respondents are those with Internet experiences and are able to conduct purchase behaviors. After data cleaning, the final sample comprised 242 returned questionnaires. We applied the partial least squares (PLS) ([Fornell & Bookstein, 1982](#)) technique to assess the dimensional effects of social identity. PLS is a second-generation statistical technique. Compared with covariance-based structural equation modeling (CB-SEM), such as the one applied by LISERAL and AMOS, PLS is a variance-based SEM that emphasizes model relationships and explains the variance in dependent variables. PLS-SEM has several advantages over CB-SEM ([Hair, Hult, Ringle, & Sarstedt, 2013](#)). For example, PLS-SEM is capable of handling formative constructs and does not require normal data ([Chin & Newsted, 1999](#)). Thus, the non-parametric nature of PLS does not require the specification of competing models. Although PLS-SEM is relatively younger than CB-SEM, its use in top journals has increased dramatically in the last 15 years and appears to be a great complementary modeling method to the traditional SEM ([Hair et al., 2013](#)).

Table 1
Measurement items.

Constructs	Items	
Cognitive identity	CogId1	To what extent does your own sense of who you are (i.e. your personal identity) overlap with your sense of what this SNS represents (i.e. the SNS's identity)?
	CogId2	Please indicate to what degree your self-image overlaps with the identity of this SNS as you perceive it?
	CogId3	How would you express the degree of overlap between your personal identity and the identity of this SNS you mentioned above when you are actually part of the SNS and engaging in SNS-related activities?
Affective identity	AffId1	When someone praises this SNS, it feels like a personal compliment.
	AffId2	I would experience an emotional loss if I had to stop using this SNS.
	AffId3	How attached are you to this SNS you mentioned above?
	AffId4	How strong would you say your feelings of belongingness are toward the SNS you mentioned above?
Evaluative identity	Evald1	I believe others respect me for my association with this SNS.
	Evald2	I consider myself a valuable partner of this SNS.
	Evald3	I am a valuable member of the this SNS.
	Evald4	I am an important member of this SNS.
Purchase behavior	Purchase1	On average, I pay for services or products through this SNS _____ times per month. (Please estimate)
	Purchase2	On average, each time I pay _____ (US dollars) to buy services or products through this SNS. (Please estimate)
Usage behavior	Use1	On average, I use this SNS _____ hours per week. (Please estimate)
	Use2	On average, I use this SNS _____ times per week. (Please estimate)
	Use3	Please rate the depth of your using this SNS (i.e. using more complex or advanced features or settings of SNS) _____

4. Results

4.1. Validity of measurement scales

Following previous studies, we assessed the measurement items for multicollinearity, for which no issues were identified (Petter, Straub, & Rai, 2007; Yeh & Teng, 2012). The variance inflation factor (VIF) was checked and all items had VIF values lower than 2, showing minimal concern for this issue (Diamantopoulos & Siguaw, 2006).

To investigate convergent validity, we compared the loading of each indicator to its corresponding latent variable. As shown in Table 2, all loadings to the corresponding latent variables are greater than 0.7; thus, they pass the convergent validity test.

Regarding the discriminant validity, an initial screening of construct correlations (Table 3, last three columns) shows that all correlations are lower than 0.75 and indicate discriminant validity. Moreover, the loadings of each indicator to their latent variables are apparently greater than the loadings to other constructs. For example, the loading of AffId1 to affective identity (0.718) is

Table 2
Loadings.

	Affective	Cognitive	Evaluative
AffId1	0.718	0.555	0.641
AffId2	0.862	0.461	0.612
AffId3	0.905	0.503	0.606
AffId4	0.886	0.469	0.651
CogId1	0.568	0.932	0.506
CogId2	0.561	0.942	0.553
CogId3	0.472	0.884	0.426
Evald1	0.665	0.506	0.829
Evald2	0.678	0.508	0.925
Evald3	0.676	0.507	0.929
Evald4	0.653	0.448	0.916

Bold values represent that the indicators corresponding to their specific construct have loadings above 0.7.

Table 3
Correlations, construct reliability, and AVE.

	AVE	Composite reliability	Cronbach's alpha	Affective	Cognitive	Evaluative
Affective	0.7154	0.909	0.8643	1		
Cognitive	0.8459	0.943	0.9097	0.585	1	
Evaluative	0.8116	0.945	0.9222	0.739	0.5433	1

substantially greater than those to cognitive identity (0.555) or evaluative identity (0.641). The average variance extracted (AVE) of the three social identity dimensions is also examined for discriminant validity. Evidence that all three AVE square roots are the highest among the correlation coefficients offers additional support for discriminant validity.

Previous research has stated that composite reliability and AVE are two major indicators of internal consistency. The third column in Table 2 shows that all constructs have a composite reliability greater than 0.9, which is greater than the threshold value of 0.7 (Hair, Black, Babin, & Anderson, 2006); thus, the constructs can be considered to have good internal consistency. Moreover, an AVE value greater than 0.5 further indicates internal consistency (Fornell & Larcker, 1981). All major constructs also passed this test. Internal consistency also lends additional support to the convergent validity of the three social identity constructs.

Another concern is common method bias (CMB) (Podsakoff & Organ, 1986). Although Malhotra, Kim, and Patil (2006) indicated that CMB is not particularly harmful to information system- and technology-related topics such as SNSs, the present study implemented several techniques to minimize CMB, as recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). First, in the questionnaire design, we placed the construct items in different segments and separated them with demographic questions to create psychological and proximal separations. Second, to reduce evaluation apprehension and ensure anonymity of respondents, the surveys were completed anonymously, and no answers were considered correct or incorrect. Moreover, we also employed Harman's single-factor test to identify whether the data have CMB. Factor analysis results show that no single factor can explain more than 50% of the variance extracted. Therefore, CMB is minimal.

4.2. Structural model and hypotheses testing results

The model results are presented in Fig. 1. Overall, the model explains 7% of the variance in purchase behavior and 16% in use

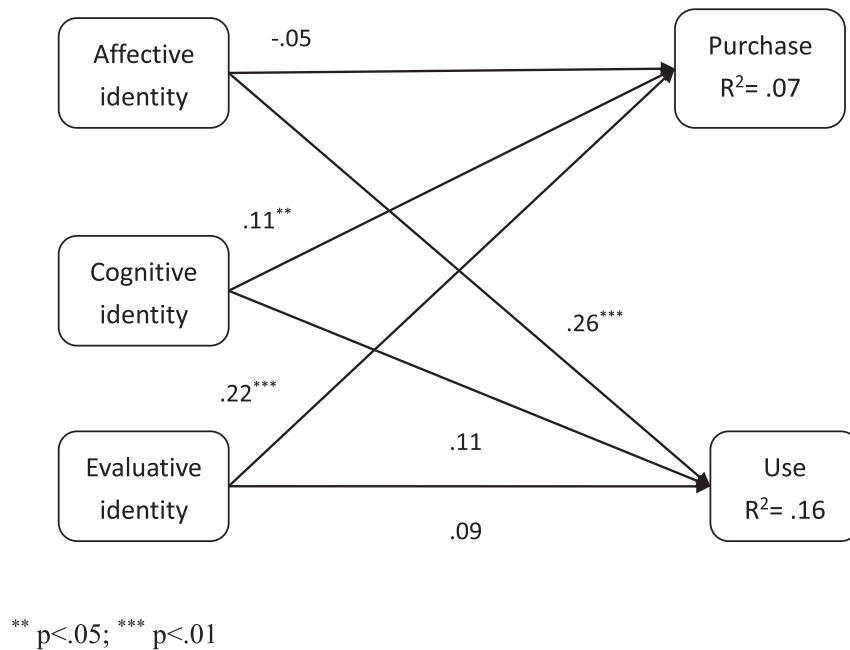


Fig. 1. Research model.

behavior. In other words, the overall model shows that the explanatory power of use behavior is slightly greater than that of purchase behavior.

Path coefficients obtained from the PLS results are explained identically as the beta coefficients in the regression model. Three hypotheses of H1 investigate the main effects of each dimension on outcome behaviors. As shown in Fig. 1, affective identity has no significant effect on purchase behavior ($\beta_{ap} = -0.05$, $p > 0.05$), but has a positive influence on use behavior ($\beta_{au} = 0.26$, $p < 0.01$). However, cognitive identity works differently from affective identity. The result indicates that cognitive identity has a significant and positive influence on purchase behavior ($\beta_{cp} = 0.11$, $p < 0.05$), although the influence on use behavior is non-significant ($\beta_{cu} = 0.11$, $p > 0.05$). Similar to cognitive identity, evaluative identity has a positive influence on purchase behavior ($\beta_{ep} = 0.22$, $p < 0.01$) and has no effect on use behavior ($\beta_{eu} = 0.09$, $p > 0.05$). H1a, 1b, and 1c are all partially supported.

H2–4 examine the relative magnitudes of dimensional effects of social identity on use and purchase behaviors. For use behavior, only affective identity demonstrates positive and significant effect, whereas the other two fail to exert significant influences. Therefore, H2 is supported. For purchase behavior, both cognitive and evaluative identity have positive and significant effects. Moreover, evaluative identity has a stronger effect than cognitive identity. Instead, affective identity has no such effect. These results support H3. H4 proposes that cognitive dimension has a similar effect on both use and purchase behavior. However, analysis shows that cognitive identity has a positive and significant influence on purchase behavior but exerts no such influence on use behavior. The influence of cognitive identity on use and purchase behavior is not at a similar level. Consequently, H4 is not supported.

5. Discussion

The primary objectives of the present study are to examine the dual effects of social identity on consumer online behaviors as well

as to explore and investigate whether the three distinctive components of social identity suggested by the theory exert various influences on outcome behaviors. Research findings offer theoretical contributions in several ways. First, this study extends the customer–brand and customer–company identification literature to the social media context. The results revealed that users develop social identification with virtual groups and even with platforms that foster these groups. Second, by integrating both use and purchase behavior in one model, this study can investigate the dual effects of social identity on two key consumer behaviors. When a member of an online social network develops identification toward social media platforms, he or she is more likely to continuously use the website and engage in purchase behavior. In other words, this finding confirms our proposition that social identity is able to serve as a common factor that drives both use and purchase behavior at the same time. Moreover, the effects of social identification on outcome behaviors are resulted from different identity components. Therefore, this study presents an integrative perspective on the role of social identity in the social media context. Third, this study examines the dimensional effect of social identity on two behaviors of interest. Interestingly, the analysis shows that the affective dimension of social identity has a greater influence on use behavior, accounting for 16% of variance of use behavior, whereas cognitive and evaluative dimensions of social identity have a more significant effect on purchase behavior, explaining 7% of the variance. To this end, this study confirms the theoretical distinction between three different components of social identity with empirical data. Moreover, different social identity aspects influence user behaviors in various ways; that is, only affective identity is able to influence users' use behavior, whereas cognitive and evaluative identity can significantly influence purchase behavior. For purchase behavior, the evaluative component of social identity is twice as influential as the effect of cognitive dimension. This novel and interesting result provides additional support to prior research that the three dimensions are independent and non-interchangeable (Tajfel, 1982).

This study also offers managerial implications for social media managers. Findings suggest that social media users develop identification with these platforms and the virtual groups fostered in this environment. This social identification drives both use and purchase behavior. Managers should acknowledge this insight and consider focusing on user identification toward the website to encourage both use and purchase behavior. Investing in the development of user identification as a marketing lever helps build a customer base not only by encouraging use but also by discouraging quitting behavior (Stieger, Burger, Bohn, & Voracek, 2013), thereby securing revenue sources. Such an approach also enhances marketing effectiveness through resource allocation for a common driver with a dual effect on two desired outcome behaviors. Furthermore, if the marketing goal is to generate further use behavior, managers should focus on developing users' affective commitment to the site. By contrast, if purchase behavior is the objective, then cognitive and evaluative identities are more suitable to maneuver.

6. Limitations and future research

Although this study confirms the effects of the overall and conceptual distinctive dimensions of social identity with novel and interesting findings, empirical results presented in this study should be interpreted and generalized with care. First, the surveys were completed by a younger generation. Although this demographic comprises the majority of social media users that are more likely to be accessed through this channel, the findings should be generalized to other generations with caution. Therefore, this study recommends that future studies consider other customer profiles such as elderly groups and investigate whether the reported relationships and effects still hold. Comparing the relationships among the variables to detect generation gaps would also be interesting in such a way that the findings could offer additional guidance on market segmentation and targeting. Second, this study does not examine potential moderators and mediators that may influence the dimensional effect of social identity. For example, personality traits may affect how people react to marketing events; thus, they may influence the relationships examined in this study. Cultural difference may also play a role in consumer online behavior. The well-known Hofstede cultural dimensions may offer direction for further research on these relationships. Such mechanisms would be critical in extending the theoretical and practical value of the present study.

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