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Understanding the effect of social media marketing activities: The mediation of social identification, perceived value, and satisfaction☆

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ABSTRACT

With the prevalence of Internet, social media has become an important means for online marketing events. Individuals and companies both create fan pages on online platforms and develop business opportunities using social media. While many past studies have investigated social media, few have mentioned the effects of social media marketing activities. This study proposed the effects of social media marketing activities on continuance intention, participation intention and purchase intention via the mediation of social identification, perceived value, and satisfaction. To empirically test the effects of social media marketing activities, this study conducted an online survey on 502 social media users for data analysis. The analytical results indicated that social media marketing activities indirectly affect satisfaction through social identification and perceived value. At the same time, social identification and perceived value directly affect satisfaction that then influences continuance intention, participation intention and purchase intention. Finally, the academic and management implications based on the empirical results of this study are provided as references for the improvement of social media marketing.

1. Introduction

The rise of social media has reflected people's need for interpersonal interactions. Social networking sites have brought social activities into the online virtual world. For example, the real-time texting facilitates information sharing and online social contacts among people. This phenomenon suggests companies use social media as an important part of their online marketing strategies. Social media marketing is defined as commercial marketing events or processes that use social media in an attempt to positively influence consumers' purchase behavior (Dann, 2010). In the face of the rapid rise of virtual community websites, many companies have already begun to think about how to rely on such sites to deepen their communications and interactions with users in order to build a sense of close and friendly relations and form virtual brand communities (Kaplan and Haenlein, 2010; Chen et al., 2014).

As the Internet has developed different forms of media and applications over time, it has changed the traditional human interactions of the past and also created new bridges for communication. With the popularity of Internet and mobile technologies and the widespread reliance on online social media brand preferences, the sharing of consumer experiences and brand information has become a new field of brand marketing. Therefore, the development of social groups has become more efficient. Even among group members who have never met each other, a good sense of community can take shape. Communities that collect goods and services of a specific brand are called virtual brand communities. Prahalad and Ramaswamy (2004) suggested that consumers are not only interested in making product purchases; rather, they also want to create experiences with other consumers or experts. Therefore, participation in online communities can lead to a high degree of cohesion among consumers, thereby affecting the market. Companies must therefore identify the factors or methods necessary to drive customers to participate in such communities.

With regard to the similarities and differences between online communities and real-world communities, Wellman (2001) believed that the nature of an online community is the same as that of a real community in terms of meeting the members' needs for self-identity, shared experiences and social support. Online communities mainly use computers as their platform for operations, which makes them different from real-world communities in terms of technology and manifestations. Brand communities are set up by specific brand products or services. According to Muniz and O'Guinn (2001), brand communities are defined as specific communities based on social relationships

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between brand consumers that are free of geographical restrictions. As the brand community is built on users' structured social relationships, it is among the types of social communities, which also feature community awareness, rituals, traditions, moral responsibilities and other core features of communities. Therefore, members of the community can spread brand knowledge and learn from other consumers' evaluations of products, thus producing ongoing and widespread influence on other members' ideas and actions. For example, past research has pointed out that when consumers become part of a brand community, the brand in question becomes a common language and set of beliefs that links the members of the community together through the sharing of brand experiences (Muniz and O'Guinn, 2001; Muniz and Schau, 2005; Sicilia and Palazon, 2008).

The majority of the studies on social communities cited thus far have been from the perspective of operators. However, there were few discussions of the benefits created by community members from the member perspective aimed at analyzing the connotations of social community value, as well as its influence on members. In terms of consumer behavior, value is the key factor in determining individual choice and behavior. The higher the perceived value based on consumers' overall assessment, the higher the consumers' loyalty to the service provider will be developed (Sirdeshmukh et al., 2002). Farquhar and Rowley (2006) pointed out that consumers' recognition of and loyalty towards a social community depends on the value created by the community. If community members are regarded as the customers of a social community, consumer value can be used to understand members' evaluation of the social community. In retrospect, most of the past studies of social community value were based on the operator's point of view in order to discuss the benefits created by community members, whereas few explored the value of social community participation or the impact of social community value on member attitudes or behaviors from the perspective of members. However, lowering the threshold for the establishment of websites results in a large number of social communities; thus, attracting the attention of netizens and cultivating the loyalty of social community members has grown to be the most important issue faced by operators. Therefore, the perception of the community users towards the value of the community has a certain influence on community selection and retention.

2. Literature review and development of hypotheses

2.1. Social media marketing activities

The research of Kim and Ko (2012) pointed out that the community marketing campaigns of luxury brands include five major factors, namely, entertainment, interaction, trendiness, customization and word-of-mouth, and that these five factors will produce significant impacts on customers' brand equity, purchase intentions, etc. However, goods and services are external factors for users, while community marketing activities are the result of interactions between individual mental states and the events. Although each person can experience the same service activities, they will likely have different feelings and ideas about a given event, so the experiences of consumers and users are different (Agapito et al., 2013). The marketing competition of the future will focus on brand community marketing activities, so these marketing activities must provide themes and sensory stimulation to impress customers with good memories (Tsaur et al., 2007). Users nowadays no longer focus only on product features; rather, brands need to provide impressive experiences to users (Sheu et al., 2009; Komppula and Gartner, 2012).

Enterprises must organize marketing activities according to different users' needs; they must understand users' needs earlier than the users themselves and learn which products users need in order to organize events that leave lasting impressions (Kim and Perdue, 2013). The place that marketing activities hold in the hearts and minds of users has the most valuable impact of users' continued use (Hsu and Tsou, 2011). Today, some fashion brands such as Louis Vuitton provide live fashion shows via Facebook (Kim and Ko, 2012). Ralph Lauren, Chanel, Gucci and other famous brands have cooperated with Apple to create iPhone applications (apps). Many brands have also created their own Twitter accounts or posts on Facebook, so the communications between brand and customer have no restrictions in terms of time, location and media. Therefore, the one-way information transmission of traditional mass media has transformed into a form of interactive two-way direct communication. The higher transfer efficiency of social media has attracted a lot of companies aiming to increase their exposure on the Internet (Kaplan and Haenlein, 2010). As a result, more industries have attempted to profit from social media; thus, a set of rules have been developed for the management of users and companies and companies have also developed corresponding marketing strategies for social media.

2.2. Perceived value (PV)

Numerous scholars have regarded PV as a key metric in enterprise marketing by firms. PV is emphasized and widely discussed in various branches of marketing research (Khalifa, 2004). Consumers' service preferences or purchase intentions can be determined by examining PV. Findings can then be developed into a key differentiation tool for maintaining a competitive advantage (Heskett et al., 1994; Ravald and Gronroos, 1996; Yu et al., 2013). The significance of PV is based on the value of a product or service that is perceived by customers (Zeithaml, 1988), which can be defined as a tradeoff between perceived benefits and perceived costs (Lovelock, 2001). In a mobile commerce study, Kim et al. (2007) indicated that PV is a metric of overall effectiveness of a service as assessed by an individual, taking into account the effort made by the individual to use the surface and the benefits gained from it.

Consumers commonly receive the added value of a product or service that is provided by a vendor. Such value is known as consumption value (Butz Jr and Goodstein, 1997; Grönroos, 2008). Consumption value is a form of personal value, which people gain by completing various social interactions, exchanges, or spending. Consequently, consumption value is essentially a belief of acquiring personal value. Restated, consumption value is the ultimate personal value (Lai, 1995).

Following a discussion of various dimensions of PV that have proposed in theoretical and experiential studies, Sheth et al. (1991) proposed the concept of “consumption values”, based on which, Sweeney and Soutar (2001) developed a scale for measuring the PV of customers in a retail purchase context. PV incorporates the five theoretical types of value - functional value, social value, emotional value, epistemic value, and conditional value (Ledden et al., 2007). Essentially, PV is a psychological evaluation, which not only exists in products and the ownership of selected products or services, but also originates from the consumers themselves (Tynan et al., 2010).

On the other hand, Value comes in many forms and from many sources, such as product utility, quality, image (formed by advertising and promotional activities), availability, as well as additional services. Sirdeshmukh et al. (2002) held that perceived value is the difference between the benefits and costs when the consumer desires to maintain the relationship with a service supplier. In terms of consumer behavior, value is the key factor affecting individual choices and behaviors. Enterprises can use customers' experiential value to learn customer preferences and make modifications to improve the added value of the product, enhance the outcomes of the experience, and increase product value (Shobeiri et al., 2013; Wittmer and Rowley, 2014).

Experiential value is the result of interactions between products and customers (Mathwick et al., 2001; Vera and Trujillo, 2013). The value perceived by a customer results from the interaction between the value produced by each experience and the given customer's personal preferences. Enterprises can use customers' experiential value to learn customer preferences and make modifications to improve the added value of the product, enhance the outcomes of the experience, and

increase product value (Shobeiri et al., 2013; Wittmer and Rowley, 2014). Holbrook (1994) divided experiential value into four types, namely, aesthetics, playfulness, consumer return on investment (CROI) and service excellence. Past network behavior research also used these four types of experiential value as assessment indicators for perceived value (e.g. Mathwick et al., 2001; Shobeiri et al., 2013). *Aesthetics* represents the customer's evaluation of the aspects related to aesthetics of the service experienced; specifically, whether the service was consistent with personal preferences (Ryu et al., 2010; Hosany and Witham, 2010; De Nisco and Warnaby, 2014). In the virtual community environment, companies can make bold attempts to create a unique style by combining a number of graphics and colors to attract customers' attention and deepen the impressions left by the brand (Horng et al., 2013; Mathwick et al., 2001). *Playfulness* refers to feelings of happiness and isolation from reality felt during the service (Kang et al., 2014). In the virtual world, it can bring customers enjoyment and pleasant feelings, and it is an important motivator for customers (Huang et al., 2010). *CROI* refers to the customer's evaluation after comparing the efforts invested in and the benefits obtained from the experience. It reflects the internal value of the experience and the customer's evaluation of the rewards gained from the experience (Kim et al., 2012; Shobeiri et al., 2013). *Service excellence* refers to the customer's comparison of their personal standards for the experience and the impressions felt during the experience (Calver and Page, 2013), and whether the customer felt that the service exceeded their expectations. Service excellence reflects the services that the customer expected from the brand.

2.3. Social identification

Social identity theory clarifies how individuals improve self-esteem and self-affirmation through categorization, identity and comparison (Tajfel and Turner, 2004). Many studies on brand communities include social identity theory, holding that the members of brand communities include themselves as part of the community. The brand owner and brand community also define themselves which may strengthen the relationship between members and the brand community or the relationship between members and the brand (Algesheimer et al., 2005; Bagozzi and Dholakia, 2006; Chen et al., 2014; McAlexander et al., 2002). Therefore, community participants are categorized into specific groups according to their living environment, occupation, or level of education. At the same time, social community users also categorize others into groups, either into the same group as themselves or other groups, according to their classifications in the online community.

Brand community identification is also formed by a process similar to brand identification. The interaction of these behaviors help users create the same ideologies regarding the community and strengthen the bonds between members, thus producing a sense of identity with the community. This process can also be interpreted as the overlap between users' values and the values created by the social community (McAlexander et al., 2002; Zhou et al., 2012).

Bhattacharya and Sen (2003) pointed out that social community members express their ideas by participating in the community and that participating in various activities within the community can assist others solve problems. Algesheimer et al. (2005) noted that social community participation is a positive factor in community identity. When consumers join a community, they take delight in helping other members and actively participate in the discussions or activities initiated by the community. In other words, community involvement refers to an individual sharing their professional knowledge or understanding with the other community members stemming from their emotions, sense of belonging, or personal growth. Scholars have proposed that the idea of community identity can be applied to virtual communities and is considered an important factor affecting the operation of the virtual communities (Blanchard, 2007; Casaló et al., 2010). Besides, community identity helps facilitate positive interaction between users and other virtual community members, motivating the users to participate actively in the community (Dholakia et al., 2004; Casaló et al., 2010; Shen et al., 2011). From the viewpoints of above literature, social communities require joint operation by the members; when an individual recognizes the goals and visions of an organization, the individual will be more loyal to the virtual organization.

2.4. Satisfaction

Satisfaction refers to customers' comparison of the satisfaction after the service and the expected satisfaction based on standards produced by the accumulation of previous experiences. Expectation confirmation theory (ECT) defines satisfaction as a customer's expectation for a service and the degree to which the service satisfied these expectations (Oliver, 1980). Customers determine the degree of satisfaction for the current service according to the satisfaction experienced for this and previous services (Chen et al., 2012).

Compared with other forms of satisfaction, community satisfaction in this study reflects members' overall rating of the community (Van Dolen et al., 2007). In essence, this evaluation is based on the accumulation of past interactions. Higher satisfaction with the community leads to joyful emotions, thus affecting members' community behavior. Recent research has also pointed out that community satisfaction has a positive impact on members' community contribution and loyalty (Van Dolen et al., 2007). In other words, satisfaction is an important antecedent for community loyalty and active participation.

2.5. Three types of intention

Many studies on marketing and information systems use continuance intention as an important measure of whether customers continue to use a service (Thong et al., 2006). Customers being willing to continue to use a service is the key factor for the success of service providers. Bhattacherjee (2001) held that successful information system marketing must first convince users to accept the new information system; for sustainable operation, in addition to maintaining first time users, it is more important for operators to ensure the continued use of users.

For social networking site operators, it is important to find the main reason for users' continued participation in the social networking site and to further attract users to the site. However, the study of information systems for the past 20 years has mainly focused on the cognitive behavioral models, including the theory of reasoned action (TRA), theory of planned behavior (TPB), and technology acceptance model (TAM) and their variants. In recent years, researchers have begun to study the continued use of information systems. Bhattacherjee (2001) proposed a model to explain the factors for continued use, verifying that satisfaction and perceived use positively affect user's continuance intention. Cheung and Lee (2009) held that there are two intentions behind the continued participation of community members; the first is continuance intention, which describes the intent of community members to continue to use the community in the future, and the second is recommendation intention, which is similar to word of mouth marketing and describes all informal communication between community members and others regarding the virtual community. Past studies on virtual community members mostly involved the continued use of information system services. The difference between this study and past studies is that this study focused on the factors for community members' continued participation after joining the online brand community. Thus, in addition to investigating the influence of usage purpose on user continuance intention, this study also explored the factors affecting users' willingness to participate in the community.

Purchase intention represents the consumers' willingness to purchase a product (Dodds et al., 1991). When measuring consumers' purchase behavior, Morwitz and Schmittlein (1992) pointed out that willingness to purchase has been widely used as a predictor for consumers' future purchasing behavior. Blackwell et al. (2001) stated that

willingness to purchase can be seen as consumers' objective preference for selecting a certain product or brand. However, Boyd and Mason (1999) proposed that willingness to purchase refers to consumers' degree of preference for certain products. In some literature, willingness to purchase is measured by the time intervals between product purchases.

However, it is difficult to identify and track whether a particular action took place (such as purchase or recommendation) in empirical investigations. When consumers purchased products, they would search for relevant information based on their own experiences and the external environment. After collecting a certain amount of information, consumers start to evaluate, consider, and compare, ending in purchase behavior. As purchase intention is consumers' subjective preference for a certain product, purchase intention is often used to measure the consumers' behavioral intention (Fishbein and Ajzen, 1975). Schiffman and Kanuk (2009) defines willingness to purchase as the probability that a consumer purchases a certain product; a higher willingness to purchase equates to a higher probability. Prior research has found that purchase intention can be used as a key predictor for consumer behavior and the subjective tendency for consumer purchases (Verhagen and Van Dolen, 2009; Huang et al., 2010; Lu et al., 2010; Kim and Chung, 2011). Algesheimer et al. (2005) claimed that, from a marketing perspective, if a company wished to maintain a community and reach the community goals while also creating successful marketing through the community, then three member intentions must be considered. The first is membership continuance intention; this indicates that members enjoy keeping their promise to the community and are willing to exert effort to become part of the community. The second is community recommendation intention; this indicates that members are willing to recommend the community to non-members. The third is community participation intention; this indicates members' willingness to participate in community activities. Therefore, compared to past literature that examined information system usage, this study also discussed the effects of social media marketing activities on participation intention and purchase intention.

2.6. Development of hypotheses

Social media provides individuals with shared interests a virtual space to share and discuss ideas. Social media allows users to build a community through sustained communication. Long-term exchanges of information and growth enhance members develop loyal social relationships (Raacke and Bonds-Raacke, 2008). According to Java et al. (2009), the amount of information published on social media by a user is positively correlated with the number of followers said user has. Based on the above discussion, this study proposed H1.

H1. Social media marketing activities (SMMVs) is positively related to social identification.

The social media environment encourages user interaction and participation; thus, when browsing the website, users are influenced by the website's multimedia, content interaction, and content information (Keng and Ting, 2009). Past literature has found that companies can use their employees and environment to create a experiential setting to stimulate consumers' experiential value and feelings (e.g. Grace and O'Cass, 2004; Keng et al., 2007; Wu and Liang, 2009). Thus, this study proposed the following hypothesis:

H2. Social media marketing activities (SMMVs) are positively related to perceived value.

The benefits of these communities include conveying marketing information as well as customer service, exploring demands, and managing a community. These activities can increase customer satisfaction and improve consumer rights. Verhagen et al. (2011) found that when making online transactions, customers will have higher satisfaction with the website they if have a highly enjoyable experience. McAlexander et al. (2002) stated that the interactions and communication between community users, establishing community loyalty, increasing customer satisfaction, and the degree of customer loyalty are key to the long-term management of a community platform. Based on the above discussion, this study proposed H3.

H3. Social media marketing activities (SMMVs) are positively related to satisfaction.

According to the social identity theory, on a group level, people can have different social identities based on social comparisons or self-categorization and define themselves as a member of this category or group, and thus, the motivation for individual behavior is extended from personal benefit to group benefits. Social identity theory holds that individuals play down their personal values during self-categorization. Changes in self-concepts affect community processes, such as standard behavior, group superiority, cooperation and interaction, empathy, positive group attitude, and cohesion. From a customer perspective, the higher the identification with an organization or a brand, the greater likely the consumer is to be satisfied with the organization's products (Papista and Dimitriadis, 2012). Similarly, existing studies empirically validated the fact that perceived value is influenced by the level of brand identification (He et al., 2012; So et al., 2013). Abdullaha et al. (2016) also stated that there is a positive impact of perceived website interactivity on customer perceived value. Therefore, this study proposed H4.

H4. Social identification is positively related to perceived value.

After studying American consumer behavior, Bagozzi and Dholakia (2006) concluded that members' participation in brand community activities (such as browsing, discussion, and meetups) significantly influences members' brand-related behavior. He et al. (2012) pointed out that consumers' brand identity positively affects satisfaction. McAlexander et al. (2002) stated that consumers use online communities to easily and regularly share their thoughts and experiences regarding a brand. These community experiences form part of the customer-brand experience and create a group identity and feelings of belonging and trust. Is summary of the above findings, this study proposes that group identity is the reason that members recognize the community, confirmation that members share the same feelings and experiences with a brand, and feelings of unity and commitment as part of the group. A stronger group identity indicates that members are more closely integrated into the brand community and hold community opinion of the brand in higher regard. Thus, this study proposed the following hypothesis:

H5. Social identification is positively related to satisfaction.

Transaction utility theory proposed by Thaler (1985) indicated that perceived value positively influences consumers' willingness to purchase. Dodds et al. (1991) and Grewal et al. (1998) stated that consumers develop willingness to purchase after establishing perceived value. Petrick and Backman (2001) pointed out that PV is an antecedent to customer satisfaction. Another past studies found that perceived value, satisfaction, and behavioral intention are all correlated (e.g. Kim et al., 2007; Chen and Lin, 2015).

In a study on information system continued usage intention, Bhattacherjee (2001) concluded that users' continuance intention (CI) mainly stems from satisfaction after actual use. According to ECM studies, satisfaction is an important factor influencing CI (e.g. Hong et al., 2006; Thong et al., 2006; Bhattacherjee and Barfar, 2011; Chen et al., 2013). In addition, a study on information system continued usage intention pointed out that users' CI is mainly determined by their satisfaction after using the system (e.g. Roca et al., 2006; Limayem et al., 2007; Chen et al., 2012).

According to ECT (Oliver, 1980), customer satisfaction affects repurchase behavior; a customer's satisfaction with a product creates repurchase intention. Many studies have noted that customer satisfaction

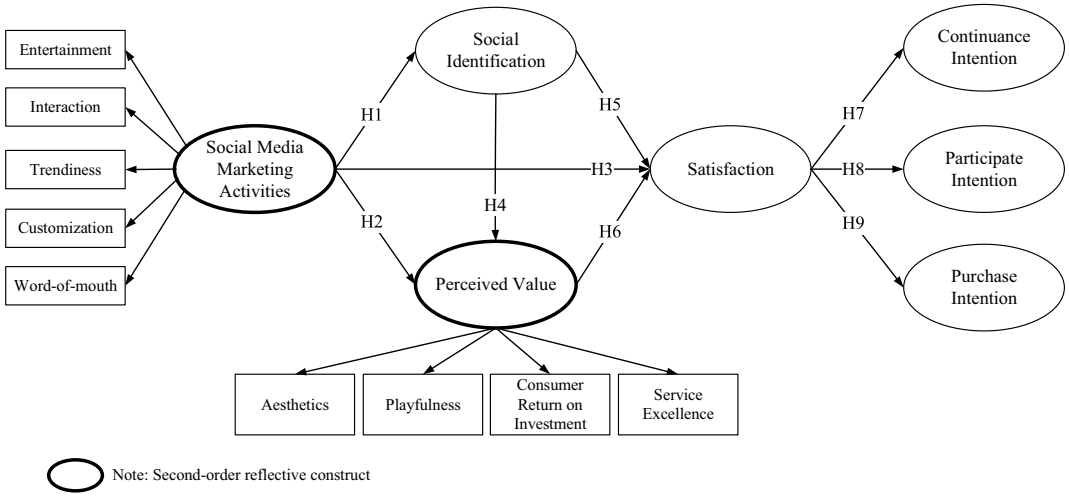

Fig. 1. Research framework.

and repurchase intention are highly and positively correlated (Dongjin et al., 2008). Marketing studies have also pointed out that a satisfying experience with a product will influence future repurchase intention (Anderson and Sullivan, 1993; Olsen, 2002). Based on the above discussion, this study proposed H6–H9.

H6. Perceived value is positively related to satisfaction.

H7. Satisfaction is positively related to continuance intention.

H8. Satisfaction is positively related to participation intention.

H9. Satisfaction is positively related to purchase intention.

Fig. 1 presents the research framework of this study. Summary of operational definitions are shown in Table 1.

3. Research method

3.1. Subjects

This study designed a questionnaire according to the hypotheses stated above. The participants in this study were experienced users of social media. After completing the questionnaire design, 10 participants with social media marketing experience were invited to complete a pretest; then modifications were made for areas of the questionnaire that were ambiguous or easily misunderstood so that the participants could fully understand the content to improve the testing quality. After the first draft was modified, to ensure that the participants did not misunderstand the questionnaire, a pilot test was conducted at a university in northern Taiwan in which 46 valid sample responses were collected. According to the reliability coefficient criteria suggested by Nunnally and Bernstein (1994), the results of the pilot test had a Cronbach's alpha value over 0.7, indicating that the internal consistency and stability for the questionnaire were acceptable.

This study used an online community to invite social media users to complete the questionnaire in the designated online questionnaire system. Online questionnaires have the following advantages (Tan & Teo, 2000): (1) sampling is not restricted to a single geological location, (2) lower cost, and (3) faster questionnaire responses. In the description part of the questionnaire, the respondents were informed that ten participants who submitted a valid questionnaire would be given a power bank device in order to improve the participants' willingness and trustworthiness. To prevent participants from repeatedly filling out the questionnaire, this study screened for replicates using the same email addresses. Email addresses rather than personal ID numbers were used

Table 1
Operational definition.

Construct	Definition	Source
Social media marketing activities	Measuring the effects of community members' understanding of activities on social media marketing entertainment, interaction, tendency, customization, and word-of-mouth.	Kim and Ko, 2012
Social identification	The degree of community members' sense of identity on a certain social media.	Bhattacharya and Sen, 2003; Algesheimer et al., 2005
Aesthetics	Users' subjective opinions of social media design and environment.	Mathwick et al., 2001; Shobeiri et al., 2013
Playfulness	The degree of enjoyment or escapism when using social media.	Mathwick et al., 2001; Shobeiri et al., 2013
Consumer return on investment	The psychological benefits of the money, time, and effort spent on social media compared to the returns.	Mathwick et al., 2001; Shobeiri et al., 2013
Service excellence	The degree of service quality promises and commitments are implemented and exceed customer expectations.	Mathwick et al., 2001; Shobeiri et al., 2013
Satisfaction	The degree of post-service satisfaction after using social media.	Bhattacherjee (2001); Liao et al. (2007); Chen et al. (2012); Chen et al. (2013); Chen and Lin (2015)
Continuance Intention	Users' intentions towards the continued use of social media.	Bhattacherjee (2001); Bhattacherjee et al. (2008); Chen et al. (2012); Chen et al. (2013)
Participation intention	Users' probability and willingness to attend and discuss the social media marketing activities.	Debatin et al. (2009)
Purchase Intention	Users' probability and willingness to purchase recommended products after using social networking websites.	Ajzen, 1991; Pavlou et al. (2007)

herein because verifying personal ID numbers will cause participants' serious concern and suspicion about personal privacy issues. Furthermore, few unusable questionnaires that were obviously filled out at random or with many missing values were removed to improve overall survey data quality. In addition to the preceding measures to eliminate unusable responses, a large sample size used by this study can substantially increase the power of statistical analysis and robustness. In terms of content validity, this study designed the core model based on the relevant constructs used in past literature. The questions in the questionnaire were developed based on the literature and pre-validate scales. The questionnaire was carefully verified by several scholars who were well-versed in social media marketing. Therefore, the content validity of the questionnaire was appropriately confirmed. The questionnaire was divided into two sections; the first section investigated personal information and data regarding social media use (gender, educational background, age, occupation, commonly used social media platforms and types, and hours of social media use per day). The second section measured items for the hypotheses in this study. In order to improve the quality of the questionnaire, the questionnaire could only be submitted with all questions completed. The actual sample size for data analysis is 502, including 52% females and 48% males. The majority respondents (69%) were aged 21–35. In terms of educational background, the largest bracket had completed one college or university degree (61.2%) and the second largest bracket was master's and above (17.5%).

4. Data analysis

Partial least squares (PLS) analysis and estimation were performed with two phases. The first phase conducted reliability and validity analyses, whereas the second phase estimated and verified the path coefficients and explanatory power of the structural model. The purpose of the above two phases was to confirm whether the constructs were reliable and valid, thus verifying the relationships between constructs (Anderson and Gerbing, 1988; Hulland, 1999). PLS was adopted because it is suitable for discussing the causal relationships between construct variables and can simultaneously handle the model constructs and measurement items (Petter et al., 2007). In addition, as PLS had relaxed requirements for the variable normality and randomness, it is suitable for handling the relationship between variables in abnormal data distribution. Moreover, it has the advantage of analyzing complex prediction models (Chin and Newsted, 1999). This study investigated the causal relationship between social media marketing activities, social identification, PV, satisfaction, and intention; however, each construct contained a number of measurement items in past literature. Therefore, to investigate the causal relationship between variables, reduce measurement errors, and avoid collinearity, PLS was more suitable for this study than other SEM analysis methods. Majchrzak et al. (2005) recommended there should be at least 5 to 10 times the number of samples as the maximum number of model paths. In this study, the number of samples was 502 and the number of maximum paths was 9, fitting the proposed standards and making it suitable for PLS analysis. This study used the SmartPLS (Version 3.2.7) developed by Ringle et al. (2015).

4.1. Outer model and scale validation

The related tests for the outer model included the reliability of each item and the internal consistency, convergent validity, and discriminant validity of each construct. The reliability of items was tested by the corresponding loading of the questions. Factor loading presented the extent the construct can be measured by some questions and the threshold value was 0.6, which was used to represent individual reliability (Hair Jr. et al., 2010). After deleting the fourth question in the playfulness construct, all the measurements items met the standards. The composite reliability of each construct is shown in Table 2. All composite reliability (CR) values for each construct were higher than the threshold value 0.7 (Chin, 1998), indicating the constructs were internally consistent.

Table 2
Reliability and AVE of the outer model.

Construct	Cronbach's alpha	Composite reliability	AVE
SMMA	0.928	0.938	0.582
SI	0.904	0.940	0.839
PV	0.929	0.939	0.708
SAT	0.908	0.908	0.846
CI	0.869	0.920	0.793
PAI	0.914	0.939	0.794
PUI	0.892	0.949	0.903

Note: SMMA = Social Media Marketing Activities; SI = Social Identification; PV = Perceived Value; SAT = Satisfaction; CI = Continuance Intention; PAI = Participation Intention; PUI = Purchase Intention.

In terms of convergent validity, in addition to measuring each question using factor loading and composite reliability, AVE indicators for each construct were considered. If this index was > 0.5, this construct has good convergent validity (Fornell and Larcker, 1981). It can be seen from Table 2 that the AVEs for potential variables of the constructs in this study were between 0.694 and 0.903, indicating good convergent validity.

Discriminant validity detects the degree of discrimination between tested variables and different constructs criterion. Henseler et al. (2015) indicated a testing method technique which is the heterotrait-monotrait ratio (HTMT) of correlations based on the multitrait-multimethod matrix. Therefore, this study evaluated discriminant validity through HTMT. While the discriminant validity did not have a serious problem when the values of HTMT are lower than HTMT0.90 value of 0.90 (Gold et al., 2001), all values as Table 3 shows the HTMT values between the constructs are all below the 0.90 threshold pointing that discriminant validity has been achieved. Besides, as shown in Table 4, the comparison of cross-loadings and factor loadings for each indicator indicated reasonable discriminant validity, when the factor loading of each scale item for its assigned latent construct is higher than its loading on any other constructs (Hair Jr et al., 2016). Therefore, the constructs in this research had good discriminant validity.

Preventive measures were taken in order to avoid common method variance (CMV) that may result from the collection of single respondent's cognitive information by a self-reported scale and reduce the impact of CMV. In addition to anonymous surveys, this study strived to hide the meaning of each question and separate questions for different variables as much as possible. However, the variable results in Tables 3 and 4 had a considerable degree of construct validity, which also shows that the results were not largely affected by CMV. In addition, this study

Table 3
Results of discriminant validity by HTMT.

Factors	CI	PAI	PLAY	PUI	PV	SAT	SMMA
CI							
PAI	0.752						
PLAY	0.388	0.577					
PUI	0.819	0.821	0.423				
PV	0.768	0.781	0.816	0.758			
SAT	0.878	0.772	0.492	0.788	0.889		
SMMA	0.738	0.686	0.588	0.652	0.850	0.759	
Social identity	0.804	0.859	0.541	0.748	0.802	0.873	0.685

Note: SMMA = Social Media Marketing Activities; AES = Aesthetics; PLY = Playfulness; CROI = Consumer Return on Investment; SE = Service Excellence; SI = Social Identification; PV = Perceived Value; SAT = Satisfaction; CI = Continuance Intention; PAI = Participation Intention; PUI = Purchase Intention.

Table 4
Standardized factor loadings and cross loadings of the outer model.

	SMMA	SI	AES	PLY	CROI	SE	SAT	CI	PAI	PUI
SMMA1	***0.737***	0.471	0.617	0.343	0.511	0.551	0.602	0.543	0.426	0.398
SMMA2	***0.787***	0.510	0.645	0.364	0.480	0.587	0.621	0.556	0.494	0.465
SMMA3	***0.759***	0.485	0.563	0.359	0.444	0.529	0.515	0.541	0.459	0.453
SMMA4	***0.788***	0.488	0.612	0.425	0.456	0.555	0.526	0.524	0.503	0.449
SMMA5	***0.786***	0.482	0.579	0.434	0.439	0.552	0.528	0.481	0.493	0.447
SMMA6	***0.756***	0.497	0.610	0.352	0.521	0.600	0.566	0.563	0.452	0.481
SMMA7	***0.702***	0.493	0.512	0.478	0.444	0.448	0.421	0.433	0.473	0.428
SMMA8	***0.710***	0.390	0.515	0.454	0.433	0.484	0.471	0.425	0.431	0.377
SMMA9	***0.754***	0.453	0.619	0.528	0.459	0.546	0.494	0.396	0.487	0.405
SMMA10	***0.798***	0.517	0.617	0.413	0.517	0.596	0.576	0.573	0.565	0.582
SMMA11	***0.769***	0.473	0.621	0.412	0.460	0.557	0.525	0.508	0.520	0.484
SI1	0.596	***0.902***	0.633	0.524	0.528	0.649	0.702	0.628	0.701	0.585
SI2	0.587	***0.940***	0.626	0.412	0.562	0.666	0.771	0.687	0.710	0.632
SI3	0.561	***0.906***	0.598	0.429	0.525	0.643	0.700	0.641	0.740	0.629
AES1	0.736	0.594	***0.798***	0.422	0.559	0.664	0.644	0.659	0.530	0.528
AES2	0.673	0.566	***0.910***	0.525	0.518	0.662	0.618	0.520	0.547	0.485
AES3	0.649	0.601	***0.895***	0.517	0.494	0.673	0.616	0.528	0.563	0.493
PLY1	0.461	0.384	0.487	***0.928***	0.380	0.405	0.330	0.250	0.446	0.327
PLY2	0.450	0.395	0.458	***0.935***	0.391	0.410	0.356	0.263	0.449	0.314
PLY3	0.570	0.569	0.590	***0.890***	0.485	0.528	0.547	0.434	0.548	0.407
CROI1	0.506	0.490	0.487	0.366	***0.879***	0.634	0.598	0.492	0.501	0.590
CROI2	0.576	0.529	0.536	0.394	***0.933***	0.676	0.659	0.561	0.511	0.604
CROI3	0.618	0.572	0.604	0.482	***0.902***	0.726	0.690	0.577	0.554	0.585
SE1	0.641	0.599	0.706	0.479	0.718	***0.909***	0.716	0.613	0.578	0.599
SE2	0.625	0.632	0.649	0.405	0.628	***0.887***	0.711	0.632	0.618	0.645
SE3	0.682	0.680	0.697	0.432	0.665	***0.883***	0.866	0.667	0.655	0.631
SAT1	0.688	0.708	0.697	0.453	0.675	0.839	***0.934***	0.724	0.658	0.677
SAT2	0.670	0.716	0.674	0.443	0.674	0.792	***0.930***	0.697	0.659	0.655
SAT3	0.600	0.760	0.613	0.359	0.634	0.727	***0.894***	0.729	0.632	0.626
CI1	0.581	0.606	0.552	0.260	0.521	0.616	0.689	***0.913***	0.542	0.610
CI2	0.582	0.636	0.588	0.311	0.520	0.639	0.720	***0.920***	0.597	0.616
CI3	0.630	0.660	0.606	0.367	0.570	0.649	0.673	***0.837***	0.658	0.700
PAI1	0.564	0.656	0.534	0.489	0.547	0.625	0.631	0.572	***0.869***	0.663
PAI2	0.530	0.655	0.519	0.506	0.422	0.526	0.552	0.544	***0.878***	0.575
PAI3	0.552	0.734	0.556	0.424	0.489	0.615	0.644	0.625	***0.913***	0.678
PAI4	0.620	0.736	0.626	0.471	0.587	0.679	0.679	0.645	***0.905***	0.728
PUI1	0.566	0.633	0.541	0.372	0.605	0.662	0.660	0.671	0.702	***0.948***
PUI2	0.577	0.644	0.556	0.358	0.639	0.666	0.689	0.697	0.715	***0.952***

Note 1: SMMA = Social Media Marketing Activities; AES = Aesthetics; PLY = Playfulness; CROI = Consumer Return on Investment; SE = Service Excellence; SI = Social Identification; PV = Perceived Value; SAT = Satisfaction; CI = Continuance Intention; PAI = Participation Intention; PUI = Purchase Intention. Note 2: The yellow cells are the factor loadings of scale items for each construct.

used Harman's One-Factor Test to test the severity of CMV (Podsakoff and Organ, 1986). Exploratory factor analysis for the 37 questions in this study found that the explanatory variance for the first factor was 37.69% and was a non-integrated factor. It can be seen that the impact of CMV was not serious in this study.

This study computed the Goodness of Fit (GOF) following Tenenhaus et al. (2005) to understand the overall quality of the proposed model, t. The GOF is calculated as:

$$GOF = \sqrt{\overline{AVE} \times \overline{R^2}} = \sqrt{0.719 \times 0.582} = 0.667$$

According to above result, GOF is 0.667 which exceeds the cut-off criterion of 0.36 for a large effect size (Wetzels et al., 2009).

4.2. Inner model and hypotheses testing

In this study, the inner model PLS analysis was used to test the hypotheses. The inner model was used to estimate the path coefficients, R-squares and Q-squares. Path coefficients represent the intensity and direction of the variable relationships to show the cause and effect between the observed variables and latent variables. However, the R-square value refers to the percentage to which the dependent variable can be explained, representing the predictive ability of the model. Social media marketing activities and PV are second-order factors. Moreover, this study used bootstrapping to estimate the significance of each path coefficients. The estimation was made by re-sampling data and the estimated values were more precise than the commonly used

Table 5
Summary of inner model results.

Hypothesis	Path coefficient	t-Value	Result
H1:SMMA → SI	0.628***	17.033	Supported
H2:SMMA → PV	0.541***	10.725	Supported
H3:SMMA → SAT	0.067	1.262	Not supported
H4:SI → PV	0.401***	7.852	Supported
H5:SI → SAT	0.384***	8.846	Supported
H6:PV → SAT	0.493***	8.444	Supported
H7:SAT → CI	0.780***	31.441	Supported
H8:SAT → PAI	0.706***	27.170	Supported
H9:SAT → PUI	0.710***	25.486	Supported

Note 1: SMMA = Social Media Marketing Activities; SI = Social Identification; PV = Perceived Value; SAT = Satisfaction; CI = Continuance Intention; PAI = Participation Intention; PUI = Purchase Intention. Note 2: * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001. Note 3: Number of bootstrap samples = 10,000.

limit approximate value (Purvis et al., 2001). Therefore, this study used this method to test the significant relationships between variables.

Table 5 and Fig. 2 presented that social media marketing activities positively and significantly affected social identification, supporting H1 and H2 (SMMA → SI: β = 0.635, t-value = 17.155; SMMA → PV: β = 0.557, t-value = 11.205). However, social media marketing activities had no significant direct effect on satisfaction; thus, H3 was not supported (β = 0.079, t-value = 1.505). The analysis showed that social identification had a significant effect on satisfaction and PV, supporting H4 and H5 (SI → PV: β = 0.387, t-value = 7.553; SI → SAT: β = 0.383, t-value = 8.907). H6 in this study was also supported (β = 0.493, t-value = 8.444). The analysis results indicated that PV had a positive effect on satisfaction. Finally, satisfaction positively and significantly affected continuance intention, participation intention and purchase intention (SAT → CI: β = 0.780, t-value = 31.441; SAT → PAI: β = 0.706, t-value = 27.638; SAT → PUI: β = 0.484, t-value = 25.486). The values of Q-square for social identity (Q2 = 0.311), perceived value (Q2 = 0.381), satisfaction (Q2 = 0.604), continuance intention (Q2 = 0.455), participation intention (Q2 = 0.370) and purchase intention (Q2 = 0.434) are greater than zero, indicating that our proposed model has sufficient predictive power.

4.3. Testing of mediation effects

In order to evaluate whether the mediation model proposed in this study was statistically meaningful, path analysis and the Sobel test were used (Sobel, 1982). This study used the Sobel test to obtain Z values to

Table 6
Mediation effects testing.

Relationship	z-Value of Sobel test	Bias-corrected percentile bootstrap confidence intervals (95%)
SMMA → SI → SAT	7.906***	(0.190, 0.307)
SMMA → SI → PV	6.913***	(0.159, 0.320)
SMMA → PV → SAT	6.597***	(0.194, 0.346)
SI → SAT → CI	8.570***	(0.244, 0.382)
SI → SAT → PAI	8.478***	(0.221, 0.347)
SI → SAT → PUI	8.408***	(0.223, 0.345)
SI → PV → SAT	5.544***	(0.323, 0.467)
PV → SAT → CI	7.900***	(0.588, 0.697)
PV → SAT → PAI	7.828***	(0.530, 0.636)
PV → SAT → PUI	7.770***	(0.534, 0.647)

Note 1: SMMA = Social Media Marketing Activities; SI = Social Identification; PV = Perceived Value; SAT = Satisfaction; CI = Continuance Intention; PAI = Participation Intention; PUI = Purchase Intention. Note 2: Number of bootstrap samples = 10,000. Note 2: *** p-value < 0.001.

approximate p-values in order to judge whether there was significant indirect effect (as shown in Table 6). The mediator provides significant mediation effect between the independent variable and the dependent variable if the absolute z-value of a mediator is > 1.96.

The present study further used the Bootstrapping method with bias-corrected confidence estimates to estimate effects of the mediators (Hayes and Preacher, 2014). We adopted the 95% confidence interval of the specific mediating effects was obtained with 10,000 bootstrap resamples. Zero value did not fall in the 95% confidence interval suggesting that the significance mediation effects confirmed.

5. Discussion

This study was based on social media marketing activities proposed by Kim and Ko (2012) and investigated the influencing factors of the three types of user social media intention. The empirical results of this study make two important conclusions and contributions. First, the effects of social media marketing activities have mostly gone overlooked in most studies on social websites. This study confirmed that social media marketing activities has a significant influence on social identification and PV, which in turn affect satisfaction, continuance intention, participation intention and purchase intention. Thus, this model helps understand users' usage intention for social media. Social media marketing activities is an important factor that influences users' continuance intention, participation intention and purchase intention. Social media marketing can help maintain corporate brands. In the past, keyword advertising and blog marketing were based on content. Social

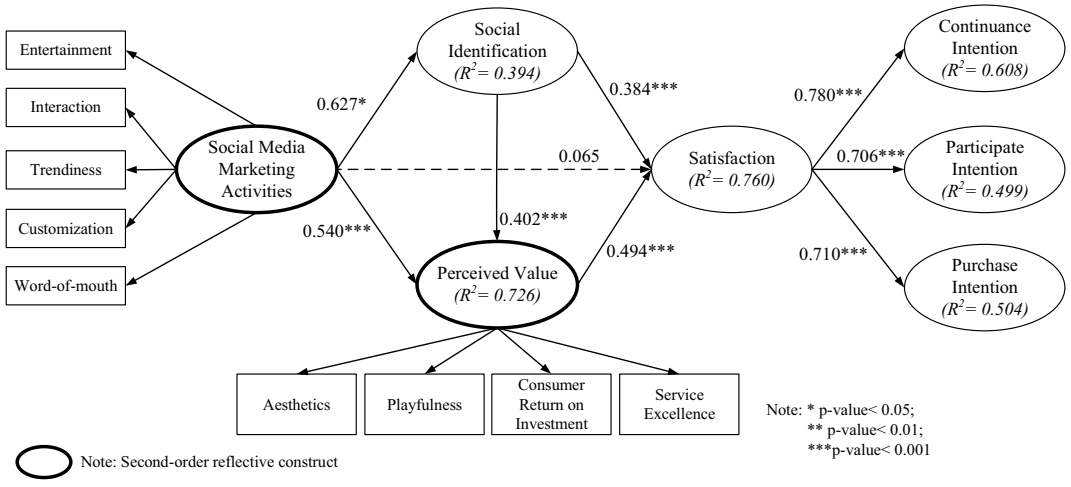

Fig. 2. Standardized path coefficients and significance of inner model.

media marketing reaches target audiences and improves the effect of the transmitted information via a long-term, close relationship with the online community (Holzner, 2008). In practice, social media service providers should consider how to increase the effects of social media marketing activities. Community operators are suggested to increase forum content and activities (e.g., test reports for new products, trials for group members, sharing how you became a fan of the brand, and sharing user experiences, as well as using a motivation system to increase member interaction) before social media marketing activities. Members can be invited to share the reasons they chose the brand over competitors so that others are aware of other competing brands. The resulting discussions provide members with more opportunities to consider why they prefer the brand and why they avoid other brands, thus strengthening community cohesion and brand loyalty.

Second, most administrators focus on whether managing a brand community can help their own brand or create a business advantage. Marketing tools and strategies have fundamentally changed since the appearance of social media (Mangold and Faulds, 2009). Consumers' sources of product information for purchase decisions have shifted from traditional media to social media. Therefore, in this age of social media, companies must consider how to control message content and publication timing and frequency in order to achieve marketing goals. The results of this study confirm that if companies can help users identify with their brand community, users' positive relationships with the brands they like can be strengthened and users may also stop purchasing competitor products. Thus, companies can conclude from this study that management of an online brand community and strategies to cultivate members' community identity can help brand business performance and inspire community members to reject competing brands.

Despite the efforts to conduct rigorous research structure, research methodology, and data collection, there were several limitations that can be addressed in future studies. First, online questionnaires were used for partial data collection; as some respondents may have been more willing to complete the questionnaire due to their social community identity, leading to self-selection bias which may affect the external validity of the results. Second, the collected sample in this study was cross-sectional; thus, the analysis results can only explain individual usage behavior for currently popular social media. However, different types of social media offer different services; therefore, users long-term use or changes in usage demands still require long-term observation. The growth model analysis results based on users' browsing experiences and experiential values at different time periods in future longitudinal studies may be more conclusive of the causal relationship between variables. Third, users in different areas or countries seem to have preferences for certain social media. The further study should explore why individuals from different countries or with different cultural backgrounds choose different social media and whether these individuals have different motivations and demands for social media require international and multi-website research for further investigation. Additionally, the characteristics of new social networking websites, such as brevity and immediacy of Twitter or the game-like feel of Facebook, are unique from traditional social networking websites and many researchers overlook this shift. This study only investigated the effects of social media marketing activities; any other characteristics of new social networking websites and their effects on usage demands or usage behavior must be examined in future research. Lastly, future research can examine whether different characteristics (e.g., personality or technology readiness) affect social media marketing activities or members' community participation.

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