Article

What Drives Continuance Intention towards Social Media? Social Influence and Identity Perspectives

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Abstract: With the growth of social media communities, people now use this new media to engage in many interrelated activities. As a result, social media communities have grown into popular and interactive platforms among users, consumers and enterprises. In the social media era of high competition, increasing continuance intention towards a specific social media platform could transfer extra benefits to such virtual groups. Based on the expectation-confirmation model (ECM), this research proposed a conceptual framework incorporating social influence and social identity as key determinants of social media continuous usage intention. The research findings of this study highlight that: (1) the social influence view of the group norms and image significantly affects social identity; (2) social identity significantly affects perceived usefulness and confirmation; (3) confirmation has a significant impact on perceived usefulness and satisfaction; (4) perceived usefulness and satisfaction have positive effects on usage continuance intention. The results of this study can serve as a guide to better understand the reasons for and implications of social media usage and adoption.

Keywords: social identity; group norms; image; perceived critical mass; expectation-confirmation model (ECM); social media

1. Introduction

People now use various forms of online social media to carry out many different activities of social interaction. Companies and other organizations are also making use of social media communities to promote their brands with related fan pages being very common. The operators of social media communities work to attract more people by offering interesting and plentiful content, as well as continuous, uninterrupted interactions, as such efforts can attract more users, and thus increase the related organizations market profile.

Virtual communities are interactive platforms among Internet users or between users and businesses, and there is fierce competition among such communities. The number of virtual community users, or the additional services offered, recognition, usability and other factors, will affect users’ willingness to participate in a virtual community. The company brand hopes to increase its popularity, and the sustainable usage of fan pages has become the norm to achieve this. Social media community
operators aim to improve the contents in virtual communities to attract more users, as this would allow the community to be viable and sustainable viability, thus increasing its business activities and value. The development of the Internet has brought about a socialization of information, and the user’s life has been inseparable with the network. In the era of Web 2.0, the operation of the websites has shifted to social media communities as the main focus of development [1–3]. As the Internet has evolved over time in different forms and applications of media, it has changed traditional forms of interpersonal interaction and created new communication bridges among people, such as online groups.

In recent years, plentiful empirical research has assessed the behavior of social media in different environments, such as the educational environment [4,5], knowledge sharing [6], and leisure environment [7,8]. However, members of virtual communities are not just information seeking, but also to seek social interaction and friendship [2]. The concept of social identity has been applied for investigating the usage behavior of information systems in previous research, but has rarely been used for investigating the formation characteristics of social media. Scholars have also identified social identity as one of the important factors influencing the operation of virtual communities [9–11]. Social identity is the feeling of belonging and identification in a community and the pride of being part of that community. Therefore, social identity also helps users to maintain positive interactions with other members of the virtual community and allows users to participate more actively in the community [12,13]. Therefore, social identity is an important research topic in both marketing and online group activities.

On the other hand, human beings are predominantly gregarious, and the impact of such online communities on individuals should be taken into account when discussing the acceptance of science and technology. Prior studies pointed out that group members tend to categorize social norms and change personal attitudes and behavior under group pressure [14]. Therefore, the consumer’s personal cognitive behavior will be affected by the social communities and peers they engage with. When a website reaches a critical number of users, it will positively affect the consumer’s attitudes and willingness to act [15]. This is quite different from the business model of earlier previous discussion areas or message boards. Therefore, this article attempts to construct an integrated model to explain and predict consumers’ behavior of using social media and relevant determinants (i.e., group norms, critical mass and image) in viewpoints of social identity.

2. Literature Review and Theoretical Background

2.1. Social Identity

Social identity theory emphasizes the sequences of categorization and comparison that conduct individuals’ perceptions of a group or organization, such as their prestige or uniqueness, and elicit identification with them [16]. A perception of community is a critical characteristic of face-to-face communication or interaction among the members of a group. Social identity refers to an individual’s sense of identity in relation to a group. In other words, if an identity is from a community of individuals who belong to this community, then this is social identity. Here, it was worth noting that when customers developed a greater sense of identification with a company, they were more likely to support that company [9,17]. Prior research about social identity showed that intergroup encounters enhance identification and reduce polarization generally [17–19].

The sense of social community is an important feature of face-to-face communication or interaction among the members of a group [19,20], and thus the degree of identification with the social community will affect its operations [21]. Several studies have also highlighted how social identity can be applied to social media groups and shown how it is an essential determinant in this context [9,10,20]. A highly social identity can help users to interact with other virtual community members actively, and participate more aggressively in the group [12,13].
2.2. Group Norms

Theory of reasoned action (TRA) was constructed by Fishbein and Ajzen [22] to understand the relationship between attitudes and behaviors in relation to specific actions. Behavioral intention is a function of both attitudes and subjective norms toward the focal behavior, and a stronger behavioral intention makes it more likely that a person will perform that behavior.

Postmes et al. [23] stated that group norms define the communication patterns within a group and that conformity to such norms increases over time. Many studies have aimed to better evaluate the role of the social influence utilized by social media groups on its members [12,24–27]. Cialdini and Goldstein [28] suggested that group norms are more likely to influence behavior in situations when there is greater uncertainty about the correct behavior. If an individual is unsure what they should do, they will be likely to be influenced by what others do around them. When the norms of community commitment are accepted by individuals, then this is called the consistency of norms. Therefore, group norms are also important variables of social influence and are formed through the process of social influence. Shen, Cheung, Lee and Chen [13] suggested that group norms are adopted by an individual because they share similar goals and values with others in the social network. Most important of all, group norms influence an individual’s willingness to participate and the level of social interaction in a virtual community [12,27].

2.3. Image

Boulding [29] defined an image as the sum of what we think we know and what makes us behave the way we do. Thus, in this case, image is a subjective concept that a person possesses and it can also convey a person’s behavior. Images could be transformed or changed by messages containing symbols, experiences, information and other outcomes. Moore and Benbasat [8] pointed out that image was based on the extent to which the use of innovation is perceived to enhance a person’s image or status within their particular system. The concept of an image could be applied to different fields and, in the context of comparisons between brands, can be called brand image. It can also be applied to corporations, as the corporate image. This study defines image as the degree to which people use an innovation in a social community to enhance their personal image or status [8,18,30,31].

Chen, Yen and Hwang [2] found a positive linkage between image and the intention to keep using a community network, such as Facebook or online forums. As for personal cognition, there was a correlation between the promotion of personal image and social interaction [30]. This research improves the concept of image to social media communities and further analyzes user’s feelings in this context.

2.4. Perceived Critical Mass

Metcalfe [32] stated that, in a network of N users, the value seen by each user is proportional to N-1 other users, so the total value of the network grows with N*(N-1) or, for large Ns, with N squared. In other words, the value of the network increases along with the number of users, with this greater value further increasing the number of users, and so on. When the amount of Internet adopters spans a critical mass, the effects of each additional person will be greater. Stated in other words, when a virtual community has many people engaged in its discussions, then this will attract even more people to take part. Once a critical mass is achieved, the number of users then enlarges rapidly. As a result, virtual community operators must work to push the number of users to reach this critical mass.

The diffusion of innovations manifests itself in different ways and is strongly influenced by the type of adopter and the innovation decision-making process [33]. Rogers [33] mentioned that the categories of adopters in the literature are innovators, early adopters, early majority, late majority, and laggards, as defined by the level to which a person accepts a fresh opinion. At some point within the adoption curve, an innovation may reach a critical mass. A critical mass of users is thus considered to be a critical determinant in social influence, as users will then interact with each other in different
groups. Kim and Kim [34] proposed that, once a critical mass is reached, diffusion continues at exponential growth, finally reaching the stabilization phase. It was important to note that this critical mass was based on a perception and not a specific point in the diffusion process [15]. Existing studies also stated that users’ perceptions of critical mass are realized as the preference for acceptance of groupware while online services are fruitfully implemented [2,15,35,36]. The concept of critical mass can explain most human behaviors, because personal behavior is often affected by the number of people who have adopted an idea. In the context of this study, if more people have adopted an innovation in a virtual community, the possibility of adoption by others will increase.

2.5. Expectation-Confirmation Model

Oliver [37] initially introduced the Expectation Confirmation Theory (ECT), which was mainly used to study consumer satisfaction. The basic concept of ECT was that consumers judge satisfaction by comparing pre-purchase expectations with performance. The process of re-purchase intention [37]. Firstly, at the first point of time (t1) before purchase, consumers will have expectations about the product. After using the product, at the second point of time (t2), the consumer will recognize the performance of the product based on his or her actual feelings.

However, some scholars have proposed a modified model of expectation recognition theory for different applications, for example, Bhattacharjee [38]. Bhattacharjee [38] argued that Oliver’s expectation validation theory ignores the fact that original and actual expectations change over time, and that Bhattacharjee [38] also proposed that system persistence behavior is similar to repurchase behavior, as the act of engaging in this behavior was similar to the act of buying again. The decision-making process consisted of three stages—initial decision, initial use experience, and post-use experience—each of which may change the consumer’s subsequent behavior. Bhattacharjee [38] proposed the Expectation-Confirmation Model (ECM) and suggested that, in an information system/technology (IS/IT) environment, users’ intention to continue using the system was determined by their satisfaction with using the system and perceived usefulness of continuing to use the system. User satisfaction, in turn, is affected by the perceived usefulness and confirmation of expectations that users have experienced from previous information system usage. Past empirical research has shown that ECM is effective in explaining consumers’ continued use of intentions [6,39–44]. Therefore, this study uses ECM as the basis for an empirical study of users’ intention to continue using social media.

3. Research Method

3.1. Research Hypotheses Development

Group norms define communication patterns and expectations within groups. Prior studies about virtual communities also took social influence factors into consideration [12,24,25,45]. According to Shen, Cheung, Lee and Chen [13], group norms were defined as the consensus among community members with regard to their common expectations and goals. In addition, Dholakia, Bagozzi and Pearo [12] indicated that group norms had the positive affect on collective intentions to towards online communities. When people join a virtual community, they can understand its values, goals, and norms. If their values are consistent with the goals of other members in the community, they will form a sense of identity with it. This study defines group norms as when an individual’s behaviors in the virtual community are subjected to pressure from its members and environment, and thus posits the following:

**Hypothesis 1.** Group norms have a positive impact on social identity.

Oliver [46] defined a critical mass of users as when the related people have some social intentions that arise when the number of participants goes beyond a specific point in the innovation diffusion process. The role of relevant research on the perceived critical mass in the dissemination of information technology has been paid to considerable attention. For example, Lou, Luo and Strong [15] highlighted
that perceived critical mass as a key factor that influences an individual’s decision to accept the groupware technology. Network externality depends on the linked value of user numbers, and the size of the user base affects the determination of the value of a product or service [47]. Jing [48] pointed out that the information technology products often have the characteristics of network externality, such as software and online services, including online communities. Therefore, this study defines the perceived critical mass as the basis for a collective action when the number of users reaches a certain number, and posits the following:

**Hypothesis 2. Perceived critical mass has a positive impact on social identity.**

Venkatesh, Morris, Davis and Davis [31] reviewed the related research and integrated eight models discussed in the previous literature to present the Unified Theory of Acceptance and Use of Technology, where social influence is one of the core determinants of the use of information technology. In addition, Chen, Wu, Wu and Chen [18] also found the positive linkage between image and social interaction tie. Therefore, we posit the following hypothesis:

**Hypothesis 3. Image has a positive impact on social identity.**

Social identity theory explains that part of a person’s self-concept comes from the group they belong to [16]. A person’s self-concept is thus related to other people or groups [45]. We are not separate individuals, but group or community members, thus giving rise to the so-called sense of community. This is an important characteristic of face-to-face communication or interaction among the members of the group [20,49–51]. In addition, the expectations and trust that exist in relation to the sense of community are two factors that influence the members of the community [51].

Song and Kim [52] argued that social identity was a key factor that influenced the intention to use specific technologies or systems on online activities. Kwon and Wen [53] indicated that social identity influenced perceived usefulness significantly. If individuals had higher recognition of their communities, they will have greater willingness to participate and share information in the affairs of the online communities. Several studies have also indicated that social identity should be considered on online communities and be a key influencer in their operations [9–11]. Social identity also helped users to engage actively with other members of the social media groups and participate more actively [12,13]. Taken together, we propose the following hypotheses:

**Hypothesis 4. Social identity has a positive impact on perceived usefulness.**

**Hypothesis 5. Social identity has a positive impact on confirmation.**

Davis [54] proposed the technology acceptance model (TAM), which claims that system usage can be influenced by the motivations of users: the perceived usefulness and perceived ease-of-use. From the prior research results, we found the perceived usefulness positively affected their satisfaction towards different information services [39,40,44,55,56]. Therefore, we propose the following:

**Hypothesis 6. Perceived usefulness has a positive impact on satisfaction.**

Satisfaction, perceived usefulness and the confirmation of expectations are, by previous empirical studies, found to be the key determinants of adoption in a variety of information services [40,41,44,56]. Similarly, other studies, such as Premkumar and Bhattacherjee [57] and Chen, Liu and Lin [39], have consistently shown the positive linkage among confirmation, perceived usefulness, satisfaction. As a result, ECM posited that users’ perceived usefulness and satisfaction of information services had a positive influence on their intention to continue relevant information services usage. Lastly, ECM also
assumed that the confirmation of expectations of users affected positively their perceived usefulness towards information services. Therefore, we posit the following hypotheses:

**Hypothesis 7.** Perceived usefulness has a positive impact on continuance usage intention.

**Hypothesis 8.** Confirmation of expectations has a positive impact on perceived usefulness.

**Hypothesis 9.** User confirmation has a positive impact on satisfaction.

**Hypothesis 10.** User satisfaction has a positive impact on continuance intention.

According to hypotheses development, we proposed the research framework for this study (as shown in Figure 1). In this study, we applied an online questionnaire to collect empirical data. According to the purpose of the study, its structure and the operational definition of the constructs were organized. The questionnaire was designed with reference to the relevant literature, and it was carried out with experts and scholars after several amendments were made. The variables used in this study were taken from the literature and included three exogenous constructs (i.e., group norms, critical mass, and image), four mediators (i.e., social identity, perceived usefulness, confirmation, and satisfaction) and one endogenous construct (continuance intention), as shown in Table 1.

![Figure 1. Research Framework.](image)

**Table 1. Definitions of constructs.**

| Construct                  | Definition                                                                 | Source                  |
|----------------------------|---------------------------------------------------------------------------|-------------------------|
| Group Norms                | The perception of social pressure to perform a behavior in the social media platforms or not. | [12,15,31]              |
| Perceived Critical Mass    | When the number of participants in social media reaches a majority of a user’s awareness, the user’s propensity to use the media is generated. | [15,47]                |
| Image                      | The extent to which the use of social media applications within a particular social group can enhance an individual’s image or status. | [2,18,31]              |
| Social Identity            | The extent to which the social media user categorizes himself/herself as a member of the social media groups. | [12,52,53]             |
| Perceived Usefulness       | The extent to which a social media user is confident that the social media can improve their friendship with others. | [39,54]                |
| Confirmation of Expectations | The extent to which social media users perceive their initial expectations as being confirmed after actual adoption | [38,39,44]             |
| Satisfaction               | A positive perception resulting from an overall evaluation based on prior experience using social media | [39,44,58]             |
| Usage Continuance Intention | The extent to which a social media user intends to re-patronize a related service consistently in the future, thereby causing repeated participation in the same social media community. | [38,39,44]             |
3.2. Procedure and Sampling

This study investigated users in a social media community, and the main respondents are Taiwanese users on systems including Facebook and Weibo. We used an online questionnaire to collect data, because social media community users are used to interacting online. A web-based questionnaire was designed with the Google Docs’ “Network Questionnaire” service, and the data were collected via an anonymous online questionnaire posted on a bulletin board system (PTT) and Facebook. Facebook and PTT were used as the sampling platform for this study because they are the two largest social media user groups in Taiwan [59]. We also used a lottery to give prizes of an 8G flash drive and attract more users to complete the questionnaire. Our questionnaire was online during three months and a total of 260 questionnaires were collected (as shown in Table 2). We deleted the invalid questionnaires, and the number of valid responses was 247, giving a 95% valid response rate.

| Table 2. Sample framework. | Items | Options | Frequency | Percentage |
|---------------------------|-------|---------|-----------|------------|
| Gender                    | Male  | 133     | 54%       |            |
|                           | Female| 114     | 46%       |            |
| Age                       | Below 20-year-old | 20     | 8%        |            |
|                           | 21 to 30-year-old | 200    | 81%       |            |
|                           | 31 to 40-year-old | 15     | 6%        |            |
|                           | 41 to 50-year-old | 7      | 3%        |            |
|                           | Above 50-year-old | 5      | 2%        |            |
| Which social media platforms have been used (Multiple choice) | Facebook | 247 | 100% | |
|                           | Plurk | 102     | 41.2%     |            |
|                           | iGoogle | 83    | 33.5%     |            |
|                           | Twitter | 50   | 20.4%     |            |
|                           | Weibo | 33      | 13.5%     |            |
|                           | Others | 11     | 4.6%      |            |
| Usage frequency of social media platform | Every day | 221 | 90% | |
|                           | 1 to 2 days | 14   | 6%        |            |
|                           | 3 to 5 days | 5    | 2%        |            |
|                           | 7 days | 2       | 1%        |            |
|                           | Above 7 days | 5    | 2%        |            |
| Usage length each time of social media platform | Below 30 min | 40  | 16% | |
|                           | 30 min to 1 h | 62  | 25%       |            |
|                           | 1 to 3 h | 69    | 28%       |            |
|                           | 3 to 6 h | 44    | 18%       |            |
|                           | Above 6 h | 32   | 13%       |            |

4. Empirical Data Assessment

4.1. Scale Validation

We adopted IBM AMOS 24 to estimate the impacts of the variables and verify the suitability of the empirical model. We apply structural equation modeling (SEM) for data analysis, including two phases: measurement model analysis (confirmatory factor analysis, CFA) and structural model analysis. CFA was applied to test the compatibility of the study with regard to c reliability and validity analyses.
Then, we used structural model analysis to test the path influences among the latent variables. The results of the structural model analysis could provide the t-value of the normalized factor loadings and the coefficients of the hypothesized paths.

Three standards to evaluate the convergent validity of CFA. First, the reliability of each index is evaluated by means of standardized factor loadings. Second, as two standards, Cronbach’s \( \alpha \) and Composite Reliability (CR) are used to measure the reliability. Third, extracted average variance (AVE) measures the variance of variables caused by measurement error relative to the variance. As shown in Table 3, Cronbach’s \( \alpha \) and CR of all the latent variables are above 0.70, and AVE for all the constructs are higher than 0.5. The result indicates our empirical data reaches convergent validity.

### Table 3. Reliability and convergent validity.

| Construct          | Indicator | Factor Loading | Cronbach’s \( \alpha \) | AVE   | Composite Reliability |
|--------------------|-----------|----------------|--------------------------|-------|-----------------------|
| Group Norms (GN)   | GN1       | 0.679          | 0.802                    | 0.583 | 0.806                 |
|                    | GN2       | 0.733          |                          |       |                       |
|                    | GN3       | 0.867          |                          |       |                       |
| Perceived Critical Mass (PCM) | PCM1     | 0.551          | 0.697                    | 0.457 | 0.709                 |
|                    | PCM2     | 0.606          |                          |       |                       |
|                    | PCM3     | 0.837          |                          |       |                       |
| Image (IM)         | IM1       | 0.839          | 0.883                    | 0.716 | 0.883                 |
|                    | IM2       | 0.818          |                          |       |                       |
|                    | IM3       | 0.881          |                          |       |                       |
| Social Identity (SI) | SI1     | 0.79           | 0.898                    | 0.75  | 0.899                 |
|                    | SI2     | 0.929          |                          |       |                       |
|                    | SI3     | 0.874          |                          |       |                       |
| Perceived Usefulness (PU) | PU1     | 0.879          | 0.925                    | 0.803 | 0.924                 |
|                    | PU2     | 0.893          |                          |       |                       |
|                    | PU3     | 0.917          |                          |       |                       |
| Confirmation (CONF) | CONF1   | 0.854          | 0.862                    | 0.679 | 0.863                 |
|                    | CONF2   | 0.861          |                          |       |                       |
|                    | CONF3   | 0.754          |                          |       |                       |
| Satisfaction (SAT) | SAT1    | 0.854          | 0.875                    | 0.641 | 0.875                 |
|                    | SAT2    | 0.861          |                          |       |                       |
|                    | SAT3    | 0.754          |                          |       |                       |
|                    | SAT4    | 0.751          |                          |       |                       |
| Continuance Intention (CI) | CI1     | 0.688          | 0.885                    | 0.668 | 0.887                 |
|                    | CI2     | 0.946          |                          |       |                       |
|                    | CI3     | 0.895          |                          |       |                       |
|                    | CI4     | 0.71           |                          |       |                       |

Discriminant validity analysis means that, when the multiple indicators of a trait have a certain degree of convergence, the indicators of the trait should also be negatively correlated with the measure of its opposing trait. In other words, the discriminant validity is mainly to test the degree to which measures of different traits are unrelated. In this study, the correlation coefficient between the traits is tested by the bootstrap method, and the confidence interval is 95%. When the confidence interval of each trait does not contain 1, it means that there is discriminant validity [60]. According to the analysis.
result of this study, the confidence intervals of each trait do not contain the correlation coefficient 1 at a 95% confidence level. This implies that there is good discrimination among the traits (as shown in Table 4).

Table 4. Discriminant validity analysis.

| Relationship | Correlation | Lower Bound | Upper Bound | p-Value |
|--------------|-------------|-------------|-------------|---------|
| GN↔PCM       | 0.673       | 0.513       | 0.827       | 0.001   |
| GN↔IM        | 0.597       | 0.455       | 0.723       | 0.002   |
| GN↔SI        | 0.544       | 0.416       | 0.663       | 0.001   |
| CM↔IM        | 0.434       | 0.279       | 0.570       | 0.003   |
| CM↔SI        | 0.350       | 0.222       | 0.483       | 0.001   |
| IM↔SI        | 0.659       | 0.502       | 0.791       | 0.003   |
| PU↔CONF      | 0.477       | 0.361       | 0.593       | 0.001   |
| PU↔SAT       | 0.513       | 0.394       | 0.617       | 0.002   |
| PU↔CI        | 0.499       | 0.379       | 0.570       | 0.002   |
| CONF↔SAT     | 0.920       | 0.878       | 0.962       | 0.002   |
| CONF↔CI      | 0.407       | 0.297       | 0.522       | 0.001   |
| SAT↔CI       | 0.529       | 0.406       | 0.627       | 0.003   |
| GN↔PU        | 0.569       | 0.441       | 0.684       | 0.001   |
| GN↔CONF      | 0.397       | 0.240       | 0.565       | 0.002   |
| GN↔SAT       | 0.427       | 0.298       | 0.568       | 0.001   |
| GN↔CI        | 0.488       | 0.338       | 0.631       | 0.001   |
| PCM↔PU       | 0.548       | 0.407       | 0.676       | 0.002   |
| PCM↔CONF     | 0.328       | 0.175       | 0.471       | 0.002   |
| PCM↔SAT      | 0.393       | 0.252       | 0.525       | 0.002   |
| PCM↔CI       | 0.697       | 0.567       | 0.809       | 0.001   |
| IM↔PU        | 0.434       | 0.308       | 0.545       | 0.002   |
| IM↔CONF      | 0.382       | 0.229       | 0.508       | 0.002   |
| IM↔SAT       | 0.429       | 0.282       | 0.547       | 0.003   |
| IM↔CI        | 0.292       | 0.165       | 0.400       | 0.002   |
| SI↔PU        | 0.508       | 0.388       | 0.609       | 0.002   |
| SI↔CONF      | 0.508       | 0.355       | 0.635       | 0.002   |
| SI↔SAT       | 0.552       | 0.407       | 0.663       | 0.003   |
| SI↔CI        | 0.355       | 0.247       | 0.474       | 0.001   |

Goodness-of-fit of measurement model was estimated using a variety of fit criteria. The root mean square error of approximation (RMSEA) is 0.066 (lower than 0.08), and the standardized root mean square residual (SRMR) is 0.530 (lower than 0.05). Whereas the goodness-of-fit index (GFI) is 0.868 (slightly lower than 0.90), the additional criteria including the comparative fit index (CFI), the incremental index (IFI), and the normed fit index (NFI) are all higher than 0.90 (CFI = 0.947, IFI = 0.934 and NFI = 0.903). These results indicate that the proposed measurement model in this research fitted well within our empirical data.
4.2. Structural Model Analysis and Hypotheses Testing

After testing the adaptability of the structural model to meet the basic criteria, we applied path analysis to test the hypotheses. In Figure 2 and Table 5, for the influence of group norms, perceived critical mass and image on the social identity, the path coefficient of group norms is 0.19, that of perceived critical mass is 0.02, and that of image is 0.51. This result indicates that the impact of group norms and image on social identity is significant, but that of perceived critical mass is not. For the influence of social identity on perceived usefulness and confirmation, the path coefficients are 0.36 and 0.49, respectively, which are significant. With regard to the impact of perceived usefulness on satisfaction and usage continuance intention, the path coefficients are 0.12 and 0.36, respectively, which are significant. For the effects of confirmation on perceived usefulness and satisfaction, the path coefficients are 0.26 and 0.76, respectively, which are also significant. Finally, the path coefficient of satisfaction on usage continuance intention is 0.34, which is also significantly positive.

![Figure 2](image_url)

Figure 2. Standardized solution and hypotheses testing results of the SEM model.

Table 5. Summary of hypotheses testing.

| Hypotheses  | β and p-Value | Support |
|-------------|---------------|---------|
| H1          | GN→SI 0.19 ** | Yes     |
| H2          | PCM→SI 0.02   | No      |
| H3          | IM→SI 0.51 ***| Yes     |
| H4          | SI→PU 0.36 ***| Yes     |
| H5          | SI→CONF 0.49 ***| Yes     |
| H6          | PU→SAT 0.12 ** | Yes     |
| H7          | PU→CI 0.36 ***| Yes     |
| H8          | CONF→PU 0.26 ***| Yes     |
| H9          | CONF→SAT 0.76 ***| Yes     |
| H10         | CONF→SAT 0.76 ***| Yes     |

Note: ** p-value < 0.01; *** p-value < 0.001

5. Research Findings

This study divides social influence into group norms, perceived critical mass and image, and investigates the social identity of social media users. We also apply social identity theory to further explore usage continuance intention in a social media community. Our empirical analysis verifies our hypotheses, and a detailed discussion of the results is presented as follows.
For Hypothesis 1, our empirical results indicate that there is a significant, positive relationship between group norms and social identity. The group norms reflect the intrinsic values and norms of a social media community, and the social media users build a sense of belonging, which is a social identity. This implies that the social media users pay attention to the values and norms in social media communities by integrating their group norms into their own ideas and further forming identities in relation to these communities. Group norms reflect a sense of real life. The interactions that occur with others in a social media community, such as writing posts, responding to messages, playing games are different types of group activities, enable users to feel a real sense of group life in social media community. The stronger the group norms in a social media community, the more likely a user will form a social identity based on this. The operators of social media communities should thus pay attention to group norms and establish the values, norms or standards to promote the communities.

For Hypothesis 2, our empirical results indicate that there is no significant effect between perceived critical mass and social identity, a little different from the findings in the previous literature. The perceived critical mass represents the behavior of social participants’ collective action when the number of participants in a social activity increases rapidly to a certain threshold. In fact, almost everyone is now a social media community user, and so it is now difficult to increase the number of users quickly. If the number of users increases slowly, the impact of perceived critical mass will not be so significant. In addition, awareness of personal data security is rising so that users do not post personal information or have too many unfamiliar "friends" in their own social media communities. Therefore, the number of users is no longer considered a key point in this context.

For Hypothesis 3, our empirical results indicate that there is a significantly positive linkage between image and social identity. The pressure of the social environment and the participation of friends and family are the main external factors of image, and the internal factors are the user’s own interests, attitudes and psychology. If the position or image of an individual will improve in a group by joining a social media community, the user will spend more time using this service [31]. Social media users will compare the differences in their status before and after using, and, if they believe that joining the social media community has enhanced their social status, then a social identify will be formed in the virtual community, just as in real life.

For Hypothesis 4 and 5, our empirical results indicate that social identity has the significant statistically effect on perceived usefulness and confirmation. The social identity in a social media community will gradually cause users to see the benefits of this community, and will produce confirmation of expectations in the form of perceived usefulness towards social media platforms. The degree of confirmation is the difference between the user’s expectations and actual experience, and a higher the degree of confirmation will develop after joining a social media community for a period of time.

For Hypothesis 6, our empirical results indicate that there is a positive significantly correlation between perceived usefulness and satisfaction. This implies that users will be satisfied when they believe that the social media community is beneficial to them. Therefore, social media community operators should understand what kind of services are suitable for their target market, as this can then improve the satisfaction of users.

For Hypothesis 7, our empirical results indicate that there is the positive impact from perceived usefulness to continuance intention. This implies that social media community operators should provide the necessary services to their target market users, as this will encourage users to see the usefulness of these services and continue to use them. It is thus important to understand the demands of users and to enrich the functionality of websites in order to enhance the usefulness of a social media community.

For Hypothesis 8, our empirical results indicate that the degree of confirmation has a positive and significant impact on perceived usefulness, consistent with Bhattacherjee [38]. Bhattacherjee [38] proposed that ECM should take the extent to which a user’s expectations are confirmed as cognitive beliefs to address the user’s continued usage behavior. Later, scholars attempted to apply this concept
to more fields, and the previous literature confirmed that perceived usefulness is affected by the degree of confirmation [39,44,56]. This also means that a user’s expectations of and real experience in the social media community will affect the perceived usefulness of the community. That is, the functions and services of a social media community have to meet the expectations of users if they are to think it is helpful. This can also improve the perceived usefulness of a social media community.

For Hypothesis 9, our empirical results indicate that there is the positive lineage between the degree of confirmation and satisfaction, consistent with Bhattacharjee [38], Lin, Wu and Tsai [42], Roca, Chiu and Martinez [56], and Thong, Hong and Tam [44]. Bhattacharjee [38] proposed that user beliefs and confirmation affect user satisfaction. This means that a user’s expectations and real experience in the social media community will impact their satisfaction with it. The degree of confirmation generated by the social media community affects the user’s satisfaction with it. If the social media community meets the expectations of its users, it can improve their satisfaction.

For Hypothesis 10, our empirical results indicate that satisfaction has the positive relationship with continuance intention, which is consistent with ECM. In the past, ECM studies have confirmed that satisfaction has a significant impact on usage continuance intention, and users with high satisfaction have a higher intention to continue to use the focal IT [61]. The higher the satisfaction of social media community users, the more positive their usage intention. In addition, a social media community based on interpersonal interactions simulates the intimacy of face-to-face communication, and promotes user interactions with the community through personal identity, links and status. By using content that reflects issues of long-term interest, current affairs or hot topics, the social media community can remain impartial and attractive to users. Social media community operators should aim to meet the users’ real-time interactive communication needs, as this will make users happy to share messages with others. Operators can thus achieve sustainable operations in this manner.

6. Conclusions

In recent years, social media communities based on the interactions among users have quickly linked people around the world. Social media community users have the ability to increase the economic value of such websites [62]. The operators of social media communities should manage and maintain the content and processes that enable users to interact with each other to attract more members. This study explored the usage intentions in relation to social media communities based on the concepts of social influence and social identity. Based on the results of this study, we suggested that social media community operators can provide services, strategies, techniques and designs that highlight the social influence and community characteristics of their websites.

We recommend that social media community operators should consider if their system is more useful than other existing social media sites, and whether the feelings of users meet their original expectations. The feelings of users vary, but will sustainably affect usage satisfaction and usage continuance intention. In addition, social media communities should develop towards the network model, focus on relationship management, expand any small regional networks of heterogeneous members, increase the links between members, and thus stabilize the composition of members and enhance the user base. Such sites should also provide updated personal information, encourage members to interact, establish member files and other functions. Regardless of the type of social media community, the related functions and membership are inevitably diverse and complicated. Eventually, a social media community is likely to have the dual characteristics of information exchange and social mutual assistance.

This study is rigorous on the research procedure, but we still need to mention several research limitations for this article. First, this study is based on a small sample size of social media users in Taiwan, but each country or region has its own cultural differences or preferences. Second, this study applied a cross-sectional measure that adopted a single time point for sample collection. Therefore, our theoretical model could barely explain the factors that are used continually by social media community users at a specific time period and potentially could not observe the behaviors of users over
time. We recommend that further scholars execute the time-series observations of the homogeneous sample to deeply evaluate the transition from initial usage to sustainable social influence and social identity. Third, this study explores the personal and environment-related effects from the view of social influence, but does not discuss the relationship between online service providers and users. Future studies could thus work to verify the different characteristics of users with more different views on the individual characteristics or with business views from service providers. Finally, this study focused on the social media community users’ characteristics and the environment but did not discuss any social media community systems. We suggest that further works could also estimate the influence of the social media community system in the future and thus research a deeply thoroughgoing understanding of the usage continuance intention in a social media community.

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