THE IMPACT OF SOCIAL PSYCHOLOGICAL FACTORS ON THE RELATIONSHIP QUALITY OF FACEBOOK USERS

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Abstract

Armed with the great potential for business value and social networking, social media have generated great interests in academia and practice. Rare studies investigated the impact of social psychological factors on the usage of Facebook and the formation of quality relationship. The objective of this paper is to examine the key social psychological factors to better explain the formation of quality relationship. Our proposed theoretical model combined the theories of social influence, social identity, and social presence to capture the essences of the relationship quality between users and Facebook. We conducted a survey to collect data and empirically test our proposed model. Overall, our findings provide theoretical insights to explain the influence of social psychological factors on the usage of Facebook and quality relationship. These findings also help practitioners to plan marketing strategies in better utilize social network sites.

Keywords: Facebook, Social influence, Social identity, Social presence, Relationship quality.
1 INTRODUCTION

The great popularity of social media has created a new world of collaboration and communication. Social network sites (SNS) collect user profiles where registered members can place information that they want to share with others and further connect other users to create a personal network (Cheung & Lee 2010). The primarily features of social media include blogging, grouping, networking, instant message and etc (Li 2011). Becoming a mainstream of communication, social media not only connect people together but also create a new way of communication. Social media such as Facebook, MySpace, LinkedIn, Twitter, and etc have attracted billions of users to integrate these sites into their daily activities (Cheung & Lee 2010; Boyd & Ellison 2008). Used for casual social interaction and social relationship maintenance, social media have received great attention in IS research (Li 2011).

Enterprises realize the power of social media and have embraced it as a communication channel to sustain customer relationship (Colliander & Dahlen 2011). To build intimate and steady customer relationship, enterprises utilize social media to interact with customer and explore customer demand. The opportunity of social customer relationship management (SCRM) has been valued by academia and practitioners. Prior studies examined user acceptance, continuance use of social media (Bagozzi & Lee 2002; Cheung & Lee 2010; Hsu & Lin 2008; Liang et al. 2011-12). However, few researches have been done in examining the impact of social influence, social identity, and social presence on the relationship quality between SNS users and enterprise. Since social network site is a platform that integrates individuals and community, the behaviours of SNS users are not only influenced by their traits, intrinsic, and extrinsic motivations but also affected by other users in the social community. This leads us to build our theoretical framework from the perspectives of social influence, social impact and social presence.

This paper aims to investigate the impact of social psychological factors (such as social influence, social identity, and social presence) on the relationship quality between users and Facebook. Specifically, this paper intends to solve the following research question.

1. Whether social influence, social identity, and social presence affect relationship quality between users and Facebook?
2. Whether social identity and social presence influence trust and satisfaction of Facebook users?
3. What are the antecedent factors of commitment of Facebook users?

This paper is organized as follows. Section 2 reviews the studies related to social media, social customer relationship and introduce our theoretical lens to examine the quality relationship between users and social media. Section 3 introduces research method and research design. Section 4 discusses our data analysis and findings. Section 5 concludes our theoretical and practical implications, contribution and limitation.

2 LITERATURE REVIEW

This section reviews the studies in social media, relationship quality, social identity, social influence, and social presence. These studies serve as the theoretical base of our study.

2.1 Social Media

Social media is a group of Internet-based applications that allow the creation and exchange of user generated content (Kaplan & Haenlein 2010). The increasing popularity and continuing innovations of social media have transformed the way of interacting, working, and creating value among people (Urquhart & Vaast 2012). Utilized right social media policies and training programs, companies stand to gain an enormous amount from their sales of online communications (Colliander & Dahlen 2011). Many companies began sponsoring social media in exchange for endorsements of their products
(Arango 2009). Social Network Sites (SNS) are one of the platforms of social media that provide online spaces where individuals can create a profile and connect that profiles to others to create a personal network (Cheung & Lee 2010). Social media encourages users to share information with their friends. Users may consult their social community to obtain advices. SNS provide platforms for users to handily share information in their social cycle.

### 2.2 Relationship Quality

Relationship quality refers to as relationship closeness or relationship strength, which plays a key role in affecting customer loyalty (Hennig-Thurau et al. 2002). Relationship quality is viewed as a higher-order construct composed of at least two dimensions: trust and satisfaction (Croby et al. 1990). Some studies identified three major components in relationship quality: trust, commitment, and satisfaction (Garbarino & Johnson 1999). Commitment refers to a psychological state that occurs when an ongoing relationship with a service provider is so important that maximum efforts are guaranteed in order to maintain it (Gustafsson et al. 2005). Commitment is a critical component for successful long-term relationships (Gundlach et al. 1995). Trust is defined as the belief that a service provider is honest and benevolent (Gustafsson et al. 2005). Satisfaction is defined as an overall evaluation based on the customer’s purchase and consumption experience with a service provider over time (Luo & Bhattacharya 2006). These three components represent a user’s overall attitude toward SNS provider (Liang et al. 2011-12).

A high level of overall quality can lead directly to commitment of the customer (Morgan & Hunt 1994). Trust is believed to promote commitment both in interaction efficiency and fulfilment of social needs of the customer (Thurau & Klee 1997). In addition, satisfaction is regarded as the essential ingredient to building and retaining a loyal base of long-term customers (Bhattacherjee 2001). Trust is considered as a foundation for satisfactory interactions of the consumption experience (Smith 1998). Satisfaction is fundamental to the development of mutual trust between users and SNS (Wu et al. 2010). These arguments lead to our first, second, and third hypothesis.

- **H1:** Users’ trust toward Facebook has positive impact on their commitment toward Facebook.
- **H2:** Users’ satisfaction toward Facebook has positive impact on their commitment toward Facebook.
- **H3:** Users’ satisfaction toward Facebook has positive impact on their trust toward Facebook.

### 2.3 Social Identity

Social identity refers to a feeling of affective commitment to the group (Ellemers et al. 1999). That is, social identity captures the primary perspective of an individual’s identification with the group in the sense that the individual view himself/herself belongs to the community (Dholakia et al. 2004). These categorization processes suggest that an individual places more trust in people similar to themselves (Gefen et al. 2003). Marketing researchers also demonstrate that companies can improve relationship quality by strengthening the ties between their companies and the identities customers find important (Arnett et al. 2003). Social identity enhances loyalty and citizenship behaviours in group setting (e.g., Bergami & Bagozzi 2000; Meyer et al. 2002), and is useful in explaining people’s willingness to sustain committed relationships with companies (Bhattacharya & Sen 2003). In the SNS, social identity arises through interaction with other users in the personal network as well as in online social groups (Cheung & Lee 2010). Social identity is enhanced by making favourable attributions to ingroups and this self-enhancement motive has been found to promote trust, greater satisfaction in, and relationships (Smith 1998). Thus we, argue that:

- **H4:** Users’ social identity toward Facebook has positive impact on their trust toward Facebook.
- **H5:** Users’ social identity toward Facebook has positive impact on their satisfaction toward Facebook.

### 2.4 Social Presence
Social presence is defined as the acoustic, visual, and physical contact that emerges between two communication partners (Kaplan & Haenlein 2010). It is also termed telepresence in Hoffman and Novak’s (1996) model of network navigation. Social presence reveals the degree to which a medium delivers the perceived presence of communicating participants in the two-way exchange (Fortin & Dholakia 2005). Social presence theory describes that social presence is the salience of the other in a mediated communication and the consequent salience of their interpersonal relationship (Short et al. 1976, p.65). Social presence is the extent to which a medium allows users to experience others as psychologically presence (Hassanein & Head 2006). A medium is considered as being warm, personal, sensitive, and sociable when it provides more interaction cues (Lee et al. 2009). When a medium provides a higher level of social presence, people with whom one is communicating become more connected because the higher level of social presence speeds up a person’s communication task, enhancing communication performance (Lowry et al. 2006).

Social platforms provide a channel to maintain customer relationships and build brand loyalty throughout (Giamanco & Gregoire 2012). Instead of the traditional campaign thinking, the enterprises need to focus more on relationship building when they use social media (Colliander & Dahlen 2011). When users experience high social presence, this meaningful communication enhances trust (Luhmann 1979; Gefen & Straub 2003). Social presence is proved to be positively related to trust (Weisberg et al. 2011). We argue that higher social presence of SNS lead to higher trust in that medium. In addition, when a medium has high social presence, it fulfills the customer’s social needs (Thurau & Klee 1997). Thus, we argue that social presence of SNS is proved to positively relate to customers’ satisfaction.

**H6**: When users perceive high social presence of Facebook, they would have higher trust with Facebook.

**H7**: When users perceive high social presence of Facebook, they would be more satisfied with Facebook.

### 2.5 Social Influence

Social influence theory (Fromkin 1970) argues that an individual builds his or her own opinion on the basis of the group's consensus (Sridhar & Srinivasan 2012). Social influence is defined that members of a reference group affect one another’s behavior and experience pressure to perform specific behaviors (Kulviwat et al. 2009). Social influence emerges from the transmission of various sources of information among individuals who are connected to one another. This transmission happens through various interactions that people have with others in their social circle (Nitzan & Libai 2011). Social influence functions through one or more of three distinct processes: internalization, identification, and compliance (Kelman 1958). There are two sources of social influence: normative and information social influence (Deutsch & Gerard 1955). Normative social influence is defined as the influence to comply with the positive expectations of others. Informational social influence is defined as an influence to adopt information acquired from another as evidence about reality.

Social influence will direct an individual to believe that he or she is qualified member of the community. Once an individual understands and accepts group norms, he or she will build strong identification with the community. Social influence has been proved to have positive impact on social identity in previous studies (Dholakia et al. 2004; Zhou 2011). In addition, prior study also demonstrated that the size, immediacy, and strength of social influence impacts the social presence on an individual (Latané 1981; Argo et al. 2005). These arguments lead to our H8 and H9.

**H8**: The higher extent of social influence of a Facebook user will lead to stronger social identity.

**H9**: Users’ social influence toward Facebook has positive impact on their presence toward Facebook.
3 RESEARCH METHOD

We conducted a survey to examine the influence of social psychological factors on the relationship quality between users and social media. The instrumentation, sampling method, and scale validation of the survey study are described as follows.

3.1 Instrument development

Our survey instrument contained a two-part questionnaire. The first part used 7-point Likert scales to subjectively measure respondents’ perceptions of social influence, social identity, social presence, and the relationship quality with the social media they used. The measure of social influence comprised two sub-constructs: normative social influence and informational social influence. These two sub-constructs were modeled as formative indicators of social influence. Moreover, the relationship quality was measured by three components: trust, satisfaction, and commitment. All subjective measures were developed based on the valid items in prior theories and studies. These items were categorized into first-order constructs in theory. The second part used nominal scales to collect basic information about the respondents. Items measuring respondent characteristics included age, gender, education, occupation, hours per day using Facebook, and experience with Facebook.

All first-order constructs were depicted as reflective latent constructs accounting for their indicators. The construct items of normative and informational social influences were adapted from Mangleburg et al. (2004) and Bearden et al. (1989). The construct items of social identity were developed from Zhou (2011), and items concerning social presence were developed from Animesh et al. (2011) and Qiu and Benbasat (2005). Besides, constructs concerning trust, satisfaction, and commitment were adapted from the studies of Liang et al. (2011-12), Garbarino and Jonsson (1999), Zhou (2013), Bhattacherjee (2001), and Walsh et al. (2010). Pretests of the questionnaire were performed in two steps to eliminate possible weaknesses and flaws in the questionnaire design. The first pretest was performed with 40 respondents to refine the questionnaire items. We conducted a second pretest with an expert panel, which confirmed the final version and revised the wordings and expressions.

3.2 Sample Organizations and Respondents

The research subjects of this study are Facebook users. We posted an invitation letter, which comprised a hyperlink to the online survey, on the Facebook and spread it with a snowball method.
through users’ social network. Besides, we also posted the invitation letter on Taiwan’s major digital forums and discussion boards and invited users of Facebook to fill in the questionnaire. There were 253 valid samples after excluding invalid ones. Table 1 summarizes the respondents’ demographics. To ensure the survey process had not caused selection bias among respondents, the respondent samples were divided into early (75%) and late groups (25%) according to the time-log in the online survey. These two groups were further compared using the Kolmogorov-Smirnov test in terms of their demographic characteristics. The results demonstrated the characteristics of respondents were all the same.

Table 1. Demographics of participants.

<table>
<thead>
<tr>
<th>Demographics of Participants (N=253)</th>
<th>Frequency</th>
<th>Percent</th>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;19</td>
<td>7</td>
<td>2.77%</td>
<td>Male</td>
<td>101</td>
<td>39.92%</td>
</tr>
<tr>
<td>19-22</td>
<td>60</td>
<td>23.72%</td>
<td>Female</td>
<td>152</td>
<td>60.08%</td>
</tr>
<tr>
<td>23-25</td>
<td>117</td>
<td>46.25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-30</td>
<td>34</td>
<td>13.44%</td>
<td>Junior High school</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td>31-40</td>
<td>30</td>
<td>11.86%</td>
<td>High school</td>
<td>16</td>
<td>6.32%</td>
</tr>
<tr>
<td>&gt;40</td>
<td>5</td>
<td>1.98%</td>
<td>Junior College</td>
<td>12</td>
<td>4.74%</td>
</tr>
<tr>
<td>Experience with Facebook</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;=1 month</td>
<td>2</td>
<td>0.79%</td>
<td>College</td>
<td>135</td>
<td>53.36%</td>
</tr>
<tr>
<td>Between 1 to 3 months</td>
<td>2</td>
<td>0.79%</td>
<td>Graduate college</td>
<td>84</td>
<td>33.2%</td>
</tr>
<tr>
<td>Between 3 to 6 months</td>
<td>0</td>
<td>0%</td>
<td>Ph. D.</td>
<td>5</td>
<td>1.98%</td>
</tr>
<tr>
<td>Between 6 to 12 months</td>
<td>2</td>
<td>0.79%</td>
<td>Student</td>
<td>116</td>
<td>45.85%</td>
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<tr>
<td>Between 1 to 2 years</td>
<td>31</td>
<td>12.25%</td>
<td>Information</td>
<td>17</td>
<td>6.72%</td>
</tr>
<tr>
<td>Between 2 to 3 years</td>
<td>56</td>
<td>22.13%</td>
<td>Business</td>
<td>9</td>
<td>3.56%</td>
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<tr>
<td>&gt;=3 years</td>
<td>160</td>
<td>63.24%</td>
<td>Military and Government</td>
<td>17</td>
<td>6.72%</td>
</tr>
<tr>
<td>Hours/day using Facebook</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;=1 hour</td>
<td>37</td>
<td>14.62%</td>
<td>Services</td>
<td>35</td>
<td>13.83%</td>
</tr>
<tr>
<td>Between 1 to 3 hours</td>
<td>104</td>
<td>41.11%</td>
<td>Manufacturing</td>
<td>18</td>
<td>7.11%</td>
</tr>
<tr>
<td>Between 3 to 5 hours</td>
<td>65</td>
<td>25.69%</td>
<td>Finance and Insurance</td>
<td>8</td>
<td>3.16%</td>
</tr>
<tr>
<td>Between 5 to 7 hours</td>
<td>27</td>
<td>10.67%</td>
<td>Other</td>
<td>33</td>
<td>13.41%</td>
</tr>
<tr>
<td>Between 7 to 9 hours</td>
<td>7</td>
<td>2.77%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>&gt;9 hours</td>
<td>13</td>
<td>5.14%</td>
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3.3 Scale Validation

We used SmartPLS 2.0 software to perform partial least square (PLS) method for assessing the scales validity and testing the hypotheses. The measurement model was built to assess the convergent validity and the discriminant validity of scale items whereas the structural model was built to assess the path coefficients and variances explained. We used the bootstrapping technique with 200 subsamples to estimate the parameters of research model including means, standard errors, and the t-value of item loadings, weights, and path coefficients.

We assessed the convergent validity of the scale items based on three criteria: (1) each item loading should be statistically significant and larger than 0.70; (2) Cronbach’s alpha coefficient and composite reliability for each latent construct should be larger than 0.70; and (3) the average variance extracted (AVE) for each latent construct should exceed 0.50. Besides, constructs are claimed to have good discriminant validity if the square root of a construct’s AVE exceed the correlations between this construct and other latent constructs (Fornell and Larcker 1981).

As shown in Table 2, standardized item loadings ranged from 0.70 to 0.97. All item loadings exceeded the minimum loading criterion of 0.70 and were significant at p < 0.001 level. Cronbach’s Alpha ranged from 0.82 to 0.95 and composite reliability ranged from 0.89 to 0.97. Average variance
extracted (AVE) ranged from 0.62 to 0.91. Cronbach’s Alpha and composite reliabilities of each factor exceeded the minimum requirement of 0.70. All AVE values were greater than the recognized 0.50 cut-off. These results showed that all first-order constructs have a high degree of reliability and convergent validities. Besides, each construct’s square root of AVE exceeded its correlations with all other constructs. Thus, all constructs met the criterion for discriminant validity.

<table>
<thead>
<tr>
<th>Construct Correlations and Discriminant Validity</th>
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<tbody>
<tr>
<td>Construct</td>
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<tr>
<td>NSI</td>
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<td>ISI</td>
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<td>SI</td>
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<td>SP</td>
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<tr>
<td>STS</td>
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<tr>
<td>TST</td>
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<tr>
<td>CMT</td>
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</table>

Table 2. Construct correlations and discriminant validity.

4 DISCUSSIONS

We built the structural model to estimate the path coefficients and variances explained in our research model. The following procedures were conducted to evaluate the structural model. First, the standardized path coefficient for each cause-effect relationship in the structure model was examined. The relative importance of each antecedent construct in affecting the dependent latent variables was compared in terms of their path coefficient (Chin 1998). Second, the $R^2$ coefficients of each endogenous construct were further calculated to assess the predictive power of the structural model. The $R^2$ coefficients obtained using PLS analyses are similar to those obtained using multiple regression analyses (Barclay et al. 1995). Finally, the significance of path coefficients was estimated using the bootstrapping resampling technique with 500 subsamples.

The results of hypotheses testing for the research model are shown in Figure 2. For the relationship quality constructs, trust and satisfaction have significant path coefficient with value of 0.29 and 0.48 to commitment respectively. They jointly explain 48% of the variance in commitment. This confirms that user satisfaction is a dominated antecedent of user commitment. Thus, hypotheses 1 and 2 are supported. Satisfaction in company with social identity and social presence is a domain antecedent of trust. These three constructs obtain significant path coefficients with values of 0.34, 0.23, and 0.22 and jointly explain about 49% of the variance in trust. Thus, hypotheses 3, 4, and 6 are supported. This confirms that user satisfaction is a major source of user trust while social identity and social presence are two auxiliary constructs. However, social identity and social presence are two significant antecedents of user satisfaction. They jointly explain about 47% of the variance in satisfaction and obtain significant path coefficients with values of 0.40, 0.34 respectively. Thus, hypotheses 5, and 7 are supported.

Social identity and social presence are confirmed to be two major motivators of the relationship quality between users and Facebook. Higher social identity and social presence will directly promote user satisfaction and trust and finally lead to user commitment. Finally, social influence has significant effects on social identity and social presence respectively. Social influence solely explains 57% of variance in social identity and obtains significant path coefficient with value of 0.27. Social influence also explains 24% of variance in social presence and obtains significant path coefficient with value of 0.49. Thus, hypotheses 8 and 9 are supported. Social influence is composed of normative social influence and informational social influence that obtain significant item weights with value of 0.58.
and 0.52 respectively. This result means that normative social influence and informational social influence dominate users’ perception of social identity and social presence in Facebook.

Results of Hypotheses Testing

Figure 2. Results of hypotheses testing.

5 CONCLUSION

Social media have generated great interests because of their potential for promoting social interaction, maintaining social relationships, and satisfying user needs of social networking. Although social media have attracted great attention, prior studies usually placed emphasis on exploring individual’s psychological factors and its impacts on user behavior. Rare studies have aimed at the impact of social psychological factors on the usage of social media and the formation of social relationships. These knowledge gaps motivated us to propose a theoretical model that identifies the key social psychological factors to better explain the formation of social relationships. This model combined the theories of social influence, social identity, and social presence to capture the essences of social media from the perspectives of social, individual, and technology, and related them to the promotion of relationship quality between users and community organizations.

We conducted a survey to collect data and empirically test our proposed model. Overall, we found that social psychological factors are critical to explain the formation of relationship quality between users and communities. Our findings can be concluded as follows. First, social influence, a linear combination of normative and informational social influences, serves as an antecedent of users' perception of social identity and social presence. Higher social influence will lead to higher social identity and social presence. Second, the higher the users' perception of social identity and social presence, the higher the users will satisfy with the communities of social media. Third, the higher the users' perception of social identity, social presence, and satisfaction, the higher the users will trust in the social media. Last, higher satisfaction and trust perceptions by users will lead to higher user commitment to the relationship with the communities of social media.

The theoretical and practical contributions of this research are as follows. First, based on the social interaction, individual mobility, and technological natural of social media, we developed a new theoretical framework that identifies various social psychology factors to explain the formation of relationship quality between users and communities of social media. To our best knowledge, this is the first empirical work that integrates various social psychology theories, i.e., social influence, social identity, social presence, and social exchange, to study the formation of relationship quality in the context of social media. Second, this is also one of the first studies to examine satisfaction, trust, and commitment with regard to the relationship quality of social media. Prior studies have primarily
focused on the acceptance, adoption, and continuous use issues and have not adequately examined the impacts of social media involvement on organizations. Applying social media to maintain organization’s social customer relationship are important for marketers and practitioners to explore business values of social media. This study provides a more comprehensive evaluation of social relationship in the context of social commerce. Third, our findings provide practical insights for social media developers so that they can improve their platform by providing better functionalities in line with users’ social psychological needs. Fourth, our findings also provide practical insights and marketing strategies to business managers for improving the quality of social customer relationship.

The limitations of this paper followed by future research directions are addressed in the following. First, our finding may not be able to explain non-social media users’ behavior because we only examine the current users of social media. Future research can further investigate the difference in the effects of social psychological factor on relationship quality between users and non-users. Second, we only examine users in Taiwan. Thus, the results may better explain social media usage behaviors in Asia countries context. The application of social media in managing organization’s social relationship may have tailored approaches that fit in different countries and cultures. Future research can compare the social media perceptions of different countries and cultures.

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References


Fornell, C., and Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of Marketing Research, 18 (3), 382-388.


