

DEVELOPING USER LOYALTY FOR SOCIAL NETWORKING SITES: A RELATIONAL PERSPECTIVE

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ABSTRACT

Existing literature on the continued use and loyalty for social networking sites (SNSs) has mostly employed traditional information systems (IS) models (e.g., expectation–confirmation model of IS continuance) and has largely focused on individual difference factors (e.g., motivations and beliefs). Consequently, our understanding of the factors influencing users' continuance intention and loyalty remains incomplete, and extant studies are limited in offering specific and directly actionable guidance for SNS operators. Given the limitations present in existing literature, this study adopts a user-centric relational perspective to propose and empirically examine a theoretical model comprising user-to-user social influence, operator-to-user relational bonds, and satisfaction as antecedents of SNS user loyalty. Results based on survey data collected from 289 SNS users in China suggest that the relational antecedents either directly or indirectly influence SNS user loyalty to different extents. Theoretical and managerial implications along with suggestions for future research are then presented.

Keywords: User loyalty; Social networking site; Relational bonds; Satisfaction; Social influence

1. Introduction

We have witnessed the mushrooming of hundreds of social networking sites (SNSs) worldwide in recent years. Billions of people participate in these relationship-development-oriented Internet platforms every day. The total number of SNS users globally was 1.79 billion in 2014, and the number will increase to 2.44 billion in 2018 [Statista 2015]. Lured by the increasing popularity and the considerable business potential, SNS operators are eager to attract and retain users in the hopes of maintaining their foothold in such an intensely competitive market.

Users' continued use and loyalty is apparently critical to the long-term success of SNS operators. Many researchers (e.g., [Al-Debei et al. 2013; Kang et al. 2009; Maier et al. 2012]) have examined this critical issue using various theoretical lenses, such as theory of planned behavior (TPB), expectation–confirmation model of IS continuance (ECM), and flow theory. Multiple factors such as perceived usefulness [Kang et al. 2009], sense of belonging [Lin et al. 2014], SNS-induced stress [Maier et al. 2012], and arousal [Wang et al. 2015] have been found to significantly affect SNS users' continuance intention and loyalty.

The burgeoning literature on SNSs has enriched our understanding of the antecedents driving SNS continuance and loyalty. However, our knowledge of this phenomenon remains incomplete, and research gaps remain to be

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addressed. Specifically, extant studies have mostly employed traditional information systems (IS) theories such as ECM as a frame of reference (e.g., [Cao et al. 2013; Kang et al. 2009; Maier et al. 2012; Yin et al. 2013]). However, IS scholars have criticized this research paradigm for constraining our viewpoints to an extremely narrow range and thus confining our knowledge of the antecedent factors of individual adoption and continued use of IS in general [Bagozzi 1992; Benbasat & Barki 2007] and SNSs in particular [Cao et al. 2015]. In addition, the unique social network nature of SNSs has rendered traditional models inadequate to fully explain the various phenomena occurring in the SNS context [Vannoy & Palvia 2010]. In these regards, calls have been made to go beyond the traditional models and draw theories from different disciplines [Kane et al. 2014; Vannoy & Palvia 2010]. Furthermore, our current understanding on SNS continuance and loyalty is largely focused on the user-side factors such as users' motivations and beliefs. By contrast, little is known about the operator-side factors that may be able to offer more actionable recommendations to SNS practitioners.

This study aims to address the limitations and gaps present in extant literature by taking a user-centric relational perspective to develop a research model that integrates operator-side and user-side factors to explain SNS user loyalty. Our choice of adopting a relational perspective is inspired by the relationship development nature of SNSs. The core of SNS service is serving the relationship development of users; thus, the influence derived from user-to-user relationships inevitably affects users' decision to continue their relationship with a particular SNS. Therefore, user-to-user social influence is an important factor that SNS operators should consider in developing user loyalty. A question of interest thus arises: aside from the relational influence from users per se, what can operators do to exert their relational influence on users' continuance decision?

To answer this question, we build upon relationship marketing theory (RMT) to investigate the effects of a set of operator-side factors (i.e., relational bonds) on the cultivation of user loyalty. The study of relational bonds is important because they represent mechanisms by which SNS operators can build and maintain relationships with users. In accordance with the rationale of the stimulus–organism–response (S–O–R) model, this study proposes that relational bonds indirectly affect user loyalty through the influence on satisfaction. Furthermore, this study integrates a user-side factor, i.e., social influence, into the research model because of the importance of relational influence from users. Based on the literature on social influence, this study proposes that user-to-user social influence has a direct and positive effect on user loyalty. To test the proposed hypotheses, we collected survey data from 289 SNS users in China, and the results support our hypotheses.

The study has several theoretical contributions. First, it contributes to the SNS continuance and loyalty literature by adopting a user-centric relational perspective and applying the RMT and S–O–R model to develop a theoretical model of SNS user loyalty. Second, this study adds to the literature on RMT by extending the theory to the SNS context and empirically examining the relationship network among relational bonds, satisfaction, and loyalty based on the S–O–R model. Third, it clarifies the differential effects of operator-side and user-side relational influences on user loyalty by integrating operator-to-user relational bonds and user-to-user social influence into one model. Finally, this study highlights the importance of prior experience with similar services in the development of user loyalty to the incumbent choice by conducting comparative analyses of stayers, satisfied and dissatisfied switchers.

The rest of this paper is organized as follows. The next section reviews extant studies on the continued use and loyalty of SNSs, summarizes RMT and the related literature, and describes the S–O–R model. Subsequently, the third section develops the research model and hypotheses. The research method is described in the fourth section, and the fifth section reports the data analysis results. Next, the research findings and implications for theory and practice as well as the limitations and future research directions are discussed in the sixth section. Finally, Section 7 concludes the paper.

2. Literature Review and Theoretical Background

2.1. Review of Literature on the Continued Use and Loyalty of SNSs

Continued use and loyalty greatly affects the viability of SNSs; thus, there is a growing number of studies that investigate this critical issue from varied theoretical perspectives. For example, Al-Debei et al. [2013] extended TPB by adding the perceived value construct and surveyed nearly 400 Jordanian students who are using Facebook. They established that the TPB constructs, namely, attitude, subjective norm, and perceived behavioral control, and perceived value significantly affect users' continuance intention, which combines with perceived value to jointly affect users' continuance behavior [Al-Debei et al. 2013]. Lin et al. [2014] used the self-regulation framework to investigate the antecedents and the effects of satisfaction and sense of belonging on users' continuance intention. They determined that users' perceived social connectedness and pleasure by using SNSs contribute to users' satisfaction and sense of belonging, which consequently drive users' continuance intention [Lin et al. 2014].

Although extant studies (see Table 1) have offered rich insights into the factors that affect SNS users' continued use and loyalty, such studies are limited in several aspects. First, a substantial research stream has been based on the

traditional IS adoption and continuance models (e.g., technology acceptance model (TAM) and ECM) or their extensions. For instance, Kang et al. [2009], Chang & Zhu [2012], Maier et al. [2012], Cao et al. [2013], and Yin et al. [2013] all employed ECM as the theoretical lens to explain users' continuance intention. However, this research paradigm has been criticized for limiting the research horizon and leading to an incomplete understanding of individual use behaviors of IS [Bagozzi 1992; Benbasat & Barki 2007]. Furthermore, traditional IS adoption and continuance models are inadequate to fully explain individual use behaviors in the SNS context because of SNSs' inherent relationship-building characteristics and their embeddedness in individual lives [Vannoy & Palvia 2010]. Therefore, IS researchers should adopt a cross-disciplinary and multifaceted perspective to develop rich insights and a holistic understanding of SNS user behaviors [Kane et al. 2014; Vannoy & Palvia 2010].

Second, although several studies have employed theories from other disciplines (e.g., flow theory, social capital theory, and media system dependency theory), these theories share a notable common feature with the IS adoption and continuance models. Such theories are merely concerned with the user-side factors (e.g., motivations, beliefs, and feelings). Individual difference variables are not directly manipulable because they are endogenous and inward in nature. Therefore, existing studies are limited in yielding specific and directly actionable practical insights for SNS operators. In this regard, applying theories that focus on operator-side factors that operators can directly act upon can be rewarding both theoretically and practically. This study builds upon RMT to investigate the effects of relational bonds, which reflect operators' relationship marketing efforts, on the cultivation of user loyalty. Considering the social network nature of SNSs, this study also integrates social influence, a construct originating from the social psychology literature that is widely recognized as an important antecedent to individual adoption and use in the IS literature [Venkatesh & Morris 2000; Venkatesh et al. 2003], to capture the influence of user-side factors on the formation of user loyalty.

2.2. RMT and Relational Bonds

This study adapted the relational bonds constructs from RMT to identify the antecedents of SNS user loyalty on the part of operators. RMT, which was first introduced in the services marketing literature by Berry [1983], posits that the marketing activities of firms should focus on developing and retaining long-term and profitable customer relationships instead of attracting short-term transactional customers. Since its inception, RMT has received considerable attention from both academics and practitioners, and this theory has been regarded as a new paradigm for the marketing theory and practice [Maggon & Chaudhry 2015; Palmatier et al. 2006]. Different from traditional marketing theories that focus on transactional exchange, RMT emphasizes the establishment and maintenance of close and enduring relationships with customers [Berry 2002; Nevin 1995]. RMT is essentially centered on customer retention rather than on customer attraction. According to the theory, firms should direct more marketing resources to existing customers than to potential ones, as servicing and retaining existing customers is relatively easier and more cost-efficient than acquiring new ones [Berry 1995; Berry 2002]. Firms can reduce customer defection, cultivate loyalty, expand the market share, and gain sustained competitive advantage by developing strong relationships with existing customers; these relationships are called *relational bonds* in theory [Berry 1995; Berry & Parasuraman 1991; Palmatier et al. 2006].

According to RMT, firms can develop three types of relational bonds with customers (i.e., financial, social, and structural), and these bonds form a hierarchy according to their potential for sustained competitive advantage [Berry 1995; Berry & Parasuraman 1991; Lin et al. 2003]. At the lowest level of the hierarchy, *financial bonds* refer to bonds that are tied by economic incentives such as discounts and special offers. Typical examples of financial bonds include the frequent flyer programs of airlines and the check-in for redeemable points of e-retailers. The potential of financial bonds for sustained competitive advantage is considered the lowest because these bonds are relatively easier to be imitated by competitors than the other types of relational bonds [Berry 1995]. *Social bonds* are at the second level of the bonds hierarchy, and they refer to the social dimension of firm–customer relationship. The development of social bonds typically involves regularly communicating and maintaining contact with customers, referring to customers by name during interaction, and expressing empathy, responsiveness, and support, among others [Berry 1995; Liang & Chen 2009].

Table 1: Literature on the Continued Use and Loyalty of SNSs

Paper	Theories Applied	Major Findings
Kang et al. [2009]	ECM of IS continuance	Perceived usefulness, perceived enjoyment, satisfaction, self-image congruity, regret (-), and past use → continuance intention Perceived usefulness and perceived enjoyment → satisfaction
Wu [2009]	N/A	Satisfaction → repatronage intention Utilitarian value and hedonic value → satisfaction
Chang & Zhu [2011]	TPB	Attitude, subjective norm, and perceived behavioral control → post-adoption intention Information, connecting with old friends, meeting new people, and conformity → attitude
Lin & Lu [2011]	Motivation theory, network externality	Perceived usefulness, perceived enjoyment, and number of peers → continuance intention Number of peers, number of members, and perceived complementarity → perceived usefulness Number of peers and perceived complementarity → perceived enjoyment
Chang & Zhu [2012]	ECM of IS continuance, social capital theory, and flow theory	Perceived bridging social capital and satisfaction → continuance intention Perceived bridging social capital, confirmation, and flow experience → satisfaction
Maier et al. [2012]	ECM of IS continuance, the model of adoption of technology in households	Utilitarian outcomes, social outcomes, satisfaction, and SNS-induced stress (-) → continuance intention Utilitarian outcomes, hedonic outcomes, perceived difficulty of use (-), and SNS-induced stress (-) → satisfaction
Shin & Hall [2012]	Social exchange theory	Satisfaction and commitment → loyalty Trust and perceived benefit → satisfaction and commitment
Al-Debei et al. [2013]	TPB	Continuance intention and perceived value → continuance behavior Attitude, subjective norm, perceived behavioral control, and perceived value → continuance intention
Cao et al. [2013]	ECM of IS continuance, Maslow's hierarchy of needs	Satisfaction and fulfillment of self-actualization needs → continuance intention Confirmation, fulfillment of social needs, and fulfillment of self-actualization needs → satisfaction
Jin [2013]	TAM, technology readiness	Perceived usefulness, perceived ease of use, and perceived playfulness → continuance intention Positive technology readiness → perceived usefulness, perceived ease of use, and perceived playfulness Negative technology readiness (-) → perceived usefulness and perceived ease of use
Ku et al. [2013]	Uses and gratifications theory	Gratifications, perceived critical mass, subjective norm, and privacy concerns (-) → continuance intention
Yin et al. [2013]	ECM of IS continuance	Perceived usefulness, satisfaction, and perceived structural embeddedness → continuance intention Confirmation and perceived enjoyment → satisfaction
Lin et al. [2014]	Self-regulation framework	Satisfaction and sense of belonging → continuance intention System quality, connectedness, and pleasure → satisfaction

		Satisfaction, awareness, connectedness, and pleasure → sense of belonging
Chiu & Huang [2015]	Uses and gratifications theory, media system dependency theory	Gratification → continuance intention Parasocial interaction → gratification Understanding dependency, orientation dependency, and play dependency → Parasocial interaction
Wang et al. [2015]	Social cognitive theory, the balanced thinking–feelings model	Perceived usefulness, perceived ease of use, and arousal → continuance intention General computer self-efficacy → perceived usefulness SNS-specific computer self-efficacy → perceived usefulness and perceived ease of use

Note: In reporting the major findings of prior studies, the symbol “→” denotes the existence of statistically significant relationships among the constructs before and after the symbol. The relationships are positive by default, except when a construct is followed by the symbol “(-)”, which denotes a negative relationship between the construct and those after the symbol “→.”

Structural bonds are created when firms enhance customer relationships by offering valuable services that are not readily available and are difficult or expensive to obtain from other sources [Berry 1995; Chen & Chiu 2009]. The services offered do not depend on the relationship-building skills of individual service providers, as such services are typically technology-based and designed into the firms' service delivery system [Berry 1995]. Structural bonds are primarily intended to provide structural solutions to important customer problems, and they can help customers become increasingly efficient and productive [Berry 1995; Harrison-Walker & Neeley 2004; Zeithaml et al. 2001]. In particular, firms can establish structural bonds with customers by providing customized services (i.e., services catering to customers' particular interests and preferences) or integrated services (i.e., services offered in collaboration with business partners and are usually scarce to customers) [Chiu et al. 2005; Zeithaml et al. 2001]. Structural bonds have the greatest potential to generate sustained competitive advantage for firms because of a high level of inimitability, and thus these bonds are at the top of the bonds hierarchy [Berry 1995; Leung et al. 2005].

RMT has been proposed and developed in a traditional marketplace context. This theory has been applied in diverse industries to investigate the effects of relational bonds on various outcomes, including trust, commitment, relationship satisfaction, relationship quality, and satisfaction and loyalty towards firms, among others (e.g., [Chen & Chiu 2009; Hsieh et al. 2005; Liang & Chen 2009; Lin & Lu 2010; Lin et al. 2003; Nath & Mukherjee 2012; Palmatier et al. 2006; Wang et al. 2006]). Despite such extensive research, limitations continue to exist in extant literature. First, the bulk of studies has been conducted in the traditional context, and the application of RMT in an online context is scarce (except for [Chen & Chiu 2009; Hsieh et al. 2005; Liang & Chen 2009]). Additional research should be conducted to assess fully the aptness of the theory in different settings, particularly in online services. Second, RMT has theorized the various performance implications of relational bonds (e.g., customer satisfaction, commitment, and loyalty), but the nomological net among the constructs has yet to be clearly specified. Although a few studies (e.g., [Wang et al. 2006]) have empirically suggested a mediation model in which relational bonds affect relationship quality constructs (e.g., commitment) that consequently affect loyalty, a theory-based justification remains lacking.

Drawing upon RMT and related studies, this study proposes that the three types of relational bonds between operators and users in the SNS context positively affect user satisfaction with SNSs, which in turn positively affects user loyalty. The rationale of the proposition has its foundation in the S–O–R model, which is elucidated in the following subsection.

2.3. S–O–R Model

S–O–R model was introduced by Woodworth [1928] as an extension of stimulus–response theory in classical behaviorism. In contrast to stimulus–response theory that postulates a direct association between stimuli and individual responses, S–O–R model posits a mediated process such that environmental stimuli (S) cause changes to individuals' internal, organismic experiences (O), which consequently drive individuals' behavioral responses (R) [Mehrabian & Russell 1974; Moore 2011]. In the S–O–R framework, the *stimulus* is conceptualized as an influence that arouses individuals [Eroglu et al. 2001]. It can be represented in diverse forms, such as the marketing activities of a firm, the atmospheric quality of a store, and the aesthetic design of a website [Bagozzi 1983; Eroglu et al. 2001; Jacoby 2002]. The *organism* refers to individuals' internal processing systems that intervene and mediate individuals' responses to stimuli. The internal processing systems entail individuals' cognitive and affective reactions such as beliefs and feelings toward stimuli [Jacoby 2002]. The *response* represents individuals' processing outcomes, which manifest in various forms that range from conscious to unconscious and internal (i.e., nonvisible) to external (i.e., detectable) [Jacoby 2002].

Given its parsimony and fundamentality, S–O–R model has been widely employed as a theoretical base in multiple fields, such as marketing (e.g., [Wang et al. 2007]), retailing (e.g., [Eroglu et al. 2001]), and information systems (e.g., [Animesh et al. 2011]), to investigate the effects of various stimuli on individuals' diverse responses. For example, Parboteeah et al. [2009] drew upon the S–O–R framework to examine the effects of website characteristics (i.e., information fit-to-task and visual appeal) on online consumers' perceived usefulness and enjoyment of the websites and ultimately on consumers' urge to purchase impulsively. By contextualizing the S–O–R model to the present study, the relational bonds initiated and developed by SNS operators serve as the stimulating cues that affect users' organismic experience (i.e., satisfaction with the SNS), which subsequently affects users' behavioral response (i.e., loyalty for the SNS). Therefore, in accordance with the rationale of the S–O–R model, we theorize that the influence of operator-to-user relational bonds on user loyalty is mediated through user satisfaction.

3. Research Model and Hypotheses

Adopting a user-centric relational perspective, this study integrates two sources of relational influence, one arising from SNS operators and the other from users, to investigate their effects on the formation of user loyalty. Specifically, this study builds upon the RMT literature and S–O–R model to propose that the operator-to-user relational bonds positively affect user satisfaction, which in turn positively affects user loyalty. Moreover, based on the literature

related to social influence, this study proposes that the user-to-user social influence has a direct and positive influence on user loyalty. Figure 1 depicts the research model. The hypothesis development is elaborated in the following subsections.

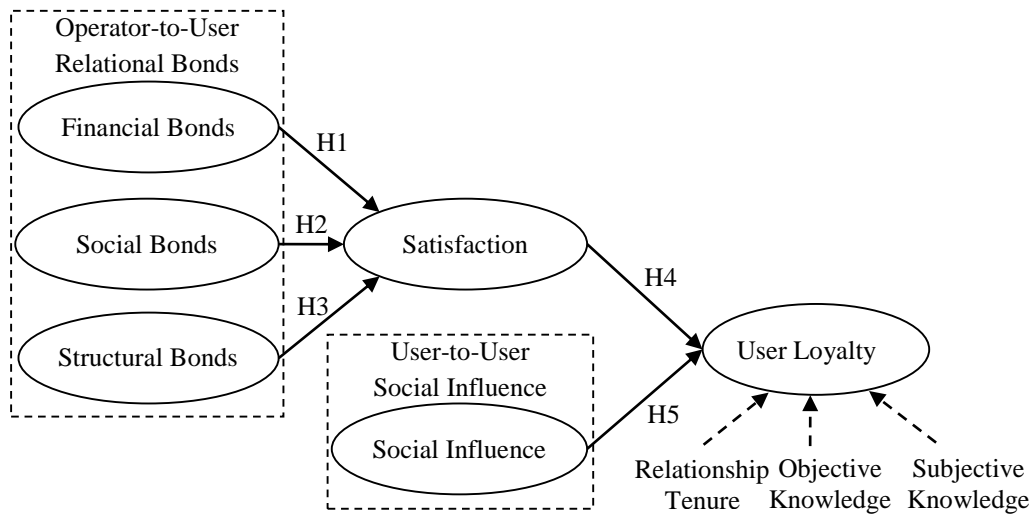


Figure 1: Research Model

3.1. Effects of Operator-to-User Relational Bonds

3.1.1. Relational Bonds and User Satisfaction

User satisfaction refers to users' pleasurable sense of need or desire fulfillment using SNS services [Oliver 1999]. This satisfaction is manifested in users' favorable feelings toward the overall service experience [Kim & Son 2009]. According to RMT, financial bonds are established by offering economic incentives such as discounts and special price offers to customers. When SNS operators forge financial bonds with their users, the users can receive the same services at lower costs. As a result, users obtain a great value from using services provided on the SNSs, as value is based on the comparison between benefits and costs. A large body of literature (e.g., [Polites et al. 2012]) has demonstrated that the value obtained in using services significantly contributes to the formation of satisfaction. Therefore, the inference that the level of financial bonds between SNS operators and users is positively associated with the level of user satisfaction is reasonable. Thus, we posit the following:

H1: *The level of financial bonds with SNS operators is positively associated with the level of user satisfaction.*

Social bonds refer to the social dimension of firm–customer relationship. These bonds can be forged by providing support and advice to customers, showing friendship, and expressing empathy, caring, and responsiveness to customer problems, among others [Chiu et al. 2005; Liang & Chen 2009; Smith 1998]. In the SNS context, the website interface is the primary conduit by which operators interact with users. Special links are placed in conspicuous positions on the homepage of SNSs to solicit users' opinions and suggestions about the services. Certain buttons also appear on the website interface for users to click so that they can ask for support from customer service representatives when encountering problems or difficulties during the service usage process. Prior studies have suggested that social bonding activities (e.g., showing customers attentiveness to their needs and exhibiting responsiveness to customer problems) contribute to the formation of customer satisfaction [Xu et al. 2013]. In addition, SNS operators send virtual greeting cards or gifts to users on specific special days, such as users' birthday or festival days. These activities create feelings of warmth and shared experiences between users and operators that consequently lead to user satisfaction [Chen & Chiu 2009; Price & Arnould 1999]. Therefore, we hypothesize the following:

H2: *The level of social bonds with SNS operators is positively associated with the level of user satisfaction.*

Building structural bonds represents a business practice in which firms attempt to retain customers by providing valuable services that are not readily available and are difficult or expensive to obtain from other sources [Berry 1995; Chen & Chiu 2009]. These services include customized services that cater to customers' particular preferences and interests and integrated services that are provided through collaborations with business partners [Chiu et al. 2005; Zeithaml et al. 2001]. The creation of structural bonds often requires investments from customers, such as time and

efforts and/or input of personal data [Hsieh et al. 2005]. Consequently, structural bonds are usually difficult to terminate because of the cost and complexity associated with changing sources [Liang & Chen 2009; Turnbull & Wilson 1989].

In the SNS context, some operators provide various tools on the site to enable users to customize the website interface according to their personal needs and preferences. The customized services provided can reduce users' information overload and improve their experience with the site, thus increasing user satisfaction [Fung 2008; Thongpapanl & Ashraf 2011]. Furthermore, some functionalities on certain SNSs (e.g., Qzone.com and Pengyou.com) have been integrated seamlessly so that users can easily expand their friend base to enjoy various services conveniently even if they are on different sites. Such alliances structurally strengthen the operator–user relationship and improve user satisfaction with the site. Additionally, some operators collaborate with celebrities and influential media outlets, such as Wall Street Journal, by inviting them to join the site [Gnyawali et al. 2010]. In this case, users can easily be updated with the latest happenings of their favorite celebrities and obtain the latest news without visiting portals or other websites. Users can also select their favorite celebrities and media outlets to obtain customized information. Prior studies have suggested that value-added services evoke users' positive emotional response and increase user satisfaction with service providers [Voss 2003]. Therefore, taken together, we posit the following:

H3: *The level of structural bonds with SNS operators is positively associated with the level of user satisfaction.*

3.1.2. User Satisfaction and Loyalty

A customer's repatronage or postpurchase behavior is considered to occur when the expectations match the perceived performance [Dick & Basu 1994]. The resulting satisfaction/dissatisfaction is a key determinant of customers' decision to retain or abandon a given product or service relationship [Lemon et al. 2002]. Customer loyalty can rarely be acquired without a sufficient level of satisfaction [Oliver 1999]. Satisfied customers are also noted to have a high tendency to purchase the same product/service repeatedly, resist competitive offers from competitors, and generate positive word of mouth [Chiou 2004]. Customers who have a high level of cumulative satisfaction (i.e., overall satisfaction) with a continuously provided service in the current period will have a high usage level of the service in a subsequent period [Bolton & Lemon 1999] and a high tendency to maintain a lasting relationship with the service provider [Bolton 1998]. In various e-service contexts, customer satisfaction has been consistently found to have a significant and positive effect on customer loyalty [Chiou 2004; Lin & Wang 2006; Luarn & Lin 2003; Polites et al. 2012]. Therefore, we expect the following:

H4: *The level of user satisfaction is positively associated with the level of SNS user loyalty.*

3.2. Effects of User-to-User Social Influence

Prior studies on behavioral sciences have theoretically and empirically suggested that reference groups, particularly certain individuals within the group, exert a significant influence on individual behaviors [Stafford 1966; Venkatesh & Morris 2000]. Specifically, individuals' media use behavior is not only generated by an objectively rational choice but is also determined by the embedded information in the social context [Fulk et al. 1987]. SNSs serve as an online platform for individuals to fulfill interpersonal communication needs, and thus social influence is inherent in individuals' decision to use an SNS continuously.

Individuals' loyalty to a service has been suggested to be substantially affected by the acceptance of their preference for a certain service by the social group to which the individuals refer [Gounaris & Stathakopoulos 2004]. Powerful reference groups can easily change their members' behaviors and align them with the norms and standards that the groups consider appropriate [Gounaris & Stathakopoulos 2004]. Therefore, social influence from an individual's referred group and peers' recommendations of a particular brand is positively related to individuals' loyalty to the brand [Gounaris & Stathakopoulos 2004; Stafford 1966].

Theoretical support for the association between social influence and user loyalty is derived from the unified theory of acceptance and use of technology [Venkatesh et al. 2003], which was developed on the basis of a review of eight theoretical models (e.g., theory of reasoned action). This theory suggests that social influence has a direct effect on individuals' behavioral responses to technology. Loyalty represents individuals' commitment and future patronage intention toward a service provider, and thus the expectation that the user-to-user social influence will directly affect an individual's loyalty to a particular SNS is logical. Several studies on marketing (e.g., [Nitzan & Libai 2011]) and information systems (e.g., [Xu et al. 2009]) have established the direct effect of social influence on individuals' loyalty to service providers. Therefore, we hypothesize the following:

H5: *User-to-user social influence is positively associated with the level of SNS user loyalty.*

4. Research Method

4.1. Instrument Design

Items selected for the constructs were primarily adapted from prior studies to ensure content validity. Certain new items were supplemented according to the construct definitions and research context. All items were first reviewed by an IS researcher with an expertise in questionnaire design and measurement theory to further ensure the content validity and identify any ambiguous items. The questionnaire was subsequently pretested with 30 users who had at least six months of SNS usage experience. The feedback from these respondents was used to further refine and modify the instrument. Table 2 presents the sources and the number of items measuring the constructs in the research model.

Table 2: Sources of Measurement Items

Construct	Type	Source	Number of Items
User Loyalty	Reflective	Chaudhuri & Holbrook [2001], Lin & Wang [2006]	5
Satisfaction	Reflective	Lin & Wang [2006]	4
Social Influence	Reflective	Bearden et al. [1989], Venkatesh & Morris [2000]	4
Subjective Knowledge	Reflective	Brucks [1985], Supplemented	3
Financial Bonds	Formative	Hsieh et al. [2005], Supplemented	3
Social Bonds	Formative	Hsieh et al. [2005], Chiu et al. [2005]	3
Structural Bonds	Formative	Hsieh et al. [2005], Chiu et al. [2005], Supplemented	4

Apart from the theoretical constructs specified in Figure 1, we included three factors (i.e., relationship tenure, objective knowledge, and subjective knowledge) as control variables in determining SNS user loyalty. Relationship tenure has been suggested to positively influence users' perceived switching costs and usage inertia, and it leads users to be increasingly loyal [Bell et al. 2005; Dick & Basu 1994]. This variable was measured by asking respondents "up to now, how long have you used this SNS?" Moreover, users with a high level of objective and subjective knowledge tend to seek a sizable amount of information, and they are prone to search for alternatives, which lowers their tendency to remain loyal to their present choice [Brucks 1985; Capraro et al. 2003]. According to Capraro et al. [2003], users' objective knowledge of SNSs was measured as the total number of correct responses to thirty-two questions, with eight questions for each of the four most popular Chinese SNSs. Specifically, respondents were asked to answer True/False/Don't Know with regard to whether each SNS offers a particular feature. Scores for objective knowledge were calculated as the number of correct answers. The items for measuring subjective knowledge were primarily adapted from Brucks [1985].

In the present study, all scales were originally developed in English. Back translation was used [Craig & Douglas 2005] because the respondents were Chinese. First, two bilingual native Chinese independently translated the original items into Chinese. Second, a third bilingual Chinese compared the two versions and reconciled the slight differences in translation and then back translated the items to English. Finally, the authors compared the back-translated English version with the original and noted no serious discrepancies. Translational equivalence was ensured through these procedures.

4.2. Data Collection

The data used to test the model were collected through a survey at a large public university in China. Respondents were first asked whether they had used SNSs at any time, and they were asked to participate in the survey if they replied affirmatively. In filling out the questionnaire, respondents were requested to select the SNS that they used most often and then answer the questions accordingly. Ten-yuan gifts were given to respondents as a token of appreciation for their participation. The questionnaire was distributed to 335 students. In total, 332 responses were collected, 43 of which were excluded for incompleteness and unnaturally long sequences of repetitive answers. The final dataset comprised 289 valid responses. Table 3 presents the demographic statistics of the sample.

Table 3: Demographic Statistics

	Category	Number (<i>N</i> = 289)	Percentage (%)
Gender	Male	156	54.0
	Female	133	46.0
Age	18 – 22	157	54.3
	23 – 26	126	43.6
	27 – 30	6	2.1
Educational Level	Bachelor	145	50.2
	Master	120	41.5
	Doctoral and above	24	8.3
Frequency of Usage	Less than once per week	8	2.8
	Once per week	21	7.3
	2 – 3 days per week	52	18.0
	4 – 5 days per week	59	20.4
	At least once per day	149	51.6
Relationship Tenure (in years)	< 0.5	1	0.3
	0.5 – 1	37	12.8
	1 – 3	204	70.6
	4 – 5	44	15.2
	> 5	3	1.0

5. Data Analysis and Results

5.1. Analysis Technique

The partial least squares (PLS) technique as implemented in SmartPLS 2.0 [Ringle et al. 2005] was used for the data analysis. PLS was determined to be appropriate for three reasons. First, PLS is appropriate for our research context because it supports both exploratory and confirmatory studies [Gefen et al. 2000]. Second, PLS can incorporate both formative and reflective indicators [Chin 1998]. Third, PLS can accommodate small data sample models and latent constructs under conditions of non-normality [Gefen et al. 2000].

5.2. Measurement Model Validation

Constructs in structural equation models can be modeled as formative or reflective. According to Diamantopoulos & Winklhofer [2001], Jarvis et al. [2003], and Petter et al. [2007], four criteria are used to determine if a construct should be modeled as formative versus reflective: (1) direction of causality between the construct and its indicators, (2) interchangeability of indicators, (3) covariation among indicators, and (4) nomological net of indicators. The construct should be modeled as formative if the direction of causality is from the indicators to the construct, disregarding an indicator alters the conceptual domain of the construct, and indicators do not need to covary with each other and have the same antecedents and consequents. Conversely, the construct should be reflective if the four conditions occur in the opposite direction. In accordance with the decision rules, user loyalty, social influence, satisfaction, and the control variable subjective knowledge were operationalized as reflective constructs, while the three types of relational bonds (i.e., financial, social, and structural bonds) were modeled as formative constructs.

5.2.1. Assessment of Measures for Formative Constructs

To assess the construct validity of formative measures, principal components analysis was conducted to examine the item weights [Petter et al. 2007]. In the present study, SmartPLS with a bootstrapping resampling method was used to obtain item weights on their respective constructs and t-test values for path significance. Five items were statistically insignificant at the $p < 0.05$ level (see Table 4), suggesting that they may need to be removed [Petter et al. 2007]. However, the elimination of formative items, particularly the insignificant ones, should not affect the content validity of a construct and should ensure that the conceptual domain of the construct remains well covered [Diamantopoulos & Siguaw 2006; Diamantopoulos & Winklhofer 2001; Petter et al. 2007]. With this consideration, we inspected the content of the insignificant items and concluded that they should be retained because the items represent distinct bonding activities that have been practiced by major SNSs.

To assess the construct reliability, multicollinearity among items was examined using the variance inflation factor (VIF) statistic [Diamantopoulos & Siguaw 2006; Diamantopoulos & Winklhofer 2001; Petter et al. 2007]. Three ordinary least squares regressions were run with the PLS construct score as the dependent variable and the items as the independent variables. The VIF values ranged from 1.041 to 1.638 (see Table 4), and all were below the threshold value of 3.3 [Diamantopoulos & Siguaw 2006; Petter et al. 2007]. This result suggests that multicollinearity is not a problem for the formative constructs in this study.

Table 4: Formative Constructs: Item Weights and T-Statistics

Constructs (Measurement Items) – All items measured on 7-point Likert scales	Weights	VIF
Financial Bonds (Mean = 3.549, Std. Dev. = 1.500)		
This SNS provides discounts for loyal users.	0.087	1.509
I can have the chance to participate in promotional activities (e.g., lucky draw) when I try the newly-developed games/applications.	0.915***	1.638
This SNS provides special offers for VIP members (e.g., free for some items).	0.069	1.289
Social Bonds (Mean = 4.664, Std. Dev. = 1.152)		
This SNS collects my opinions about its services.	0.237	1.183
This SNS sends me greeting cards or virtual gifts on special days.	0.917***	1.041
I can get help from the customer support staff to solve any problem I have regarding the use of this SNS.	0.103	1.223
Structural Bonds (Mean = 4.925 Std. Dev. = 0.830)		
I can get customized services from this SNS.	0.395*	1.223
This SNS recommends potential friends based on my profile (e.g., common class, major, school).	0.364*	1.197
This SNS provides complete information about its services.	0.200	1.313
This SNS offers a variety of ways to get information more efficiently.	0.467**	1.280

Notes: * significant at $p < 0.05$, ** significant at $p < 0.01$, *** significant at $p < 0.001$.

5.2.2. Assessment of Measures for Reflective Constructs

The reliability of reflective constructs was assessed using composite reliability and Cronbach's alpha [Nunnally & Bernstein 1994]. All reflective constructs met the requirements of composite reliability and Cronbach's alpha being greater than the cut-off threshold value 0.7 (see Table 5) [Gefen et al. 2000; Nunnally & Bernstein 1994]. This result indicates an adequate internal consistency of measures.

Table 5: Reliability and Discriminant Validity Test Results

Construct	CR	CA	LOY	SI	SAT	RT	OK	SK
User Loyalty (LOY)	0.906	0.870	0.811					
Social Influence (SI)	0.830	0.748	0.251	0.745				
Satisfaction (SAT)	0.861	0.791	0.437	0.156	0.782			
<i>Relationship Tenure (RT)</i>	1.000	1.000	0.197	-0.019	0.020	1		
<i>Objective Knowledge (OK)</i>	1.000	1.000	0.001	-0.058	0.077	0.004	1	
<i>Subjective Knowledge (SK)</i>	0.900	0.835	0.125	0.039	0.194	0.146	0.095	0.867

Notes: CR: composite reliability, CA: Cronbach's alpha, diagonal elements in bold represent the square root of AVE.

Convergent validity is established when items load significantly on their respective constructs, with loadings being equal to or greater than 0.6 [Chin 1998; Nunnally & Bernstein 1994], and when the average variance extracted (AVE) value of constructs is higher than 0.5 [Fornell & Larcker 1981]. All item loadings were significant at the $p < 0.001$ level and are equal to or above 0.6 (see Table 6). All AVEs in Table 6 are above 0.5. Therefore, the convergent validity of constructs is validated. Discriminant validity is assessed by comparing the loadings of items on their intended constructs with the loadings on other constructs and by comparing the square root of the construct's AVE with the construct's correlations with other constructs [Fornell & Larcker 1981; Gefen et al. 2000]. In the present study, all items loaded more highly on their intended constructs than on any other construct. The square root of the AVE for each construct, as depicted in the diagonal elements of Table 5, is higher than the inter-construct correlations in the off-diagonal elements. Therefore, the reflective constructs in this study possess adequate discriminant validity.

Table 6: Descriptive Statistics, Item Loadings, and AVEs of Reflective Constructs

Constructs (Items) – All items measured on 7-point Likert scales	Item Loading
User Loyalty (AVE = 0.658; Mean = 4.327, Std. Dev. = 1.048)	
I am committed to this SNS.	0.772
I intend to keep using this SNS.	0.829
My preference for this SNS would not willingly change.	0.841
It would be difficult to change my beliefs about this SNS.	0.849
Even if close friends recommended another SNS, my preference for this SNS would not change.	0.762
Social Influence (AVE = 0.555; Mean = 4.521, Std. Dev. = 1.072)	
I achieve a sense of belonging by using the same SNS that others use.	0.884
People who influence my behavior think that I should use this SNS.	0.773
I rarely use the SNS until I am sure my friends approve of it.	0.598
When using SNS, I generally use those SNSs that I think others will approve of.	0.696
Satisfaction (AVE = 0.611; Mean = 5.176, Std. Dev. = 0.806)	
I am satisfied with my overall experience with this SNS.	0.855
I am satisfied overall with the quality of this SNS service.	0.851
As a whole, I am not satisfied with this SNS. (reversed)	0.604
This SNS has met my expectations.	0.790
Subjective Knowledge (AVE = 0.751; Mean = 4.239, Std. Dev. = 1.069)	
Rate your knowledge of SNSs, as compared to the average user. (One of the least knowledgeable / One of the most knowledgeable)	0.835
Circle one of the numbers below to describe your familiarity with SNSs. (Not at all familiar / Extremely familiar)	0.913
I know a lot about SNSs.	0.849

Note: all item loadings are significant at $p < 0.001$.

5.3. Common Method Bias

Common method bias (CMB) can be a potential threat to the validity of our research findings because the data for all variables were self-reported and collected from a single survey. To address this threat, we applied both procedural and statistical remedies following Podsakoff et al. [2003]. First, different response formats (e.g., Likert scales and semantic differential) were used at the stage of instrument design to create a methodological separation of measurement that reduced consistency motifs and demand characteristics. Second, the respondents were allowed to answer questions anonymously. They were assured that there are no right or wrong answers, and they were requested to answer questions as honestly as possible. These procedures reduced respondents' evaluation apprehension, thus decreasing the social desirability bias. Third, the widely used Harman's one-factor test was conducted on all the reflective items to assess statistically the extent of CMB in this study. This test comprised a principal components factor analysis (unrotated), and CMB is assumed to exist if a single factor emerges from the analysis or one factor accounts for a majority of the covariance in the items. Our results suggested four factors with eigenvalues greater than one, and the first factor merely accounted for 28.2% of the total variance. Therefore, CMB is not expected to be a serious concern in this study.

5.4. Structural Model Estimation

The structural model was subsequently assessed to evaluate its explanatory power and the significance of the hypothesized paths. Figure 2 illustrates the path analysis results of the structural model. The variables in the research model explained 26.3% of the variance in user loyalty and 21.0% of the variance in satisfaction. The three types of relational bonds all have a significant and positive effect on user satisfaction, thus supporting H1–H3. User satisfaction significantly influences user loyalty, thus supporting H4. As expected in H5, user-to-user social influence has a significant and positive effect on user loyalty. Among the control variables, only relationship tenure has a significant effect on user loyalty.

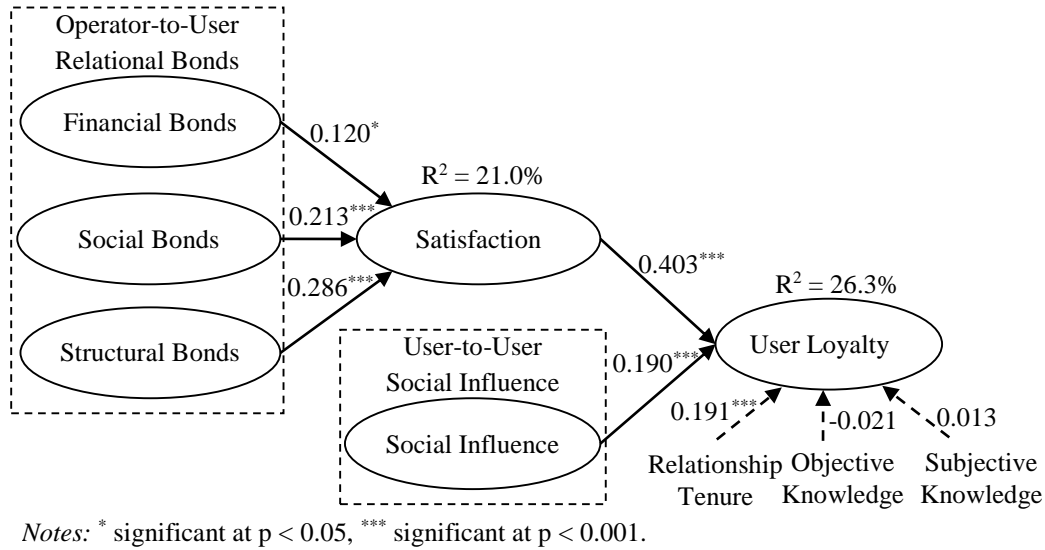


Figure 2: Results of PLS Analysis

We also conducted mediation tests using the bootstrapping method [Preacher & Hayes 2008] to examine the indirect effects of operator-to-user relational bonds on user loyalty through satisfaction. The bootstrapping method has been recommended by many researchers (e.g., [MacKinnon et al. 2004; Preacher & Hayes 2008]) because of its advantages over traditional analysis techniques, such as the Sobel test. First, bootstrapping is a nonparametric resampling procedure that does not involve the normality assumption of the sampling distribution of the indirect effect. Second, this method does not require a large sample size. Third, bootstrapping has a high statistical power and a low Type I error rate when applied to small- and medium-sized samples. We chose bias-corrected bootstrap¹ over other bootstrapping methods because of its ability to correct for bias in the central tendency of the estimate, its greater statistical power, and its highly accurate confidence intervals [MacKinnon et al. 2004; Preacher & Hayes 2008; Williams & MacKinnon 2008].

Following Preacher and Hayes [2008], we used 5000 bootstrap samples to construct confidence intervals. The mediation effect is significant at the 0.05 level if the 95% confidence interval does not include 0. Table 7 shows that all of the 95% confidence intervals of the mediation effects of satisfaction on the effects of the three types of relational bonds on user loyalty do not include 0. Therefore, satisfaction significantly mediates the effects of operator-to-user relational bonds on user loyalty, which supports the S–O–R model in justifying the mediating role of satisfaction in the influence of the relationship marketing efforts of SNS operators on the cultivation of user loyalty.

Table 7: Mediation Test Results (Dependent Variable: User Loyalty, Mediator: Satisfaction)

Independent Variable	Point Estimate	Confidence Interval (95%)
Financial Bonds	0.083	(0.035, 0.139)
Social Bonds	0.130	(0.076, 0.196)
Structural Bonds	0.147	(0.095, 0.218)

5.5. Further Analyses on Satisfaction and User Loyalty

The above analyses assessed user loyalty as the extent of loyalty to the SNS being used. To provide a more concrete and realistic examination of SNS user loyalty in a competing SNS scenario, we performed additional analyses to improve the rigor of our findings. For this purpose, we asked three questions in the survey. First, we asked the respondents to state the SNS that they used most often (i.e., the incumbent SNS). Second, we asked the respondents whether the incumbent SNS was the first SNS that they used. Respondents who answered “yes” were classified as stayers, whereas those who answered “no” were asked if they were dissatisfied with the first SNS that they used. Respondents who answered “yes” were classified as dissatisfied switchers, whereas those who answered “no” were classified as satisfied switchers. Through this process, we classified the SNS users into stayers, satisfied switchers, and dissatisfied switchers, following the same classification used in the customer loyalty literature [Ganesh et al. 2000].

¹ For technical details, see MacKinnon et al. [2004] and Preacher & Hayes [2008].

Stayers are those who have been using the same SNS since they started, satisfied switchers are those who changed to another SNS even though they were satisfied with their previous SNS, and dissatisfied switchers are those who switched to another SNS because of their dissatisfaction with the earlier SNS.

We performed a univariate analysis of variance (ANOVA) of user loyalty with these three groups of users using Tukey's honestly significant difference method. Table 8 shows that the mean differences between stayers and satisfied switchers and those between dissatisfied switchers and satisfied switchers in terms of user loyalty are both significant. However, the mean difference between stayers and dissatisfied switchers is insignificant. As we used satisfaction as the classification criterion, these ANOVA results are generally consistent with our findings from the structural model analyses.

Table 8: ANOVA Results

User Type	Number ($N=289$)	Mean of User Loyalty	Std. Deviation	Mean Difference
Dissatisfied Switchers (I)	16	4.600	0.944	0.213 (I-J)
Stayers (J)	235	4.387	1.043	0.545* (J-K)
Satisfied Switchers (K)	38	3.842	1.011	0.758* (I-K)

Note: * significant at $p < 0.05$.

Interestingly, the mean loyalty of dissatisfied switchers to their currently used SNS is significantly higher than that of satisfied switchers, consistent with the arguments of Ganesh et al. [2000] on the loyalty difference between dissatisfied and satisfied switchers in the retail banking industry. Given their dissatisfying experience with prior SNS, dissatisfied switchers tend to form a relatively low level of expectation regarding the performance of their switch-to SNS before switching. Consequently, they tend to perceive a high level of satisfaction with their currently used SNS compared with satisfied switchers. Given the critical role of satisfaction in affecting their continuance decision, dissatisfied switchers are more loyal to their currently used SNS than satisfied switchers. Stayers also exhibit a significantly higher level of loyalty to their currently used SNS than satisfied switchers. This finding can be explained by cognitive dissonance theory [Festinger 1957], which posits that individuals tend to maintain consistency between their beliefs and actions. Compared with satisfied switchers, stayers maintain their relationship with the incumbent SNS and have no experience with other SNSs. Therefore, they hold a stronger belief of their commitment and preference for the incumbent SNS. Consequently, stayers are more loyal than satisfied switchers.

Although the post hoc analyses reveal some interesting findings, these are merely preliminary and exploratory analyses that attempt to provide in-depth insights into the development of SNS user loyalty. Therefore, these results must be cautiously generalized because of the relatively large proportion of stayers in the sample. Additional studies must examine a matching sample to validate our findings.

6. Discussion and Implications

6.1. Discussion of Findings

We employed a user-centric relational perspective to investigate the effects of two sources of relational influence, namely, operator-to-user relational bonds and user-to-user social influence, on the development of SNS user loyalty. These two sources of relational influence significantly affect SNS user loyalty through different mechanisms. Specifically, user-to-user social influence directly and positively affects user loyalty, whereas operator-to-user relational bonds indirectly affect user loyalty through user satisfaction.

Our finding on the direct effect of social influence is essentially consistent with that of prior studies. Researchers have suggested that social influence factors, such as subjective norm [Chang & Zhu 2011; Cheung & Lee 2010; Choi & Chung 2013; Hu et al. 2011], group norm [Cheung et al. 2011], and critical mass [Ku et al. 2013], have direct and significant effects on the choice of users and their continued use of SNSs. In particular, Cheung et al. [2011; 2010] noted that SNS use is a social rather than an individual action (i.e., we-intention) in which several users commit themselves to using an SNS because they are embedded in the social fabrics of their online social networks. Our finding not only provides additional empirical support for the significant effect of social influence on the decision making of individuals but also demonstrates that social influence is a key factor that warrants attention in understanding human behavior in a social computing context.

Our findings on the indirect effects of operator-to-user relational bonds (i.e., financial, social, and structural bonds) on user loyalty are consistent with and extend previous research on RMT (e.g., [Palmatier et al. 2006; Wang et al. 2006]), which suggests a mediated model of the performance outcomes of the relationship marketing efforts of a firm. Many prior studies (e.g., [Liang & Chen 2009; Palmatier et al. 2006; Wang et al. 2006]) have confirmed the mediating role of relationship quality and its elemental constructs (i.e., trust, commitment, and relationship satisfaction) in the performance effects of relationship marketing. However, the mediation effect of customer satisfaction, which is a

critical factor that contributes to customer loyalty [Kim & Son 2009] and a key metric in the assessment of IS success [Delone & McLean 2003], has been largely understudied. Our findings echo those of previous research [Chen & Chiu 2009] by showing the significant effect of relational bonds on online customer satisfaction. These findings also enrich our understanding of the mediated pathways that underlie the effect of relationship marketing on performance.

Notably, the effect of operator-to-user structural bonds on user satisfaction (path coefficient = 0.286) is stronger than that of social bonds (path coefficient = 0.213), which in turn is stronger than that of financial bonds (path coefficient = 0.120). Therefore, given the significant and positive effect of satisfaction on user loyalty, structural bonds make the greatest contribution to the cultivation of SNS user loyalty, whereas financial bonds make the least contribution. These results support the theorization of RMT on the bonds hierarchy [Berry 1995; Berry & Parasuraman 1991; Lin et al. 2003] in which financial, social, and structural bonds are arranged in ascending order to develop a sustained competitive advantage.

6.2. Implications for Theory

Our study makes several theoretical contributions. First, it contributes to the SNS continuance and loyalty literature by investigating the effects of two sources of relational influence, namely, operator-to-user relational bonds and user-to-user social influence, on user loyalty. Although many studies have investigated such topic, they have mostly relied on traditional IS adoption and continuance models, such as TAM and ECM (e.g., [Jin 2013; Kang et al. 2009; Maier et al. 2012; Yin et al. 2013]). Scholars have argued that such reliance has limited the spectrum of identified factors too narrowly [Bagozzi 1992; Benbasat & Barki 2007; Cao et al. 2015], thus hindering the intellectual progress in the IS field. Furthermore, given the unique social network nature of SNSs, traditional IS adoption and continuance models lack specificity and adequacy in explaining user behaviors in the SNS context [Kane et al. 2014; Vannoy & Palvia 2010]. This study goes beyond the traditional IS models by applying relevant theories from other disciplines to investigate SNS user loyalty. In doing so, this study broadens the spectrum of SNS continuance research and provides fresh insights into the theoretical modeling of SNS continuance.

Second, this study contributes to the RMT literature in two ways, namely, by applying the theory to the SNS context and by empirically testing the nomological net among relational bonds, satisfaction, and loyalty based on the S–O–R model. The majority of existing studies on RMT were conducted in traditional marketplace settings. Previous studies have rarely applied the theory in online settings, with the exception of [Chen & Chiu 2009; Hsieh et al. 2005; Liang & Chen 2009]. However, these studies [Chen & Chiu 2009; Hsieh et al. 2005; Liang & Chen 2009] have addressed the customer retention issue in the electronic commerce context, which is different from the SNS context where SNS services are generally provided free to users and commercial transactions do not dominate in the firm–customer interaction relationship. In sum, this study contributes to the RMT literature by expanding the applicability of the theory to the SNS context. Moreover, although RMT theorizes the various outcomes of relational bonds, such as satisfaction and loyalty, the nomological net of these constructs remains nebulous. Some studies (e.g., [Wang et al. 2006]) have empirically shown that the effects of relational bonds on loyalty are mediated by relationship quality constructs, such as relationship satisfaction. However, their findings lack reasonable theoretical justification. We employ the S–O–R model, which is widely adopted as a theoretical foundation in the IS discipline [Animesh et al. 2011; Parboteeah et al. 2009] but is seldom used by relationship marketing researchers (except for [Chiu et al. 2005]), to justify and to prove empirically the indirect effects of relational bonds on SNS user loyalty through user satisfaction. In doing so, our study contributes to the RMT literature by empirically validating a theoretical framework that can appropriately justify the nomological net of various RMT constructs.

Third, this study identified two sources of relational influence on user loyalty from a user-centric perspective and integrated operator-to-user relational bonds and user-to-user social influence into one model. By doing so, this study reconciles what has been previously presumed to be independent in the literature. Although both relational bonds and social influence are suggested to influence the continued use and loyalty of individuals to specific services, few studies have considered the above two sources of relational influence simultaneously. This study examines the differential effects of relational bonds and social influence on user loyalty in the SNS context. In essence, our proposed model offers a theoretical account of how the operator- and user-side relational influences differ in developing user loyalty. The findings shed light on how the two sources of relational influence simultaneously yet differentially shape the development of user loyalty for SNSs.

Fourth, by rigorously assessing the loyalty of users to their present SNS and supplementing such assessment with further analyses of the three types of SNS users (i.e., stayers, satisfied switchers, and dissatisfied switchers), this research provides richer insights that further our understanding of SNS user loyalty. Dissatisfied switchers are the most loyal to their incumbent SNS, whereas satisfied switchers are the least loyal. This result indicates that the loyalty of users with the present service is also influenced by their experiences with past services. Their evaluations and perceived performances of past services can significantly affect the level of their loyalty to the current service. The

past experiences of individuals with other similar services should also be considered when examining the loyalty of individuals to Internet services.

6.3. Implications for Practice

This study offers many practical implications. First, our study suggests that SNS operators and managers can employ a relational bonding strategy to enhance user satisfaction and develop user loyalty. The three types of relational bonds, namely, financial, social, and structural bonds, significantly affect user satisfaction, which in turn significantly affects user loyalty. Therefore, SNS operators must build all these three types of relational bonds with their users to enhance user retention. To establish financial bonds, SNS operators should offer economic incentives to their users. For example, many users purchase digital items, such as avatars, wallpapers, and music, from operators to support their online self-image [Kim et al. 2012]. In this case, operators can give users discounts on their purchased items or provide free items to the active users to encourage continuous visits to the website. Operators can also initiate promotional campaigns, such as entering users into a lottery draw for a limited time period of VIP membership, to stimulate user active participation when newly developed applications and games are released.

Second, in order to develop social bonds, SNS operators can invite users to participate in surveys that enable them to express their opinions and suggestions on the provided services. Operators can also provide their users with virtual gifts and greeting messages to strengthen their relationship and evoke user satisfaction. They must also provide efficient and effective technical support to solve the problems encountered by their users when exploring the website. These services can make users feel that they are being cared for, and this feeling may lead to their contentment with their SNS experiences. During their interaction with users, operators should address users by their name instead of using general terms, such as “dear customer,” to demonstrate their attentiveness and establish an emotional closeness with their users.

Third, to forge structural bonds with users, operators should improve the customizability of their website services. For example, they can provide readily modifiable online presentation templates and easy-to-use tools that enable users to personalize their web views. They can also offer some in-site options that utilize algorithms to customize the information flow that users obtain. They should actively seek strategic cooperation with other firms and celebrities to provide integrated services. For instance, they can invite popular news companies to establish a business-type account on the SNS to enhance the informational value of the site to its users. Operators should also recognize that financial, social, and structural bonds have different effects on user satisfaction, which in turn acts as a key driver of user loyalty. Given that structural bonds have the strongest effect and financial bonds have the weakest, operators should forge a higher level of relational bonds and upgrade their relationship marketing tactics to create a strong basis for the development of user loyalty.

Fourth, the significant effect of user-to-user social influence on user loyalty suggests that SNS operators should leverage the social influence effects among their users to improve the stickiness of their site. Therefore, operators should consider ways to motivate incumbent users to refer their friends, colleagues, and family members to the site. For example, economic benefits, such as electronic coupons for certain retailers and discounts for digital items sold on the SNS, can be provided to users who have successfully invited new users. Through this invitation strategy, the social influence from incumbent users becomes salient to new users and facilitates their adoption and continued use of the SNS. The participation of new users augments the network value of the SNS and consolidates the continuance intention of incumbent users [Lin & Lu 2011] that in turn reinforces the SNS loyalty of new users. Also, operators should consider ways to facilitate the interaction and connectedness among their users to enhance the effect of user-to-user social influence on user loyalty formation. They can invite users and their connections to participate in social network games to promote their interaction and strengthen their collective continuance intention with the SNS.

Fifth, aside from satisfying incumbent users, SNS operators should pay more attention to new users and try their best to satisfy their demands because these new users may have switched from other SNSs out of dissatisfaction. Dissatisfied switchers are more loyal than stayers. Therefore, if they have switched and have become satisfied with the incumbent SNS, then they are less likely to switch to another SNS. Therefore, given the large potential benefits generated by loyal users, SNS operators should recognize new users, especially dissatisfied switchers. They can identify this group of users by administering a short survey to new registrants. Operators should also focus on catering to the preferences and needs of these users.

6.4. Limitations and Future Research

The aforementioned discussions must be considered in light of some of the study’s limitations. First, we considered user relationships with SNS operators and user-to-user social influence as the antecedent factors of SNS user loyalty. This perspective necessarily limits the scope and depth of our understanding of other potential influencing factors. Other important factors could also affect SNS user loyalty, but these factors were excluded from our theoretical model. Therefore, future research may use our model as a foundation to explore other significant factors and to advance our understanding of SNS user loyalty.

Second, although using college students as respondents may yield results that lack generalizability, these respondents are deemed appropriate in our case because we have both undergraduates and postgraduates in our dataset. More importantly, college students form the core representative population of SNS users [Chen 2013]. Future research can validate our findings by collecting data from a wider range of SNS users. Our findings, which are based on Chinese users, offer some insights into the largest Internet market in the world. Nevertheless, given the importance of localization for SNSs, future studies should also be conducted in other countries.

Third, we used cross-sectional data to test the proposed model empirically, and this research design does not offer insights into the effect of the dynamics of user relationships with a firm on user loyalty. We merely produced a "snapshot" of users at certain stages of their relationship but were unable to follow individual users over time. A longitudinal design should generate further insights.

Fourth, although the effect of user-to-user social influence was tested, we were unsure whether different types of users (e.g., active and inactive users according to their degree of participation or leaders and followers according to their roles in the usage pattern) could exert varying effects on the loyalty of other users. If so, in what way and to what extent do these effects vary? Future in-depth research can investigate these issues.

7. Conclusion

As the SNS market becomes increasingly competitive, SNS operators and managers must gain insights into the factors that determine the loyalty of users to SNSs. From a user-centric relational perspective, this study developed a research model that integrates two sources of relational influence, namely, operator-to-user relational bonds and user-to-user social influence, as antecedents of SNS user loyalty. Drawing upon the RMT literature and the S–O–R model, we proposed that operator-to-user relational bonds affect user loyalty by enhancing user satisfaction. User-to-user social influence also has a direct effect on the formation of user loyalty. The data from 289 SNS users in China support our hypotheses. Our study offers a novel theoretical perspective on the SNS continuance and loyalty phenomenon. We contribute to the RMT literature by applying the theory to the SNS context and empirically verifying the mediation effect of satisfaction on the effects of relational bonds on user loyalty according to the S–O–R model. Practically, our study suggests that SNS operators should enhance their relationships with their users and leverage the influence among users to maintain their loyalty to the sites.

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