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Social capital, motivations, and mobile coupon sharing

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Abstract

Purpose – The purpose of this paper is to integrate social capital theory and motivation theory to identify the factors that affect the intention of users to share mobile coupons (m-coupons) via social network sites (SNS). Social capital includes social ties, trust, and perceived similarity, whereas motivation comprises sense of self-worth and socializing.

Design/methodology/approach – A research model that integrates three social capital factors, two motivations, and m-coupon sharing is developed. Quantitative data from 297 users who had coupon usage experience are collected via offline and online survey. Partial least squares is used to conduct data analysis and test hypotheses.

Findings – Social ties, trust, and perceived similarity are positively related to m-coupon sharing intention and positively affect sense of self-worth and socializing, which have significant positive effects on m-coupon sharing intention and mediate the relationships between social capital factors and sharing intention.

Originality/value – This study highlights the integrated effects of social capital and motivations on m-coupon sharing intention in SNS. While social capital factors (i.e. social ties, trust, and perceived similarity) and motivations (i.e. sense of self-worth and socializing) positively affect m-coupon sharing, motivations are more directly associated with m-coupon sharing than social capital factors.

Keywords Social media marketing, Motivation theory, Social network sites, M-coupon sharing, Social capital theory

Paper type Research paper

1. Introduction

Advanced mobile communication and information technology have sparked the development of mobile commerce and marketing, which have resulted in the widespread use of mobile coupon (m-coupon) (Dickinger and Kleijnen, 2008). M-coupon is one of the most effective tools of mobile marketing and is a type of digital coupons sent to mobile devices, such as smart phones and personal digital assistants. These coupons contain messages that include text, pictures, audio, and videos (Dickinger and Kleijnen, 2008). Users can obtain these coupons from websites, couponing applications, or their friends and then receive discounts or cash back by showing the coupons to respective retailers. The number of m-coupon users is estimated to reach 300 million by 2014, and the market

is predicted to exceed \$43 billion by 2016 (Juniper-Research, 2012). Attracted by the massive market, numerous couponing applications and platforms, such as Dingding Couponing and Dianping Couponing, have been launched to lure customers. As one of famous couponing applications in China, Dianping Couponing has been downloaded more than 40 million times (Liu *et al.*, 2015).

Retailers have been encouraged by the higher average redemption rate of m-coupons (8 percent) than that of traditional print coupons and e-coupons (typically 1 percent or less) (Juniper-Research, 2012), but they still expect to obtain even a higher redemption rate because they are important drivers of sales, profits, and market performance (Raghubir, 2004). Hence, they seek new ways to improve the m-coupon redemption rate. Previous studies on viral marketing and word of mouth (WOM) in social network sites (SNS) revealed that promotion information from peers can overcome consumer resistance to use them with significantly lower costs, faster delivery, and greater acceptance than traditional marketing approaches, such as advertisements. M-coupon viral marketing, which starts with sharing among SNS users and then forwarding by hundreds or thousands of other SNS members, has been recognized as an efficient way in m-coupon promotion. Besides, the viral marketing of m-coupons is supposed to improve the redemption rate (Hsueh and Chen, 2010) because consumers rely on recommendations from peers, rather than advertising from merchants (Cheung and Lee, 2012; Hsueh and Chen, 2010). The integration of couponing platforms and leading social networks is estimated to fuel the continuing growth in m-coupon usage (Juniper-Research, 2012). Therefore, investigating the determinants of the intention of users to share m-coupons via SNS is an important research topic.

Extant research has drawn from social capital theory, diffusion theory, social cognitive theory, and motivation theory to examine the adoption and usage of information and knowledge sharing in traditional organizations or virtual communities (Jeon *et al.*, 2011; Zhao *et al.*, 2012). Social capital factors, such as social ties and social network from structural social capital, trust, and identification from relational social capital, perceived similarity and share goals from cognitive social capital, are the most influential factors in information sharing in virtual community (Chang and Chuang, 2011). The direct influences of motivations on the intention to share knowledge and information have also been investigated (Jeon *et al.*, 2011; Yan and Davison, 2013). M-coupon is a type of marketing information. However, m-coupon sharing not only provides promotion information to receivers but can also generate direct and tangible economic benefits. Thus, m-coupon sharing has some special characteristics that are different from information sharing.

However, previous studies have identified three gaps. First, the relationship between social capital factors and sharing intention has never been examined in the context of m-coupon in SNS. M-coupon is a kind of promotion information. Thus, SNS users may be regarded as a marketing agent, which leads to the devaluation of reputation in SNS. The positive influence of social capital on sharing intention in the context of m-coupon is not in line with previous studies related to information sharing. Inconsistent findings on the influence of social capital in information sharing are also presented. For example, Steffes and Burgee (2009) found that a weak tie was more significant in information sharing than a strong tie, whereas other studies reached the opposite conclusion (Chai and Kim, 2012). Factors that reflect the three dimensions of social capital, which have been identified in previous studies, must be investigated in m-coupon sharing. Therefore, we investigated the roles of social tie (structural social capital), trust (relational social capital), and perceived similarity (cognitive social capital) in m-coupon sharing intention.

Second, although motivations for information sharing have been studied extensively, the effects of these motivations on m-coupon sharing require further investigation. Users provide other SNS members with the opportunity to gain direct economic value by sharing m-coupons through SNS except for promotion information sharing. Moreover, sharing m-coupons is an efficient means of maintaining interactions with "friends." However, the relationship between significant motivations (e.g. sense of self-worth and socializing) and m-coupon sharing has received limited attention. Findings on the effects of motivations on information sharing are also inconsistent (Bock *et al.*, 2005; Zha *et al.*, 2012). Thus, the effect of sense of self-worth and socializing in the context of m-coupon sharing should be explored further.

Third, social capital factors and motivations have been investigated separately (Chang and Chuang, 2011). Lin and Lu (2011) confirmed the positive relationship between social structure and motivations. Network externalities, such as number of peers and perceived complementarities, positively affect motivations in the use of SNS (Lin and Lu, 2011). Social capital in SNS, which represent one's capital embedded in social network, can trigger motivations in m-coupon contribution. Thus, we investigate the relationship between social capital factors and motivations in m-coupon sharing with the aim of obtaining a better understanding of the impact of social capital.

We attempt to bridge the aforementioned gaps by answering the following research questions:

RQ1. How do social capital factors (i.e. social tie, trust, and perceived similarity) affect m-coupon sharing intention in SNS?

RQ2. How do key motivations (i.e. sense of self-worth and socializing) influence m-coupon sharing intention in SNS?

RQ3. How do social capital factors (i.e. social tie, trust, and perceived similarity) affect motivations in the context of m-coupon?

The remainder of the paper is organized as follows. Section 2 introduces relevant theories and theoretical background. Section 3 presents the research model and hypotheses. Section 4 describes our methodology and results. Section 5 provides discussions and implications of this study. Section 6 presents our conclusions and directions for future research.

2. Theoretical background
2.1 M-coupons and m-coupon sharing in SNS
The use of coupons as market segmenting tools has long triggered the interest of merchants and researchers. Coupons can attract new customers and encourage existing customers to make additional spending beyond regular purchases. Despite the potential of coupons to increase merchant revenue, traditional coupon redemption rates are low and their coverage area is limited. However, m-coupons are digital coupons in the form of text, picture, and audio messages that are sent to smart phones or personal digital assistants (Dickinger and Kleijnen, 2008). They have higher redemption rate than traditional coupons.

Social media has developed rapidly and significantly penetrated daily life in the past decade. Attracted by the market potential, enterprises began to consider social media as a part of their respective promotion channels. Among these various types of social media, SNS has received enormous attention from researchers and practitioners (Chai and Kim, 2012). Sharing m-coupons in SNS is a form of viral marketing that was

initially referred to as "network-enhanced word of mouth" (Jurvetson and Draper, 1997), and was supposed to make promotion information picked by thousands of other people. Viral marketing of m-coupon typically start with firms that create these coupons in the form of texts and pictures with an aim to improve redemption rate. The URL which contains the detailed information about the coupon will be created when share it to friends and relatives in social media, such as SNS. If the m-coupon is forwarded and users who receive it redeem and keep passing along, the m-coupon will obtain a higher redemption rate and reach a larger group of users.

Research on the forwarding of m-coupon is mostly aimed at building a distribution and forwarding system based on advanced mobile technologies. Nevertheless, consumer intention to share m-coupons through SNS remains scarce. Extant studies on information sharing behavior in SNS have validated the influential of social factors extracted from social capital theory, socio-technical theory, and motivation theory. Social capital factors, such as the strength and centrality of social ties embedded in the social structure, shared vision, and shared languages, which measure similarity between users, promote knowledge sharing in virtual communities (Chu, 2009; Rao *et al.*, 2011). For example, Chiu *et al.* (2006) used the data collected from 310 members of one professional virtual community and confirmed the relationship between social capital and knowledge sharing. However, compared with existing shared items in SNS, such as photos, blogs, music, and news, m-coupons have other notable characteristics that may affect the sharing behaviors of users. M-coupon is a type of mobile advertising that contains promotion information. Given that m-coupon sharing behavior is considered a viral marketing strategy, negative effects, such as fear of spamming, are critical in sharing behavior (Dickinger and Kleijnen, 2008). Information sharing, such as music and news sharing, is mostly considered for hedonic benefits. However, drivers of m-coupon sharing behavior of users is considered for utilitarian benefits (Chandon *et al.*, 2000). The social capital factors, such as social ties, are supposed to be critical in m-coupon sharing; however, the mechanism is not clear. Besides, considering the viral marketing role of shared m-coupon, motivations that trigger m-coupon sharing behavior may differ from previous research on information sharing. Thus, we draw from social capital theory and explored the influence of social factors on m-coupon sharing in SNS.

2.2 Motivation theory
Motivation theory has been widely used as the theoretical base for research on human behavior. Motivations of information sharing have been studied extensively. Based on previous research, motivation can be categorized into different types (e.g. intrinsic and extrinsic) from various perspectives. M-coupon sharing is voluntary and can be regarded as a prosocial behavior. As the core of prosocial motivations, altruism has been widely used to explain the organizational citizenship behavior of individuals within organizations and his/her intention to be a volunteer (Carlo *et al.*, 2005). Given that m-coupons are shared mostly because of the consideration of the welfare of other members, we suggest that altruistic motivation (e.g. sense of self-worth) is a crucial element in this study.

Users can obtain social integrative benefits by participating in SNS based on uses and gratifications framework (Nambisan and Baron, 2009). SNS not only promotes seeking and sharing of information among users but also provides a social space in which people maintain and build their social networks. User behaviors in SNS, such as leaving comments, sharing knowledge, and writing blogs, are driven by social interaction (Oh, 2012; Peddibhotla, 2013). M-coupon viral marketing in SNS mostly obtains social integrative benefits, which are proved to be the most influential factors in

information sharing in virtual community (Lee and Ma, 2012). SNS users may voluntarily share m-coupons to satisfy their social needs and build a strong relationship with others. Therefore, based on extant research on motivations in information sharing and social media participation, we develop sense of self-worth as an altruism motivation and socializing as a social motivation as the most influential factors in the context of m-coupon sharing in SNS.

2.3 Social capital theory
Social capital refers to "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or a social unit" (Chiu *et al.*, 2006; Zhao *et al.*, 2012). It differs from other capital, such as financial and human capital, because its asset is rooted in relationships among people. Social capital can promote a variety of friendly behaviors, such as social interpersonal cooperation in the community (Chow and Chan, 2008; Zhao *et al.*, 2012). Online communities create a new context in which users develop and accumulate social capital. It can induce the loyalty of the individual to the online community, as manifested in information sharing and content contribution (Hsiao and Chiou, 2012).

Nahapiet and Ghoshal (1998) indicate that social capital has three dimensions, namely, structural, relational, and cognitive dimensions. Structural capital represents the overall connection pattern among members; it reflects the position of the user in the social system and determines the ability of users to gain access to resources in this system. In prior studies, individual centrality and social ties have been shown to reflect structural capital. Social ties describe the degree of contact and accessibility of an SNS member with his or her contacts on a friends list (Chu, 2009). Social ties can reflect the structure and quality of a relationship within a social network. Relational capital describes the level of trust among the members through prolonged interaction (Nahapiet and Ghoshal, 1998). It reflects the effective nature to other members and the personal qualities of the interpersonal relationships within a social system, such as norms, trust, and identification. Cognitive capital refers to resources that can promote individual-individual and individual-system understanding (Nahapiet and Ghoshal, 1998). High cognitive social capital enables users to develop similar perceptions and goals toward an event.

Social capital as a valuable asset can benefit users and has an effect on information and knowledge sharing both in traditional organizations and virtual communities. The knowledge sharing intention of an employee can be explained by the three dimensions of social capital, namely, structural social capital (social tie), relational social capital (affect-based trust), and cognitive social capital (shared goals), which are positively related to knowledge sharing in organizations (Chow and Chan, 2008; Yang and Farn, 2009). Similar results have also been found in virtual communities. For example, Zhao *et al.* (2012) collected quantitative data from a famous commercial community in China. After testing their research model, the results reflected that three dimensions of social capital affected intention to share knowledge. In online game communities, structural social capital – measured by individual centrality and social ties – positively influence users' loyalty toward the community through the relational, utilitarian, and normative processes (Hsiao and Chiou, 2012). Thus, we use social capital theory and motivation theory as theoretical bases to examine the factors that affect m-coupon sharing intention in SNS.

3. Research model and hypotheses
Based on the literature review above, which covered concepts such as m-coupon sharing intention in SNS, social capital theory, and motivation theory, we propose our

research model in Figure 1. We hypothesize that social ties, perceived similarly, and trust from social capital theory affect the motivations of users, which in turn, positively influence the intention to share m-coupons in SNS. The theoretical descriptions of the corresponding relationships are presented in Figure 1.

3.1 Motivations and m-coupon sharing

Sense of self-worth in this study refers to the degree to which an individual shows a positive cognition manifested by his/her m-coupon sharing behavior (Bock *et al.*, 2005). Sense of self-worth is an example of altruistic motivation. It is a positively cognitive behavior based on the feelings of personal contribution to others. Cheung and Lee (2012) note that sense of self-worth positively influences voluntary information sharing. An individual who evaluates the link between his contribution and the welfare of other members is likely to contribute information (Oh, 2012). Sense of self-worth in our study measures the extent to which the forwarded m-coupon can benefit the receiver by obtaining monetary value. When other SNS members redeem the m-coupon to buy products or services at a lower price, users with high sense of self-worth are willing to share m-coupons in SNS. Given that m-coupons are shared based on the consideration for the welfare of other members, we suggest that sense of self-worth is crucial:

H1. Sense of self-worth has a positive effect on m-coupon sharing intention in SNS.

Socializing can be measured by the extent to which content or news sharing helps develop and maintain relationships among members on SNS (Lee and Ma, 2012). Socializing motivation is positively connected with the loyalty of users and regarded as a gratification that motivates individuals to share knowledge in traditional organizations (Teng and Chen, 2014). It is also an intrinsic motivator for users to engage in information sharing on the internet or within social media channels (Anger and Kittl, 2012). SNS provides various methods for users to maintain social interaction with other users, such as posting, commenting, and reviewing. By sharing m-coupons, users can keep in touch and build strong relationships with "friends." Besides, users who are eager to enhance sense of
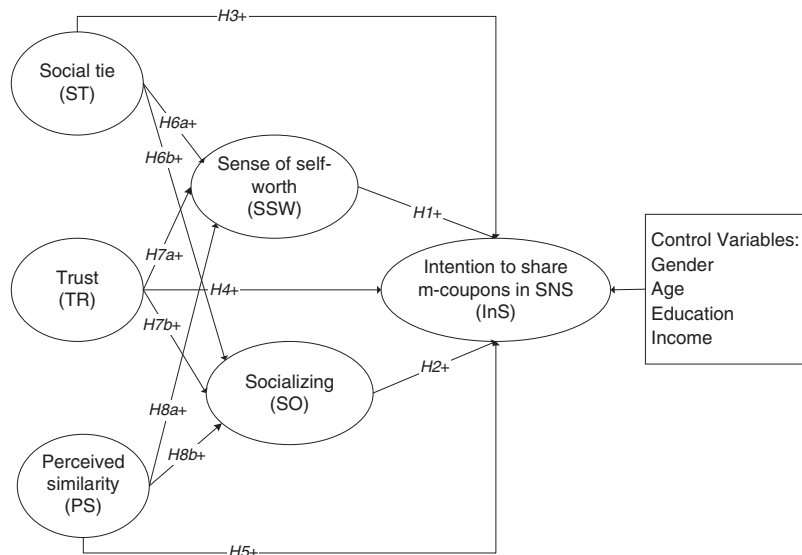
Figure 1.
Research model

belongingness to the community contribute sharable m-coupons. Thus, individuals with high socializing motivation intend to share m-coupons with others in their social network:

> *H2.* Socializing has a positive effect on m-coupon sharing intention in SNS.

3.2 Social capital factors
Several studies on information sharing behavior in SNS have focussed on the influence of social factors, such as social ties. Social ties affect knowledge sharing in SNS in a positive manner (Chai and Kim, 2012). Social ties can reflect the degree and accessibility of contacts on a friends list in SNS (Chu, 2009). In the present study, we define social ties based on the amount of interaction time, communication frequency, and intimacy among individuals. Previous studies have revealed that users are susceptible to WOM from strong ties. Tie strength from structural social capital boosts product-related electronic WOM in SNS (Chu, 2009). Users who have a good relationship with others tend to share interesting and valuable information (e.g. m-coupons) with them. When an individual has a habit of keeping long and frequent discussion with "friends" in SNS, he/she is likely to share m-coupons. The use of m-coupons may proliferate easily among SNS members with strong relationships:

> *H3.* Social ties among members in SNS have positive effects on m-coupon sharing intention.

As typical relational capital, trust describes the affective connection with other members and has an important role in information sharing in virtual community. Chiu *et al.* (2011) and Chang and Chuang (2011) argue that trust is a critical antecedent of information sharing and determines the quality of knowledge sharing behavior. When relationships are high with trust, SNS users are likely to engage in m-coupon sharing:

> *H4.* Trust among members in SNS has a positive effect on m-coupon sharing in SNS.

Cognitive social capital is essential in the current study because the evaluation of m-coupon is based on user consumption preference and habits. In the context of SNS, the cognitive capital that reflects the common characteristics of members (e.g. shared goals and values) can be presented by perceived similarity (Zhao *et al.*, 2012). Users tend to share m-coupons with other members who hold similar spending habits and interest because the evaluation of m-coupon largely depends on one's consumption preference. Similar consumers with common values can share the same evaluation of m-coupon. Perceived similarity acts as an important capital in the context of m-coupon sharing:

> *H5.* Perceived similarity among members in SNS has a positive effect on m-coupon sharing in SNS.

Frequent interaction increases familiarity among members. This cognitive behavior helps the formation of one's sense of self-worth when sharing m-coupons. Moreover, social capital derived from intense interaction can induce the development of community norms. Users with more social capital embedded in SNS may abide by this extrinsic demand and perform cooperatively (Chow and Chan, 2008; Hsiao and Chiou, 2012), thereby increasing their sense of contribution to others by sharing m-coupons. Individuals with strong social ties with other members in SNS need to increase their sense of self-worth to enhance the feeling of importance within such context. Individuals with regular connections with others are likely to develop a "habit of cooperation," which encourages them to act collectively (Kankanhalli *et al.*, 1988). Given that sharing m-coupons in SNS is only one type of interpersonal communication, users

who interact with others frequently develop a habit of socializing by sharing m-coupons. Frequent interactions heighten users' willingness to maintain their relationships with others (Chai and Kim, 2012). We suggest that users with strong social ties also have strong socializing motivation:

H6a. Social ties among members in SNS have positive effects on their sense of self-worth.

H6b. Social ties among members in SNS have positive effects on individual socializing.

In the context of m-coupon viral marketing, users are likely to expect those who are trustworthy to share m-coupons. Chow and Chan (2008) suggest that the greater the social trust among organizational members, the more favorable the subjective norm with respect to knowledge sharing. Individuals who have great social trust have a high level of sense of self-worth by providing trustworthy m-coupons. Based on social learning theory, the assessment of the behavior of other members determine one's voluntary helping behavior, such as sharing knowledge (Fang and Chiu, 2010). Trust is critical dealing with "free-rider" issues in m-coupon sharing context. Individuals are willing to share m-coupons in SNS to help others if those others are trustworthy. Besides, trust in other members positively affects a member's sense of belonging to the virtual community. Users are willing to interact with community members if they have a higher level of trust:

H7a. Trust among members in SNS has a positive effect on their sense of self-worth.

H7b. Trust among members in SNS has a positive effect on individual socializing.

Given that the evaluation of the usefulness of m-coupons is based on the preferences and consumption habits of an individual, the perceived similarity of the sender with the receiver helps ensure the perceived usefulness of shareable m-coupons. This belief improves the sense of self-worth of an individual. Furthermore, individuals tend to keep in touch and interact with those with whom they share attributes, such as interests, goals, and values. Users are also likely to adopt recommendations from similar individuals. Shared attributes not only guarantee high evaluation of information but also enhance the perceived efficacy of communication (Chiu *et al.*, 2006), which reflects the belief that information is useful to others (Oh, 2012). M-coupons are highly valued if the receiver shares similar values and interests with the sender, thereby increasing the sense of self-worth of the sender. Similar users in SNS may also interact with other members by sharing m-coupons. Individuals identify themselves with the group of people who have similar attributes (Zhao *et al.*, 2012). This kind of self-categorization induces a sense of belonging and drives users to interact with those in the specified group. In the context of m-coupon sharing in SNS, familiar users socialize in their community by sharing m-coupons. Thus:

H8a. Perceived similarity among members in SNS has a positive effect on one's sense of self-worth.

H8b. Perceived similarity among members in SNS has a positive effect on one's socializing motivation.

Four control variables are introduced into our model, namely, gender, age, education, and monthly income. These variables may affect m-coupon sharing. Gender and age

significantly affect the usage of knowledge sharing systems (Yan and Davison, 2013). Therefore, gender and age may also influence m-coupon sharing in SNS. Moreover, users with high level of education are prone to coupon use (Bawa and Shoemaker, 1987). Thus, we control the effect of education on m-coupon sharing. Chiou-Wei and Inman (2008) argued that family income can affect the redeem intention of electronic coupon. Thus, adding income as a control variable is necessary.

4. Research methodology

4.1 Construct measurement
All items selected must generalize the concept of construct to ensure content validity. We adopted measurement items that have been validated in previous studies to improve the validity of the instrument. Some modifications were made to satisfy our research context. The original items in English were back translated to develop the instrument. The initial survey form was reviewed by two IS experts and ten graduate students to ensure face validity. Face validity refers to the degree to which a measure of an assessment instrument reflects targeted objectives and the factors to be measured (Nunnally and Bernstein, 1994). According to Hardesty and Bearden (2004), the involvement of experts for face validity can reinforce scale reliability and validity. The two IS experts were selected because they specialized in mobile service research and had extensive experience in sharing m-coupons in SNS. These experts were also used for face validity in the context of online marketing (Tirunillai and Tellis, 2014). Revisions were made based on their feedback. As presented in the Appendix, the final scales consist of 21 items to measure the constructs of social ties, perceived similarity, trust, sense of self-worth, socializing, and intention to share m-coupons in SNS. All items were measured with a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

4.2 Data collection
We used online and printed surveys to collect data. The online formal survey was presented on Zhubajie (www.zhubajie.com) for three weeks. Zhubajie is one of the largest trading platforms for online services in China, and has over six million registered members as of 2011. Each valid questionnaire in our survey was paid CNY 2. We ensured the uniqueness of each questionnaire by validating the IP addresses. A total of 131 members completed the survey. We obtained 129 valid responses by deleting two duplicated responses from the same person. The offline response came from the users of Dingding couponing applications, which were the most famous in China. The respondents were required to fill out the questionnaires based on their coupon usage experience. We carefully examined the returned forms by removing those with careless and incomplete responses. We ultimately received 297 valid questionnaires in total. There is no significant difference between these two data source. Table I shows the demographics of the sample.

4.3 Data analysis and results
In this section, we tested the validity and reliability of the measurement with Partial least squares (PLS). Unlike covariance-based structural-equation-modeling, PLS is component-based and has been accepted by most IS researchers (Chow and Chan, 2008; Liu and Wang, 2014a). PLS is not highly demanding on sample size and residual distribution, which made it popular (Brown *et al.*, 2008), especially in studies related to human belief, attitude, and behavior. We chose PLS for two reasons. First, PLS is effective for our small sample size (297 respondents) (Wetzels *et al.*, 2009). Second, PLS is appropriate for an exploratory study.

Measure	Item	Count	Percentage
Gender	Male	162	54.5
	Female	135	45.5
Age	< 18 years	1	0.3
	18-24 years	184	62.0
	25-30 years	84	28.3
	31-35 years	22	7.4
	36-40 years	5	1.7
	> 40 years	1	0.3
Education	Secondary school or lower	4	1.4
	Junior college	28	9.4
	Bachelor's level	161	54.2
Monthly income	Master's level or higher	104	35
	< 1,000 CNY	168	56.6
	1,000-3,000 CNY	74	24.9
	3,001-5,000 CNY	38	12.8
	5,001-7,000 CNY	10	3.4
	> 7,000 CNY	7	2.4

Table I.
Sample demographics

Before testing the hypotheses, we first conducted exploratory factor analysis (EFA) to test the factorial reliability and validity of the measurement scales. Bartlett's test of Sphericity produced a Kaiser-Meyer-Olkin of 0.876 ($p < 0.01$), indicating the appropriateness of using principal components for the data. As shown in Table II, the results indicate that all items loaded on the expected factors were greater than 0.6. Factor loadings on other factors were below 0.4. These results imply good convergent and discriminant validity.

Factor	ST	PS	TR	SSW	InS	SO
ST1	0.723	0.116	0.356	0.125	0.004	0.128
ST2	0.811	0.113	0.176	0.068	0.063	0.086
ST3	0.809	0.182	−0.084	0.058	0.273	0.079
ST4	0.751	0.162	0.046	0.091	0.262	0.084
ST5	0.683	0.206	0.154	0.135	−0.061	0.189
PS1	0.168	0.750	0.175	0.128	0.144	0.083
PS2	0.191	0.787	0.098	0.130	0.162	0.142
PS3	0.203	0.786	0.171	0.142	0.113	0.144
PS4	0.109	0.707	0.102	0.080	0.106	0.067
SSW1	0.143	0.108	0.116	0.844	0.199	0.101
SSW2	0.114	0.162	0.120	0.856	0.187	0.096
SSW3	0.076	0.141	0.049	0.657	0.167	0.191
SO1	0.174	0.122	0.148	0.391	0.113	0.706
SO2	0.162	0.142	0.114	0.176	0.126	0.835
SO3	0.141	0.154	0.047	0.004	0.321	0.736
TR1	0.157	0.146	0.846	0.131	0.083	0.182
TR2	0.160	0.198	0.859	0.044	0.115	0.033
TR3	0.118	0.154	0.822	0.128	0.196	0.064
InS1	0.152	0.218	0.206	0.343	0.687	0.283
InS2	0.185	0.236	0.145	0.234	0.792	0.179
InS3	0.149	0.181	0.187	0.271	0.747	0.219

Table II.
Principal component analysis with varimax rotation

Confirmatory factor analysis was also conducted to further check the reliability and validity of data. The inter-construct correlations, average variance extracted (AVE), Cronbach's α, composite reliability (CR), and the square root of AVE were calculated to examine the reliability and validity of data. As shown in Table III, all Cronbach's α values were higher than 0.7, which indicates high reliability of the scales (Liu and Wang, 2014b). The AVE of each construct exceeded 0.5, and the CRs were all above 0.8. Thus, the reliability and validity were acceptable (Liu and Wang, 2016). We also checked discriminant validity. As shown in Table IV, all inter-construct correlations were smaller than the corresponding square root of AVE for all constructs, indicating good discriminant validity (Liu, 2015a).

Data from self-reporting may lead to common method bias. We test this bias with Harman's one-factor test, in which all constructs were entered into EFA. Six factors were extracted, and no single factor accounted for the majority of total variance. Our data do not support the existence of common method bias as the EFA extracted more than one factor, and the first factor cannot explain the majority of the variance. Therefore, the common method bias is not a serious concern in this study.

Factor	Item	Standard loading	CR	Cronbach's α	AVE
ST	ST1	0.789	0.901	0.863	0.646
	ST2	0.824			
	ST3	0.838			
	ST4	0.816			
	ST5	0.750			
TR	TR1	0.907	0.926	0.880	0.806
	TR2	0.900			
	TR3	0.889			
PS	PS1	0.825	0.889	0.832	0.668
	PS2	0.862			
	PS3	0.869			
	PS4	0.702			
SSW	SSW1	0.900	0.889	0.810	0.728
	SSW2	0.905			
	SSW3	0.749			
SO	SO1	0.850	0.879	0.793	0.709
	SO2	0.884			
	SO3	0.790			
InS	InS1	0.910	0.926	0.881	0.808
	InS2	0.905			
	InS3	0.880			

Table III.
Scale properties

	InS	PS	SO	SSW	ST	TR
InS	(0.900)					
PS	0.505	(0.817)				
SO	0.573	0.407	(0.842)			
SSW	0.578	0.387	0.461	(0.853)		
ST	0.437	0.461	0.413	0.334	(0.804)	
TR	0.429	0.414	0.337	0.320	0.383	(0.898)

Note: The number in the diagonal is the square root of AVE

Table IV.
Correlations and the square root of AVE

The research model and hypotheses were tested by Smart PLS 2.0. Figure 2 shows the results. The control variables have various effects on the dependent variable. Although the effect of gender and income insignificantly influence m-coupon sharing in SNS, the age and educational level of users have significant effects on m-coupon sharing intention ($\gamma = -0.08$, $p < 0.05$; $\gamma = 0.08$, $p < 0.05$). The results also show that both sense of self-worth ($\gamma = 0.32$, $p < 0.001$) and socializing ($\gamma = 0.25$, $p < 0.001$) are important motivations that trigger m-coupon sharing in SNS. Thus, H1 and H2 are supported. All social capital factors, namely, social ties ($\gamma = 0.07$, $p < 0.05$), trust ($\gamma = 0.14$, $p < 0.05$), and perceived similarity ($\gamma = 0.18$, $p < 0.001$), are positively related to m-coupon sharing intention. Hence, H3, H4, and H5 are supported. Regarding the relationship between social capital factors and motivations, social ties among SNS members positively affect sense of self-worth ($\gamma = 0.16$, $p < 0.05$) and socializing ($\gamma = 0.25$, $p < 0.001$). Thus, H6a and H6b are supported. Trust in other individuals is positively related to sense of self-worth ($\gamma = 0.16$, $p < 0.05$) and socializing motivation ($\gamma = 0.15$, $p < 0.05$), thus supporting H7a and H7b. The results also indicate that perceived similarity has a positive effect on sense of self-worth ($\gamma = 0.25$, $p < 0.001$) and socializing motivation ($\gamma = 0.23$, $p < 0.001$). Hence, H8a and H8b are supported. The hypothesis testing results are summarized in Table V. All item loadings on their hypothesized latent variables are significant, and the relationships between constructs are supported.

Given that motivations are "sitting" between the three social capital factors and the intention to share m-coupons, their mediating effects on the relationship between these two sets of factors were examined. Following the procedures suggested by Baron and Kenny (1986), we test the existence of a mediating effect. The mediating effects are statistically tested by conducting the Sobel test, which is a highly recommended assessment tool. Table VI shows that the indirect effects of the independent variables on
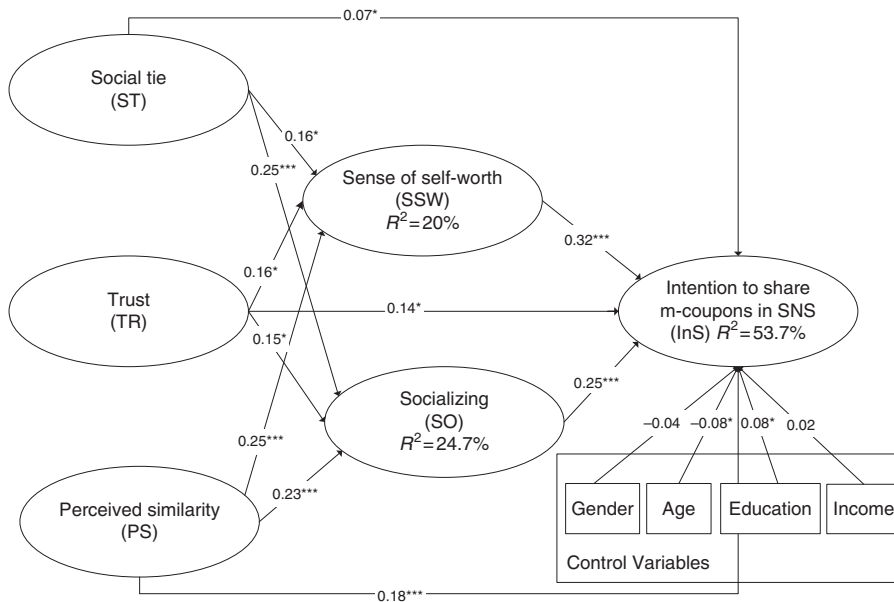
Notes: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Figure 2.
Model testing results

Table V.
Summary of
hypothesis
testing results

Hypothesis	Result
H1: sense of self-worth→intention to share m-coupons in SNS	Supported
H2: socializing→intention to share m-coupons in SNS	Supported
H3: social ties→intention to share m-coupons in SNS	Supported
H4: trust→intention to share m-coupons in SNS	Supported
H5: perceived similarity→intention to share m-coupons in SNS	Supported
H6a: social ties→sense of self-worth	Supported
H6b: social ties→socializing	Supported
H7a: trust→sense of self-worth	Supported
H7b: trust→socializing	Supported
H8a: perceived similarity→sense of self-worth	Supported
H8b: perceived similarity→socializing	Supported

Table VI.
Mediating effects
of motivations

					IV+M→DV		
IV	M	DV	IV→DV	IV→M	IV	M	Sobel test statistics
ST	SSW	InS	0.439***	0.335***	0.275***	0.486***	2.15*
ST	SO	InS	0.439***	0.414***	0.241***	0.473***	3.06**
TR	SSW	InS	0.429***	0.322***	0.272***	0.491***	2.15*
TR	SO	InS	0.429***	0.344***	0.265***	0.484***	2.18*
PS	SSW	InS	0.505***	0.387***	0.331***	0.45***	2.81**
PS	SO	InS	0.505***	0.408***	0.326***	0.441***	2.65**

Notes: IV, the independent variable; M, the mediator; DV, the dependent variable. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

the dependent variable through the mediators differ significantly from zero. Thus, sense of self-worth and socializing partially mediate the relationship between social capital factors and intention to share m-coupon.

5. Discussions and implications

5.1 Theoretical implications

The current study investigated the effects of social capital and motivations on m-coupon sharing intention in SNS by integrating social capital and motivation theories. Specifically, social capital, which includes social ties, trust, and perceived similarity, positively affect sense of self-worth and socializing. These two motivations positively affect m-coupon sharing intention in SNS. Several theoretical implications can be concluded from our results.

First, we contribute to the literature by determining the critical factors that influence the intention of users to share m-coupons via SNS. We provide empirical evidence to support the positive association of social capital (i.e. social ties, trust, and perceived similarity) and motivations (i.e. sense of self-worth and socializing) with the intention to share m-coupons in SNS. Users tend to share m-coupons when they have strong social ties, trust, and high level of perceived similarity with other members. This finding has addressed the previous gap in the arguments that social ties are negatively related to information sharing, but positively affect information sharing in a virtual community. Our results support the previous finding that social interaction and trust have positive effects on knowledge sharing (Chang and Chuang, 2011).

The results of this study have addressed another research gap on the effects of motivations on information sharing. Our evidence clearly demonstrated that sense of self-worth and socializing positively influence sharing intention. The results support the previous observation on the positive effect of sense of self-worth on knowledge sharing intention (Bock *et al.*, 2005). Our findings are also consistent with Lee and Ma (2012), who reported that socializing motivates users to share news on social media. Users can interact with others, exchange usage experience, and maintain contact with a "friend." Thus, users are very likely to share m-coupons in SNS.

Second, our study contributes to existing theory by addressing the gap in research wherein social capital and motivation theories are applied separately. Our results indicate that social capital factors stimulate the motivations of users to share m-coupons in various SNS. In SNS, social ties with other members are positively related to sense of self-worth and socializing. Active SNS users consider m-coupon sharing as a means to maintain close and constant connection with friends wherein the receiver can gain monetary value. Hence, users with strong social ties aspire to enhance their sense of importance, which triggers them to share m-coupons for the welfare of other members. Our findings further demonstrate that trust is a critical antecedent of motivations in m-coupon sharing. An SNS user who believes other members possess integrity, benevolence, and ability has a strong sense of self-worth and socializing benefits when sharing m-coupons in SNS. Moreover, our results show the significant and positive relationship between perceived similarity and sense of self-worth and socializing. Perceived similarity is essential in m-coupon sharing because a high level of perceived similarity contributes to the volition of users to socialize by sharing m-coupons. Individuals with similar interests and values have strong motivation to interact with one another by sharing m-coupons in SNS.

Finally, through the mediating effects test, our research finds that motivations significantly mediate social capital factors and the intentions of SNS users to share m-coupons. Some studies have ignored the mediating role of motivations, which results in the inconsistent effect of social capital on sharing intention. For example, tie strength has an insignificant effect on opinion giving, but it has a positive effect on opinion passing and seeking (Chu, 2009). The results of the research are consistent with Lin and Lu (2011), who determined that the network externalities of SNS users influenced their participation based on motivations. Previous studies and the current study showed that motivations (sense of self-worth and socializing) provide an important mechanism by which social capital factors exert an influence on m-coupon sharing intention.

5.2 Managerial implications

Our findings have some implications for practice. Given that both social capital and motivations positively affect the intention to share m-coupons in SNS, m-coupon providers should learn ways to improve social capital and the motivations of users in SNS. They can encourage and facilitate social interactions among users, which establish strong social ties and trigger m-coupon sharing intention. M-coupon providers can also organize activities in SNS to encourage users to interact with one another, thereby strengthening their social ties. Social network communities and m-coupon providers should hold face-to-face activities because these activities strengthen social relationships and deepen the sense of belongingness of users, thus inspiring socialization and helpful behavior.

Our findings reveal that motivations partially mediate the relationship between social capital and m-coupon sharing. Hence, improvement of user motivations in SNS should be more significant than that of social capital. M-coupon providers must ensure

the usefulness of m-coupons because their sense of self-worth triggers m-coupon sharing intention. They should not only guarantee attractive face value, but should also ensure that their m-coupons have a time-based element to prevent unintentional sharing of useless m-coupons. Considering the effect of socializing motivation on one's intention to share m-coupons, marketers should conduct an m-coupon marketing program that initiates involvement of users and their "friends."

The enhancement of sense of self-worth and socializing may be related to different m-coupon sharing intentions. Given that sense of self-worth is an altruistic motivation and socializing is a social motivation, the enhancement of sense of self-worth enables SNS users to share m-coupons voluntarily. The enhancement of socializing is a driven strategy offered by m-coupon providers to improve m-coupon sharing intention. Therefore, m-coupon providers should not ignore any aspect of motivations, but they should design a comprehensive strategy to enhance m-coupon sharing in SNS.

Social capital factors (e.g. social ties, trust, and perceived similarity) are positively related to one's sense of self-worth and socializing motivation. These motivations facilitate m-coupon sharing in SNS. In line with this observation, SNS managers and m-coupon providers should enhance perceived similarities and trust among users in SNS. M-coupon providers can initiate forums that facilitate the formation of perceived similarities, enhance the sense of belongingness of users, and develop trust relationships among each other in SNS. SNS providers can encourage users to share personal information, such as preferences and demographic information, which enable them to find similar peers easily.

6. Conclusions

This study proposed an integrated theoretical framework by integrating social capital theory and motivation theory to investigate m-coupon sharing intention in SNS. This study has several contributions. First, two significant motivations, namely, sense of self-worth and socializing, have positive effects on m-coupon sharing intention in SNS. Second, we find that social capital factors, namely, social ties, trust, and perceived similarity, are positively related to m-coupon sharing intention. Sense of self-worth and socializing partially mediate the relationship between social capital factors and m-coupon sharing intention.

Several limitations exist in this research. First, the sample size of this study is not large. A bigger sample size could generate more considerable explained variance. Second, the type of m-coupons (e.g. push or pull m-coupons) was not considered in this study. Different results may be obtained from varied types of m-coupons. Thus, future research should investigate the influence of coupon types on m-coupon sharing intention. Third, we focus on m-coupon sharing from the perspectives of consumers. Future research can examine retailer adoption and rejection of m-coupon marketing strategies implemented in SNS.

This study also has some directions for future research. First, other factors, such as opinion leadership, economic reward, perceived ease of use, and perceived entertainment, may affect the m-coupon sharing intention of users and require further examinations. Second, we measured social capital subjectively based on the users. Effective tools are available to control the reliability and validity of data. Future research can collect objective data (Liu, 2015b), such as online review number and frequency of interactions in SNS, to capture the social capital of users. Third, factors that inhibit m-coupon sharing intention, such as privacy concerns and cost of sharing, should be further investigated. Finally, the characteristics of m-coupons and sharing platforms, such as personalization, sociability, and interactivity, may also be essential in facilitating m-coupon sharing.

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(The Appendix follows overleaf.)

Appendix

Social ties (ST)	Chiu *et al.* (2006), Chu (2009)
ST1	I have a very good relationship with the contacts on my "friends" list on this SNS
ST2	I am very close to the contacts on my "friends" list on this SNS
ST3	I always hold lengthy discussions with the contacts on my "friends" list on this SNS
ST4	I communicate with the contacts on my "friends" list on this SNS frequently
ST5	The contacts on my "friends" list on this SNS are important to me
Perceived similarity (PS)	Zhao *et al.* (2012)
PS1	I feel the contacts on my "friends" list on this SNS have common goals
PS2	I feel the contacts on my "friends" list on this SNS have interests similar to mine
PS3	I feel the contacts on my "friends" list on this SNS have values similar to mine
PS4	I feel the contacts on my "friends" list on this SNS have experience similar to mine
Trust (TR)	Chu (2009)
TR1	I trust most contacts on my "friends" list on the SNS
TR2	I have confidence in the contacts on my "friends" list on the SNS
TR3	I can believe in the contacts on my "friends" list on the SNS
Sense of self-worth (SSW)	Bock *et al.* (2005), Zha *et al.* (2012)
SSW1	Sharing m-coupons would help the contacts on my "friends" list solve problems
SSW2	Sharing m-coupons would create new opportunities for the contacts on my "friends" list on this SNS
SSW3	Sharing m-coupons would help the contacts on my "friends" list on this SNS get monetary value
Socializing (SO)	Lee and Ma (2012)
SO1	I can interact with people when sharing m-coupons on SNS
SO2	I can keep in touch with people when sharing m-coupons on SNS
SO3	I feel that I belong to a community when sharing m-coupons on SNS
Intention to share m-coupons (InS)	Bock *et al.* (2005), Lee and Ma (2012), Rao *et al.* (2011)
InS1	I intend to share m-coupons on this SNS in the future
InS2	I expect to share m-coupons on this SNS contributed by other users
InS3	I plan to share m-coupons on this SNS regularly

Table AI.
Scales

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