Reputation Management in Social Commerce Communities

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Reputation Management in Social Commerce Communities

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ABSTRACT
The social media revolution has created a shift from in E-commerce to social commerce. The voice of influence is moving from traditional marketers towards social commerce communities (SCCs). This transformation allows community members to develop rich relational-related resources via digital online network. In this study, we focus on reputation building based on social capital theory in the context of social commerce community. We enhance the understanding on social capital theory in social commerce communities by identifying antecedents to contributors’ (i.e. members) community reputation. By analyzing panel data collected from a popular online forum, we found that reputation building is influenced by member centrality (structural capital), member tenure (cognitive capital), and member community reciprocity (relational capital). Of these, member centrality is the most influential factor. The study makes important contributions to research and practice.

Keywords
Reputation, social commerce community, cognitive capital, structural capital, relational capital

INTRODUCTION
User-generated content (UGC) produced by a huge number of members in online consumer communities is crucial to rapidly expand e-commerce market. The power of “crowds” across e-commerce communities assists consumers to effectively navigate products they like (Feick and Price, 1987) via reducing consumer uncertainty (Dellarocas, 2003) and further assists consumers’ purchase decisions (Olbrich and Holsing, 2011; Stephen and Toubia, 2010). With the burgeoning of online social networks, members are able to develop richer resources via intensive interactions in online consumer communities. The embeddedness of social media analytics significantly invigorates online consumer communities by formulating intertwined digital social networks. The emergence of social media analytics enables those online consumer communities to attract owners of e-commerce transaction platforms who are willing to pump money into the communities in order to benefit from social marketing programs (Adjei et al., 2010; Dholakia et al., 2009; Schau et al., 2009). Recently, the linkage between online shopping and social networking leads to a new form of e-commerce – social shopping (from now on, we use the terms ‘social commerce communities’ and ‘online consumer communities’ interchangeably). The outcome of this new business model is the social shopping community, which operates as an updated version of the traditional online consumer community. Social network characteristics in consumer communities further glue consumers together and let them effectively discover, share, recommend, rate and click hyperlinks to products that they like in e-shops (Olbrich and Holsing, 2011). The community regularly selects the most well positively rated members as “lead members”. They are regularly recommended on the homepage of the website and thus received much higher number of audiences. For several of them who are actual sellers in C2C (Consumer to Consumer) transaction platform, standing out could help them attract a vast number of potential customers into their e-shop by boosting shop awareness (Olbrich and Holsing, 2011). Despite the significance of this new business model, we still know little about how members could manage their online community resources and actions to gain a good reputation in the context of the online consumer community.

More and more sellers in e-commerce markets are seeking an effective marketing program. Social shopping communities become an effective weapon, which boosts the popularity of sellers and sustainably brings large volumes of consumer traffic.
to the transaction platform. It is very important to study how lead members (i.e. those who received the most attention and reputation) emerge in these communities for two reasons. On one hand, identifying factors that shape one’s community reputation could provide an index for those who want to become the “lead members”. Furthermore, amplified community interactions and activities via social ties help members (more and more sellers that own e-shops and sell products on C2C transaction platforms (e.g. taobao) join this type of community) promote products. Effectively managing reputation in an online consumer community can help sellers broadcast their e-shop’s popularity. On the other hand, for operators in the social shopping communities, they can incorporate more elements to improve their rating and evaluation system (i.e. system that assists operators to choose “lead members”).

In summary, online consumer communities, which bring hundreds of thousands of potential consumers into C2C transaction platforms (e.g. www.taobao.com), serve as proxies for bringing larger sized audiences to C2C transaction platforms. The burgeoning of these social media related online consumer communities are mirrored by the commercial success and so considerable venture capital has been invested (Bloomberg, 2012; Rao, 2010; Tedeschi, 2006). The novelty of the online consumer community allows members to actively share experiences, views on products and innovate in other types of product-related knowledge contributions via online social connections. To sum up, it is becoming increasingly important for academics and practitioners to understand how lead members emerge in the online consumer community, and how to govern their social capital to become lead members. In particular, this study intends to answer: How can community members effectively manage social capital embedded in intensive activities in online consumer communities to gain reputation?

To better understand how social capital acts as a gateway to becoming a “lead member”, we focus on factors that influence members’ reputation in online consumer communities. Our study responds to the call of previous literature (Godes et al., 2005; Libai et al., 2010) for a broader look at the e-commerce community interactions, which allow members to develop social capital in the online consumer community. In particular, we examine reputation management by incorporating a social capital lens. We use negative binomial regression to do data analysis in this study.

The contributions of this study unfold in three aspects. First, we investigate the gateways to becoming a distinguished member in online consumer community. Second, we enhance the understanding on social capital theory in online consumer community by identifying antecedents to contributors’ community reputation. Third, this study intends to provide implications for practitioners. Finally, our empirical evidences provide insights for community members to understand how to become a cutting-edge member by better managing reputation.

We organize the rest of this paper as follows. In the next section, we introduce the general context of online consumer community as its relatively new context. In the third section, we present the literature review and hypotheses development. We then describe our source of data and methodology. Next, we present the results of data analysis. Finally, we conclude with a discussion of implications for theory and practice.

SOCIAL COMMERCE COMMUNITY

Social commerce communities have been receiving more and more attention that lots of them are sponsored by firm (this is one of the key revenues) A social commerce community is paid for by operators (i.e. owners) of a C2C transaction platform (e.g. www.taobao.com) in that the former brings enormous network traffic into C2C transaction platform (via direct hyperlinks to an assigned C2C e-shop). This type of community attracts many users to interact through embedded social media analytics. Furthermore, they assist users to navigate the products with personalized recommendations and shared opinions from others. This capability allows them to effectively find products in which they are interested.

As members contribute, they achieve recognition, which signals their status, prestige and expertise. In online consumer communities, customers have intensive product-related interactions. These interactions enable users to nurture community experiences including sharing user’ views, experiences on all kinds of products, which influence individuals’ attitude (Bickart and Schindler, 2001; Gruen et al., 2006). Fellows’ attitudes are mirrored by giving others appreciation, praise and endorsement via giving them ‘like’ in online consumer communities (Olbrich and Holsing, 2011). Intensive online interactions are facilitated by online social networks, which mobilize social capital resources in the community.

LITERTURE REVIEW AND HYPOTHESES DEVELOPMENT

Online consumer communities often serve as proxies for consumers or potential consumers to effectively find products they like. The knowledge contribution lies in community members’ products recommendation, views and experience sharing practices. Their knowledge contribution is followed by a positive peer review and is, consequently, an acknowledgement of an individual’s substantive contributions. This psychological concept elaborated by Mitchell and Daniels (2003), explains that performance is an “outside standard that is…usually assessed by others” (p.227). This concept also applies in an online consumer community that a member’s performance is rewarded by being given “online rewards” (“likes” in our research
site). The members who shared knowledge in online consumer community can receive “feedback and acceptance as quality features”. This assessment in an online consumer community is reflected by others’ positive assessment – “likes”. This performance-like index mirrors community members’ reputation in the online consumer community, in which social capital including tenure in the community (cognitive facet), networked ties (structural facet), and reciprocity (relational capital) are mobilized.

Social capital is typical defined as “resources embedded in a social structure that are accessed and/or mobilized in purposive action” (Lin 2001, p. 29). Social capital differentiates from other forms of capital as it is embedded in the social realm (Wasko et al., 2005). Social capital can be categorized into three dimensions – structural capital, relational capital and cognitive capital. Those actual and potential resources are embedded within the network, or derived from networked connections. Building on Nahapiet et al. (1998), prior studies have found that social capital facilitates production innovation, knowledge acquisition in organization context (Hansen et al., 1998, Yli-Renko et al., 2001). Online communities differ notably from organizational settings as community members often interact through online communication via digital social network. Emergence of social media analytics and web 2.0 allow more and more people to develop social capital in online consumer communities.

Recently, a social capital lens has been used as a theoretical foundation to understand the performance of individuals in online consumer communities. For instance, structural facets of social capital, such as network position and structure have been found to affect knowledge management practices (Chang et al., 2011). Some online community scholars focus on how three facets of social capital affect knowledge contribution outcome including quality and quantity and knowledge creation process (Chou et al., 2006, Xu et al., 2010). In summary, prior studies have mainly employed a social capital lens to explain collective action, community engagement and prosocial behavior mostly by employing self-report data (Wasko and Faraj, 2005, Mathwick et al., 2007). Researchers have found that social capital is very important to knowledge contribution actions in online communities. However, understanding knowledge contribution intentions or actions in general may not be able to reflect how good (reputation) a focal member is. This study then intends to fill in the gap by identifying how to manage social capital resources mobilized in the community for a member to build reputation. In particular, we conceptualize the contributors’ performance in online consumer communities as reputation and empirically examine the antecedents by incorporating a social capital perspective.

**Structural Capital (Social Network Centrality)**

In our online consumer community, social ties are formed via a social media analytic – microblog (follower-relationships). Community members can follow other members (which we call focal members). This intertwined network provides a stable infrastructure that enables follower members to constantly receive a stream of product-related information, advice and updates, including shared experiences, recommendations and views on products they are familiar with (Java et al., 2007; Olbrich and Holsing, 2011). Resultant linkages between community members allow them to connect with each other through active online activities. This structural property plays an important role, which helps members shape their reputation in online consumer communities.

It has been found that a node with many connections is more valuable than a member with fewer connections (Kiss and Bichler, 2008). A focal member with a high number of connections is more likely to benefit from the existence of the network (Stephen and Toubia, 2010). Resultant benefits enable a number of community members to stand out through recognition from fellow members as they have a much higher chance to be observed with rich accessibility to more member traffic. Alternative stated, a focal member with many followers could attract a larger size of audience. Moreover, focal members who are central in the network maintain higher levels of activity, through which richer message flow allows more members to be accredited (a member will be given “likes” if others are satisfied with their posts). Building upon this line of argument, it is inferred that the reputation assessed by peers in the online consumer community is positively influenced by the focal user’s centrality (number of ties) in an online social network. Thus, members who are central in the network are more likely to receive accreditation. We then hypothesize that:

**H1**: A member’s reputation is positively related to his/her social network centrality.

**Relational Capital (Member Community Reciprocity)**

Relational capital is developed when members have strong identification with collectives (Lewicki and Bunker, 1996). It is primarily used to facilitate individuals’ actions and it’s crucial for a community and its members (Coleman, 1990). As an important component embedded in relational capital, a reciprocity mechanism can be used to examine an individual’s activities in the online community (Wasko et al., 2005). Furthermore, relational ties among community members allow them to mutually reinforce each other (Hung et al., 2007). It is crucial to respond to members contributing (i.e. giving) actions via browsing, commenting and giving feedback on others’ opinions and views. In short, the reciprocity mechanism enhances the
power of each party connected by relational ties, through which both parties are appreciated and rewarded by fellow members. Thus, community members with reciprocity (Wasko and Faraj, 2000) are more likely to gain reputation. We hypothesize that:

\( H_2: \) A member’s reputation is positively related to his/her community reciprocity.

**Cognitive Capital (Member Tenure)**

Cognitive capital refers to “resources that make possible shared interpretations and meanings within a collective” (Wasko et al., 2005, pp 41). An actor’s cognitive capital is nurtured as s/he interacts with other community members over time. Compared to members with less community experiences, members with longer tenure gain better understanding on workarounds (Wasko et al., 2005). A certain level of shared understanding between community members allows them to accumulate hands-on experience over time (Chou et al., 2011). Those more experienced members in online consumer communities develop a better understanding on how their contributions are helpful for others, and can better understand other knowledge seekers’ (i.e. members who seek for advices on products in the online consumer communities) needs and preferences (Wasko et al., 2009; Chou et al., 2011; Orr, 1996). Gaining a better understanding on whether their knowledge contribution (i.e. recommend projects, sharing views and experiences) is relevant and valuable enables community members to be accredited with relative ease. This leads us to hypothesize that:

\( H_3: \) A member’s reputation is positively related to his/her tenure.
SSC also can interact with other members by giving a feedback of like to other members’ post. Therefore, the independent variable, social network centrality, is operationalized from the total number of followers. This measure is consistent with structural capital with Wasko et al.’s study (2005).

Reciprocity: feedback received. The SSC also provides statistics on the number of ‘likes’ received by a member on his/her post in the site. A member whose posts receive a large number of ‘likes’ from other members is likely to be a reciprocity receiver. Reciprocity feedback received will be operationalized as the total number of likes a member has received on the sharing messages she/he has posted to the site.

Reciprocity: feedback given. The SSC also provides statistics on the number of likes a member has clicked on other members’ posts in the site. A member who gives likes to other members’ posts is likely to be a reciprocity giver. This will be operationalized as the total number of likes a member has given to other members’ posts in the site.

Tenure. Member tenure was taken from the SSC site. The SSC provides the length of time that a member has been registered with the social shopping community. Then we calculate the number of days an individual was a member of the site. Tenure will be operationalized as the number of days a member joined the SSC.

Reputation. The SSC provides a score for member’s performance in the online consumer community. A member with a large number of posts who also receives a large number of comments or forwards from other members is likely to be a high reputation member. Reputation will be operationalized as the score of a member awarded by the SSC.

DATA ANALYSIS

Table 1 summarizes the descriptive statistics (mean, standard deviation, minimum, maximum) of the variables used. Reputation is represented using a count variable because it adds together all the “likes” received from other members. Poisson regression and negative binomial regression are often used to analyze count data. Poisson regression model makes a very restrictive assumption that the mean of the dependent variable equals the variance (Cohen, Cohen, and Aiken 2003). If the variance is greater than the mean, the data is said to be over-dispersed, which can lead to inflation of the goodness of fit chi-square test and the overestimation of the significance of predictors (Cohen et al. 2003). An approach to over-dispersion is use of the negative binomial regression model (Cohen et al. 2003). For reputation, variance are greater than mean (variance = 2457213, mean = 116.63). Thus negative binomial regression was conducted by SPSS in this study.

A negative binomial regression analysis was performed with reputation as dependent variable, social network centrality, reciprocity received, and reciprocity given as independent variables. The results are shown in Table 2, which summarize the Omnibus test results, coefficients, the Wald statistic, and associated degrees of freedom and significance level of each of the predictor. Omnibus test reveals that the full model significantly predicts num of ratings (Likelihood Ratio Chi-Square = 7224.799, df = 4, p < 0.0001).

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation</td>
<td>1192</td>
<td>0</td>
<td>51144</td>
<td>116.63</td>
<td>1567.55</td>
<td>The number of members’ score awarded by website</td>
</tr>
<tr>
<td>Social Network Centrality</td>
<td>1192</td>
<td>0</td>
<td>81408</td>
<td>76.03</td>
<td>2358.12</td>
<td>The total number of followers</td>
</tr>
<tr>
<td>Reciprocity (feedback received)</td>
<td>1192</td>
<td>0</td>
<td>46471</td>
<td>91.24</td>
<td>1472.06</td>
<td>The number of “like” received from other members</td>
</tr>
<tr>
<td>Reciprocity (feedback given)</td>
<td>1192</td>
<td>0</td>
<td>125</td>
<td>13.07</td>
<td>26.79</td>
<td>The number of “like” give to other members</td>
</tr>
<tr>
<td>Tenure in the Field</td>
<td>1192</td>
<td>0</td>
<td>727</td>
<td>122.59</td>
<td>85.31</td>
<td>The number of days a member register the website</td>
</tr>
</tbody>
</table>

Table 1. Descriptive Statistics

The result shows that social network centrality has a positive effect on members’ reputation (β = 0.026, p < 0.0001), which supports H1. The support for H1 confirms the importance of this social network characteristic influence community members’ reputation. Reciprocity feedback received has a positive and significant relation to reputation (β = 0.006, p < 0.0001), thus supporting H2. Reciprocity feedback received presents social interaction among community members. Higher Reciprocity feedback received in network that can increase members’ social interaction through their network to influence community members’ reputation. Reciprocity feedback given is significant related to reputation (β = 0.016, p < 0.0001), supporting H3. Reciprocity feedback given does have an influence on community members’ reputation in social shopping.
community. Tenure is also significantly related to reputation ($\beta = 0.004$, $p < 0.0001$), which supports H4. A comparison of the three $\beta$ coefficients reveals that social network centrality is the most influential predictor. The result suggests that the greater number of followers, the more likely the member will receive reputation.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>$\beta$</th>
<th>Std. Error</th>
<th>Wald Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Network Centrality</td>
<td>.026</td>
<td>.0016</td>
<td>275.278</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>Reciprocity (feedback received)</td>
<td>.006</td>
<td>.0002</td>
<td>648.325</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>Reciprocity (feedback given)</td>
<td>.016</td>
<td>.0012</td>
<td>180.441</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>Tenure</td>
<td>.004</td>
<td>.0004</td>
<td>82.664</td>
<td>1</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Table 2. Results of Binomial Regression Analysis**

**DISCUSSION**

The results show that all of the hypotheses are supported. In this section, we further discuss findings in detail and provide implications for better managing reputation and further building good reputations by governing social capital in online consumer communities. We examine the specific role of three facets of social capital: structural capital (centrality), relational capital (reciprocity) and cognitive (tenure). The research contributes to a richer understanding of how social capital can be used to achieve high recognition and accreditation in online consumer communities.

As the results of the negative binomial regression indicate, the reputation of a member in online consumer community is positively related with factors 1) a member’s amount of social ties 2) the extent to reciprocate between community members 3) tenure of a focal community member.

As our findings indicated, community members who are central in the online social network (i.e. with many links with other members) tend to have greater visibility and influence on others with this advantageous position. Members with many social ties can thus attract larger sized audiences, who browse their posts on products. Larger traffic of audiences will drive more assessment towards a community member. As we expected, the relational facet of social capital – reciprocity - also leads to a member’s good reputation in the community. A member who is guided by reciprocity is more likely to provide helpful information (Wasko et al., 2005). Feedback given and received has been found to act as a facilitator when a community member intends to earn peer recognition. Thus, in order to gain more positive evaluation and build good reputation, not only does a community member need to share views on products h/she is families with or have experiences, but they also need to respond to others knowledge contributions in the online consumer community. Furthermore, a member with longer tenure gains a better understanding on what is more helpful for the audience. On the other hand, they are more likely to recommend something, or share something that caters to others’ needs. This “helpfulness” nurtures community members’ capability to earn more recognition by peer members and thus received more accreditation.

We also provide several practical implications. For consumers and potential consumers, they are able to identify high reputation members by accounting for the amount of followers via networked relationship, tenure information and a norm of reciprocity. “Lead members” tend to be guided by a norm of reciprocity, and tend to have longer tenure and a larger number of followers. Sellers who account for a certain proportion of online consumer community members, and could promote their reputation by better governing their social capital mobilized through online activities. They may need to integrate all three dimensions of social capital to earn more peer recognition. The findings in this study provide ideas for members who want to become “lead members” in online consumer communities.

This study has limitations which need to be noted. First, given that our data was collected from an online fashion forum, the samples were primarily female. Thus, a gender bias will certainly exist. Future studies could test our model with a data sample that is gender neutral. Second, the measures of reciprocity (i.e. feedback given and received) are quantitative surrogates and not direct measures of these constructs. Future studies could conduct a study using subjective approach.
CONCLUSION AND FUTURE WORK

This study has identified how three facets of social capital influence a member’s community reputation in the context of social commerce communities. The study makes several contributions. First, this study provides empirical support for existing findings regarding the impact that social capital has on a member’s community reputation management. Empirical findings complement the social capital literature by uncovering how social capital interrelates with “helpfulness” of a community members (i.e. reputation), which was rarely explored by prior studies. Second, our study also extends existing research in terms of the method used. Traditional online community research generally employs surveys or laboratory experiments to study online communities. To our knowledge, this is the first empirical study to use panel data sets to evaluate the role of social capital in social shopping community (i.e. online consumer community). The present study thus enhances our understanding the updated online consumer community. The findings in this study provide gateways for members who want to become “lead members” in online consumer communities. Also, by uncovering specific features on social capital, we gain a better understanding on social interactions in online consumer communities.

As a first step to study social commerce communities, we investigated how social capital mobilized in online interactions leads to “good members” by identifying specific features of three facts of social capital regarding its impact on a member’s community reputation. Next, we intend to investigate how a social commerce community benefits sellers’ sales-related outcome to gain a more complete picture of SSCs’ impact on e-commerce area. We can examine how community engagement would affect sales-related outcomes, which remains underexplored. This will be of great interest as we could incorporate important indexes, such as conversion rates and sales rank.

REFERENCES


