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BUILDING BUYERS’ LONG-TERM RELATIONSHIPS WITH THE B2B E-MARKETPLACE: THE PERSPECTIVE OF SOCIAL CAPITAL

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Abstract

The popularity of the Internet has created the growth of B2B e-marketplaces. In spite of the many advantages of B2B e-marketplaces, a majority of buyers are still reluctant to maintain a long-term relationship with B2B e-marketplaces. In order to overcome this problem, we apply social capital theory to propose a research framework for understanding how virtual community play an important role in generation of social capital and formation of sense of virtual community, which in turn drives buyers continuing to use B2B e-marketplaces. A Web-based survey is then conducted in Alibaba’s virtual community to validate our proposed framework. Our research is expected to contribute to the theory by testing social capital theory in the context of the B2B e-marketplace usage. We also expect to contribute to the practice by providing new insights for the B2B e-marketplace providers to understand the value of integrating online community into the B2B e-marketplace.

Keywords: Social Capital, Sense of Virtual Community, B2B Electronic Marketplace, Intention to Continue Usage.
1 INTRODUCTION

The popularity of the Internet has created the growth of B2B e-marketplaces where suppliers and buyers can meet, interact, and conduct transactions via an electronic platform (Truong 2008). Transaction cost economics suggest that market aggregation can facilitate usefulness of e-marketplaces in overcoming market fragmentation so that buyers have more alternatives, more readily available information about products and suppliers, more transparent prices, and lower transaction costs (Bakos 1997; Malone et al. 1987; Rao et al. 2007). The B2B e-marketplaces could also be used as digital intermediaries to facilitate collaboration between suppliers and buyers (Qizhi & Kauffman 2002).

In spite of the many advantages of B2B e-marketplaces, a majority of buyers are still reluctant to maintain a long-term relationship with B2B e-marketplaces. The IT-mediated nature of e-marketplaces results in the absence of direct prior ties between buyers and suppliers, which leads buyers only to maintain transaction-oriented rather than sociality-oriented relationships with suppliers. Due to little investment in time or mutual obligation, buyers are likely to engage in zero-sum business transactions through arm’s-length relationships and thereby make buyers less likely to continue usage of the B2B e-marketplace (Montazemi et al. 2008). The government in Prato, Italy supports SPRINTEL, a B2B e-marketplace, to assist the growth of small and medium-sized firms of the textile industry and facilitate a greater online collaboration among buyers and suppliers. However, Kumar et al. (1998) found that such B2B e-marketplace had been all but abandoned because the members of the B2B e-marketplace are likely to obtain little added value from the transaction-oriented e-marketplace. Kumar et al. (1998) further argued that trust and interpersonal relationship (the social capital of the region) play important roles in business coordination (Schultze & Orlikowski 2004). Social embeddedness and social capital shape the quality and quantity of social interaction and provide ongoing value to group members (Chi et al. 2009). Hence, it seems that B2B e-marketplaces could add value to buyers by developing social capital among buyers and suppliers, which in turn increases buyers’ intention to continue usage of B2B e-marketplaces.

The interfirm relationships in economic transactions can be divided into arm’s-length relationships and social embedded relationships. The former is characterized by short-term relationships, nonrecurring exchange, expectations of independence and nonalignment, the absence of social capital, and the use of formal contracts. Transaction cost economics considers arm's-length relationships to be efficient economic transactions and allow buyers to easily switch ties among loose collections of suppliers. In contrast, the latter is characterized by stable and long-term relationships, recurring interaction, expectations of interdependence and reciprocity, the generation of social capital, and the use of informal social contracts. Social embeddedness researchers found many advantages in social embedded relationships, such as avoiding opportunistic behavior, solving joint problem, high quality information exchange, and developing new transactions with existing relationships (Schultze &
Despite many advantages resulting from social embedded relationships, most of B2B e-marketplaces put greater emphasis on efficiency-related services and overlook the needs for building sociality-related services. This would impede the development of a long-term relationship between buyers and The B2B e-marketplace. Incorporating an online community as a method of building social capital into the B2B e-marketplace is important (Stockdale 2009), especially in intermediary e-marketplaces. Substantially, a strong virtual community profile supports social interaction not directly related to transactions and creates the sense of virtual community such as feeling of belonging (Stockdale 2009). Hence, this research proposes that an online community can be incorporated into the B2B e-marketplace to make buyers more likely to continuously use the B2B e-marketplace.

Incorporating a virtual community into the B2B e-marketplace can not only complement the efficiency-related services of the B2B e-marketplace with the social capital but also create the added value. A number of studies have been recognized similar complementarity. Kraut et al. (1999) indicated that buyers are more likely to use electronic networks in terms of interpersonal relationships with suppliers because transaction problems could be mitigated. Steinfeld (2004) pointed out that the success of B2B e-marketplaces depends on the exploitation of social capital. Driedonks et al. (2005) also found that social capital is seen as important in adoption and usage of B2B e-marketplaces.

Because social capital theory describes how to invest and harness productive social interaction (Zhao et al. 2012), we argue that social capital theory is an appropriate theoretical lens to examine how virtual community play an important role in generation of social capital and formation of sense of virtual community, which in turn drives buyers to have a higher intention to continue usage of the B2B e-marketplace.

2 LITERATURE REVIEW

2.1 Mechanism of Virtual Community

Virtual community is a group of members with common interests or goals, whose members interact predominantly in cyberspace (Koh & Kim 2003) in which individual members contribute their value for all members and a complex interpersonal networks are constituted.

An increasing number of B2B e-marketplaces offer community supports as a new strategy to complement simple transaction supports. Typically, suppliers and buyers are unfamiliar with each other. Such commercial-oriented virtual community enables suppliers and buyers to gather together and share commercial information, such as their experiences or knowledge about specific products or services (Zhao et al. 2012).

Therefore, incorporating an online community as a means of building social capital into the B2B e-marketplace is important (Stockdale 2009) because the online community can create dense and highly connected networks. A number of studies indicate that the application of Interactive
Communication Technology (ICT) (e.g., social networking site) can facilitate the generation of social capital (Yang et al. 2009). The mechanisms of the virtual community for building social capital can be illustrated as follows:

- **Member registration:** suppliers and buyers are required to register in the B2B e-marketplace, which makes suppliers and buyers have a perception of similar bounds on the B2B e-marketplace (Stockdale 2009). Besides, various activities such as suppliers’ delivery capabilities, buyers’ credit ratings, and admitting entry by nomination or invitation are used to ensure quality of members (Steinfeld 2004).

- **Reputation systems:** because B2B e-marketplaces are characterized by weak ties, rating systems—each member providing input and contributing to all suppliers and buyers—can be used to guide who is trustworthy (Steinfeld 2004; Stockdale 2009).

- **ICT:** a variety of ICTs such as bulletin boards, blogs, discussion forums, and instant messenger can allow individual members to present themselves and interact with other members closely.

### 2.2 Social Capital Theory

The core proposition of social capital theory is that an individual actor’s social network is valuable because it is constituted of valuable resources and further facilitates certain actions of members of the network (Yang et al. 2009). Social capital is defined as resources embedded in a social structure that are accessed and/or mobilized in purposive action (Lin 2001). The main difference between social capital and other forms of capital (e.g., human and financial capital) is that social capital is embedded in the relationships among actors, while other forms of capital are the property of individual actors (Wasko & Faraj 2005). That is, social capital is a relationship-based asset, which is neither completely substitutable nor easily transferable (Coleman 1988; Nahapiet & Ghoshal 1998; Schultze & Orlikowski 2004). Therefore, social capital can be regarded as individual actors who made investment in social relations resulting in benefit as a whole. As a result, accumulation of social capital enables individual actors to act together and pursue shared objectives (Coleman 1988; Lin 2001; Putnam 1993; Wiertz & de Ruyter 2007).

Nahapiet and Ghoshal (1998) proposed a research framework to explain how social capital contribute to a firm's ability to create advantages. They categorize social capital into three dimensions: structural, relational, and cognitive. The structural dimension refers to the connections between actors in a social system in which the actual relationships provide the opportunity for accessing resources or acting together. This dimension of social capital is the foundation of social capital that assists actors to access available resources and shape of relationships. The relational dimension refers to the quality of personal relationships of actors developed by interacting with each other in a social system. This dimension of social capital underscores resources embedded in relationships. The cognitive dimension refers to the shared meaning and understanding created and sustained by ongoing relationship within a social system that enable actors to act collaboratively (Montazemi, et al. 2008). Based on the works of
Nahapiet and Ghoshal (1998) and Tsai and Ghoshal (1998), we adopt social interaction, trust, and shared language to represent structure, relational, and cognitive dimensions, respectively.

2.3 Sense of Virtual Community

Sense of community (SOC) is first introduced by McMillan and Chavis (1986), who defined SOC as members’ feelings of belonging and being matter to one another and to the community as well as a shared faith that members’ needs will be met through their commitment to be together. McMillan and Chavis (1986) further developed a measure of SOC characterized by four elements: membership, influence, integration and fulfillment of needs, and shared emotional connection.

The concept of SOC has been applied to the online context as sense of virtual community (SOVC) (Blanchard 2007; Koh & Kim 2003). Koh and Kim (2003) take into account three characteristics of virtual community: anonymity, addictive behavior, and voluntary behavior. They argue that these characteristics may imply a state of immersion or flow experience. Therefore, they define SOVC as the individual members’ feelings of membership, influence, and immersion toward a virtual community. They further propose that SOVC consists of three dimensions: membership, influence, and immersion. Membership refers to the degree to which members experience feelings of belonging to their virtual community. Influence represents the degree to which members influence the other members of their community. Immersion refers to the degree to which members feel the state of flow during virtual community navigation.

3 DEVELOPMENT OF RESEARCH FRAMEWORK

3.1 Research Framework

Drawing on social capital theory, this research examines the effects of three dimensions of social capital on sense of virtual community, and then on buyers’ intention to continue usage of the B2B e-marketplace. The research framework is shown in Figure 1.

Figure 1. Research Framework
3.2 Social Capital and Sense of Virtual Community

Based on social capital theory, individuals tend to accumulate social capital in the virtual community because social capital is valuable and can be used to facilitate purposive actions of individuals. Individuals could increase social capital by conducting social interaction with other members in the virtual community. The degree of social interaction can be used to reflect the structural dimension of social capital (Tsai & Ghoshal 1998). When buyers conduct more social interactions, they are likely to acquire information that is of higher quality, relevance, and timeliness, which makes buyers spend more time and being immersed in the virtual community. Furthermore, when buyers invest a lot of time in interacting with other members, they are more likely to develop a sense of psychological ownership, which makes them consider they have membership in the virtual community. In addition, because social support is accompanied by social interactions, buyers who conduct more social interactions can exert a greater influence to other members in the virtual community by providing more social support. Based on the aforementioned discussion, social interaction facilitates three dimensions (i.e., membership, influence, and immersion) of sense of virtual community. Tsai et al. (2012) also found that social interaction is positively related to the sense of group in the social networking community consisting of working professionals. However, the relationship between social interaction and sense of virtual community has not been examined in the context of B2B e-marketplaces. We therefore propose the following hypothesis:

\[ H1: \text{Social interaction will positively influence sense of virtual community (i.e., membership, influence, and immersion).} \]

Trust is a critical aspect of social capital and facilitator of collective action (Coleman 1990). Because trust can provide an environment with less perceived risk and uncertainty, buyers who share topics regarding purchasing experiences, suggestion, and specific needs are more likely be perceived trustworthy, accepted, and satisfied. Thus, buyers tend to spend more time in the virtual community because shared information in the community is perceived as trustworthy. Furthermore, trust facilitates buyers to develop a committed relationship with other members (i.e., buyers and suppliers) and leads to a greater willingness to immerse themselves in the community. In addition, when buyers are perceived as trustworthy, it is more likely for buyers to have a greater influence on other members. Based on the aforementioned discussion, trust facilitates three dimensions (i.e., membership, influence, and immersion) of sense of virtual community. Some studies also indicated that trust has a significant impact on membership (Lin 2008; Zhao et al. 2012). We therefore propose the following hypothesis:

\[ H2: \text{Trust will positively influence sense of virtual community (i.e., membership, influence, and immersion).} \]

Shared language enables individual actors to have the ability to act together (Yang et al. 2009). When buyers have a perception of similarity to other members of the virtual community by common
language, they are more likely to feel themselves to be one part of the virtual community. Lages et al. (2008) also indicated that when exchange partners have common beliefs about what behaviors and policies are important, appropriate, and right, it is more likely to develop relationships among them. In addition, because shared language can more easily help buyers to have a shared system of understanding and predict other members’ behavior, it is more likely to assist buyers to solve common commercial problems and to enhance their influence in their virtual community. Moreover, shared language can create common value for mutual benefit that makes buyers more willing to spend time in the virtual community. Based on the aforementioned discussion, shared language facilitates three dimensions (i.e., membership, influence, and immersion) of sense of virtual community. We therefore propose the following hypothesis:

$$H3: \text{Shared language will positively influence sense of virtual community (i.e., membership, influence, and immersion).}$$

3.3 Sense of Virtual Community and Intention to Continue Usage of the B2B E-marketplace

Sense of virtual community is an important driver of buyers’ intention to continue usage of the B2B e-marketplace. When buyers have high sense of virtual community, they tend to come back to the virtual community on a regular basis. Because the virtual community is embedded in the B2B e-marketplace, buyers may have a higher intention to continue usage of the B2B e-marketplace. Remaining in the same e-marketplace makes buyers keep in touch with other members in the virtual community and further develop social capital. When buyers have feelings of membership in the virtual community, they are more likely to interact with other members and thereby makes them continue to use the B2B e-marketplace. Besides, when buyers have a higher influence in the virtual community, they are more likely to perceive that others need them, which makes them remain usage of the B2B e-marketplace. Furthermore, because buyers spend a lot of time and effort in operating the virtual community, they are more likely to hope the success of the B2B e-marketplace. As a result, they are more motivated to continuously use the B2B e-marketplace. In addition, previous studies found that sense of virtual community are determinants of information technology usage (e.g., social networking site and online group site) (Tsai et al. 2011; Zhang 2010). We therefore propose the following hypothesis:

$$H4: \text{Sense of virtual community (i.e., membership, influence, and immersion) will positively influence buyers’ intention to continue usage of the B2B e-marketplace.}$$

4 RESEARCH METHODOLOGY

4.1 Survey Administration

The research framework is tested with data from Alibaba’s virtual community. We choose Alibaba as research context for the following reasons. First, it is the largest and most popular B2B e-marketplace in China and in the world. Second, it has a vibrant and active online community embedded in its
e-marketplace. Third, it focuses on converting members of their virtual community into suppliers and buyers of the e-marketplace.

The Web-based survey is used in this research to reach subjects who are members of Alibaba’s virtual community. The Web-based survey has the advantages over traditional paper-based survey, including lower costs, faster responses, higher response rate, and geographically unbounded sample (Kaplowitz et al. 2004).

Because organization’s work practices are typically instantiated by individual members as the representation of their firm to interact with trading partners (Schultze & Orlikowski 2004), we regard individual buyers as this research’s participants of questionnaires. Besides, to assure that participants have sufficient experiences of using the virtual community and e-marketplace, the criteria for selecting participants for the sample is: a minimum of six month’s experiences of using the virtual community and e-marketplace on Alibaba e-marketplace.

4.2 Measurement Development

All of the measures are adapted from established scales to suit the context of this research. The items for measuring social interaction and trust are adapted from Tsai and Ghoshal (1998) and Tsai, et al. (2012). The items for measuring shared language are adapted from Nahapiet and Ghoshal (1998) and Tsai, et al. (2012). Membership, influence, and immersion is measured with items developed by Koh and Kim (2003). The items for measuring intention to continue usage of the B2B e-marketplace are based on Son and Benbasat (2007).

All of the items are measured with five-point Likert scales, which range from “strongly disagree” (1) to “strongly agree” (5). The partial least squares (PLS) method is conducted to validate our hypotheses. Compared to a structural equation modeling technique such as LISREL, PLS is free of strict assumptions regarding the population or scale of measurement (Haenlein & Kaplan 2004).

5 EXPECTED CONTRIBUTION AND CONCLUSION

Typically, B2B e-marketplaces are characterized by arm’s-length relationships and thereby lead buyers less likely to continuously use e-marketplaces. Drawing on social capital theory, this research proposes a research framework for understanding how virtual community could be used to help buyers develop a long-term relationship with B2B e-marketplaces. Specifically, our research indicates that the usage of virtual community provides connection of social networks that facilitates generation of social capital and formation of sense of virtual community, which in turn leads to a higher intention to continue usage of B2B e-marketplaces. We believe that our research results provide new insights for the B2B e-marketplace providers to understand the value of incorporating an online community into the B2B e-marketplace.
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