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Carol X.J. Ou

*The Hong Kong Polytechnic University, cscarol@inet.polyu.edu.hk*

Robert M. Davison

*City University of Hong Kong, isrobert@cityu.edu.hk*

Paul A. Pavlou

*Temple University, paul.pavlou@temple.edu*

Maggie Y. Li

*City University of Hong Kong, lywen66@gmail.com*

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# LEVERAGING RICH COMMUNICATION TOOLS: EVIDENCE OF ONLINE TRUST AND GUANXI IN CHINA

*Favoriser les outils de communication riche : rôle de la confiance en ligne et du  
Guanxi en Chine*

*Completed Research Paper*

**Carol X.J. Ou**

The Hong Kong Polytechnic University  
Hung Hom, Hong Kong, PRC  
cscarol@inet.polyu.edu.hk

**Robert M. Davison**

City University of Hong Kong  
83 Tat Chee Avenue, Hong Kong, PRC  
isrobert@cityu.edu.hk

**Paul A. Pavlou**

Temple University  
Philadelphia, PA, USA  
paul.pavlou@temple.edu

**Maggie Y. Li**

City University of Hong Kong  
83 Tat Chee Avenue, Hong Kong, PRC  
lywen66@gmail.com

## **Abstract**

*Driven by the evolution of consumer-to-consumer (C2C) online marketplaces, we examine the role of communication tools (i.e., an instant messenger, internal message box and a feedback system), in facilitating dyadic online transactions in the Chinese C2C marketplace. Integrating the Chinese concept of guanxi with theories of social translucence and social presence, we introduce a structural model that explains how rich communication tools influence a website's interactivity and presence, subsequently building trust and guanxi among buyers and sellers, and ultimately predicting buyers' repurchase intentions. The data collected from 185 buyers in TaoBao, China's leading C2C online marketplace, strongly support the proposed model. We believe that this research is the first formal study to show evidence of guanxi in online C2C marketplaces, and it is attributed to the role of communication tools to enhance a website's interactivity and presence.*

**Keywords:** Communication tools, interactivity, presence, trust, guanxi, C2C website design

## **Résumé**

*Dans cet article, nous examinons le rôle des outils de communication dans la facilitation des transactions en ligne dans le marché chinois du C2C. Nous intégrons le concept de guanxi aux théories de la transparence sociale et de la présence sociale pour expliquer comment les outils de communication riches aident les acheteurs et les vendeurs à renforcer leur confiance mutuelle et le guanxi, et finalement à prévoir les intentions de rachat par les acheteurs.*

## Introduction

According to Morgan Stanley's industry report (Ji and Meeker 2005), TaoBao ([www.taobao.com](http://www.taobao.com)), the market leader of China's Consumer to Consumer (C2C) marketplaces, has leveraged its communication tools to enhance online transactions<sup>1</sup>. Specifically, the embedded Instant Messenger (IM) tool (termed WangWang), which can be used to send instant messages among buyers and sellers, has received the highest degree of attention (ibid, p. 20): "we believe such (IM) services create the stickiness for TaoBao's community and enhance the chances for online transactions..." According to figures released in June, 2008 (CNNIC 2008), TaoBao has a 83.9% market share in China's online C2C marketplace. Meanwhile, eBay CN, which had a dominant position until late 2004 has faded and disappeared from the emerging largest C2C marketplace in the world in late 2006<sup>2</sup>. How and why was TaoBao able to succeed in China where eBay, the global giant of online auction marketplaces, could not, despite its considerable financial muscle and business acumen? Did IT play a role in TaoBao's success and eBay's failure?

Much previous research on C2C marketplaces has focused on how to build a buyer's trust in sellers. However, in this study, we investigate the guanxi-engendering potential of rich communication tools, such as IM, in online C2C marketplaces. As stressed by Morgan Stanley (Ji and Meeker 2005), it is possible to "get into each other's (buyers' and sellers') mind in more depth" (p. 20) by using communication tools such as WangWang. In reality, TaoBao has demonstrated the impact of communication tools, such as IM, in building dyadic relationships between buyers and sellers, relationships that have presumably rendered TaoBao a competitive advantage (Ji and Meeker 2005). Meanwhile, Chinese business transactions are characterised by high levels of uncertainty, imperfect information, and a legal system that is neither adequate in the protection that it renders buyers and sellers, nor consistent in the way that its rules are enforced (Martinsons 2008). In this situation, it is not particularly surprising that buyers and sellers seek to build persistent and pervasive personal ties and social networks (known as *guanxi* in China) (Xin and Pearce 1996). Consistently, Chinese literature and practice has conceptualised *guanxi* as a network founded on social interaction and bonded by mutual understanding of reciprocity (Davies et al. 1995) that typically operates in a dyadic fashion (Arias 1998). Driven by social mechanisms (i.e., interpersonal relationships) rather than laws and rules, *guanxi* has long been regarded as an effective mechanism to reduce business uncertainty, especially in China (Wong 1998). However, the concept of *guanxi* is relatively overlooked in research on online C2C marketplaces.

Drawing from the Social Translucence of Technology Theory (Erickson and Kellogg 2000), we consider that the communication tools embedded in C2C platforms are translucent technologies; in other words, they constitute a Computer-Mediated-Communication (CMC) system rendering interlocutors present to each other or available for communication. Specifically, we highlight the efficacy of communication tools to create a buyer's perception of social presence (i.e., intimacy), telepresence (i.e., immediacy), and interactivity. The subsequent impact of presence and interactivity is to build buyers' trust and *guanxi* with sellers, which in turn shape buyers' repurchase intentions. Given that the impact of communication tools, such as IM, is still relatively undeveloped and unexplored in online C2C marketplaces, in this study we examine the technological and functional characteristics of these tools and their potential to build trust and *guanxi*. We apply Liu (Liu 2003) and Teo et al's (Teo et al. 2003) overarching framework of system interactivity, as well as Social Presence Theory (Short et al. 1976) to conceptualize the process by which communication tools facilitate repeat transaction intentions with sellers by building trust and *guanxi*.

The paper proceeds by first introducing the TaoBao platform to help readers understand the nature of online Chinese C2C marketplaces. We then review the relevant literature on various communication tools in C2C marketplaces. This is followed by a theory development section where we introduce the research model and justify the hypotheses. Next, we describe our research methodology and explain how we solicited data from TaoBao buyers. Following the data analysis and results, we discuss the study's contributions and implications.

## Research Context – TaoBao

Over the last decade, China's online C2C marketplace has experienced a rapid evolution. The first C2C platform, EachNet ([eachnet.com](http://eachnet.com)), was established in 1999. EachNet was acquired in 2002 by eBay and renamed as eBay CN

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<sup>1</sup> The communication tools used in TaoBao include an embedded IM tool (WangWang), internal message boxes (that display buyers' specific questions related to one particular product and the seller's reply internally in TaoBao), and a feedback system (that shows buyers' ratings of sellers and detailed comments on individual transactions).

<sup>2</sup> [http://www.businessweek.com/globalbiz/content/dec2006/gb20061219\\_738124.htm?chan=search](http://www.businessweek.com/globalbiz/content/dec2006/gb20061219_738124.htm?chan=search)

(ebay.com.cn). TaoBao, which went online in April 2003, is owned by Alibaba (www.alibaba.com), China’s largest B2B and B2C portal. TaoBao very quickly overtook eBay CN, eventually pushing it out of the C2C market altogether in December 2006. Many of TaoBao’s features are not so different from those of other C2C platforms, such as eBay CN and the Chinese competitor PaiPai (www.paipai.com). However, and in stark contrast to eBay CN, TaoBao deliberately enabled and encouraged the use of a buyer-seller direct communication channel, called WangWang. While WangWang is functionally similar to IM tools like MSN Messenger, it is not a third party tool but instead is embedded in the TaoBao interface and shares with TaoBao IDs (Figure 1). When a buyer sees an item she wants to buy, she can simultaneously see if the seller of the item is online - this is indicated through a bi-colored icon (blue=online, gray=offline). Items can also be sorted according to the online status of the seller. The potential buyer can then initiate an IM conversation with the seller through a single click.

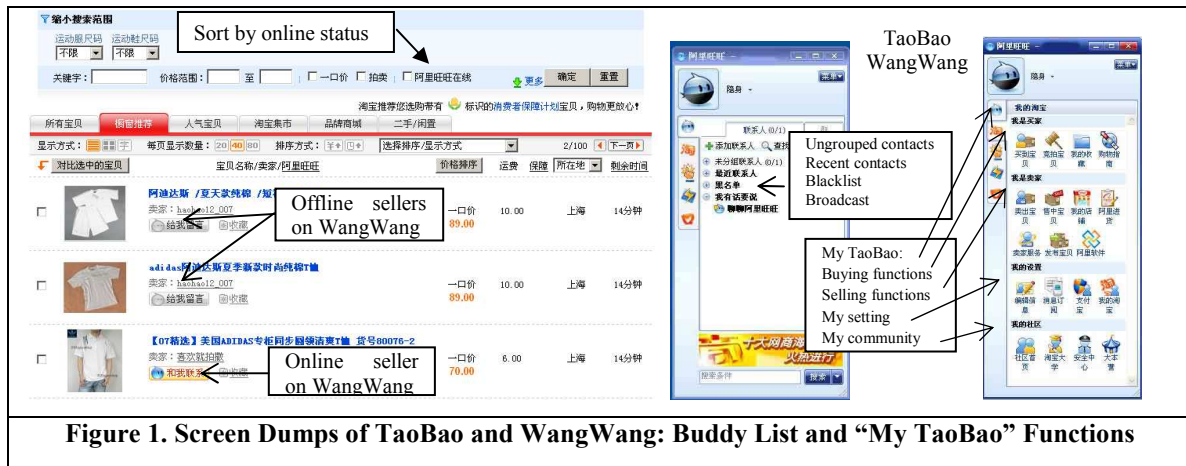


Figure 1. Screen Dumps of TaoBao and WangWang: Buddy List and “My TaoBao” Functions

## Literature Review

### Theoretical Foundations

The direct linkage between CMC tools and the social interaction process can be traced back to the Social Translucence of Technology Theory (STTT) (Erickson and Kellogg 2000). In order to bridge interlocutors’ perceived distance in the online world, STTT proposes that a socially translucent world is designed for online users “to carry on coherent discussions; to observe and imitate others’ actions; to engage in peer pressure; to create, notice, and conform to social conventions” (ibid., p. 62). By using a socially translucent system (including an IM as a typical tool), interlocutors: are able to make information visible (visibility); are aware of the involved parties’ interaction status (awareness); and thus are accountable (accountability) to each other because of the reciprocity that is a function of social expectations (Erickson and Kellogg 2000; Quan-Haase et al. 2005).

While STTT emphasizes the functionality of CMC tools in terms of visibility, awareness and accountability, its final design outcomes are consistent with those of research on social presence. Social Presence Theory (SPT) suggests that a medium’s social effects are principally caused by the degree of social presence that it affords to its users (Short et al. 1976). The overarching concept of presence encompasses two types of presence – *telepresence* and *social presence* (Ijsselstein et al. 2000; Tammelin 1998). Telepresence refers to the illusion of being physically present in the setting simulated by the medium. High levels of telepresence suggest that the technology-mediated environment is close to a non-mediated environment. Social presence is described as the feeling of being close to others. The warmer, more personal, more sociable and more sensitive the social interaction is, the stronger the feeling of social presence perceived by the interlocutors (i.e., the interaction participants). From the perspective of social interaction, both SPT and STTT imply that a socially translucent technology, such as IM and other virtual collaboration tools, should be designed to be highly interactive (Chen et al. 2004; Quan-Haase et al. 2005).

*Interactivity*, i.e., the extent to which participants can modify the form and content of a mediated environment in real time, is a significant factor influencing interlocutors’ sense of presence (Steuer 1992). In research on system interactivity in website design, (Liu 2003; Teo et al. 2003) further divide the construct of interactivity into three dimensions: active control, two-way communication, and synchronicity. Adhering to this conceptualization,

researchers have established empirical evidence for the linkage of interactivity and presence in the context of online communities (Khalifa and Shen 2004), advertising (Fortin and Dholakia 2003), as well as online purchases (Jiang and Benbasat 2007). Taken together, all these studies provide a theoretical foundation to conceptualize the CMC-related, translucent technological features and their effects on presence.

### ***CMC Tools in C2C Marketplaces***

Compared to virtual collaboration, studies related to the application of CMC tools in the C2C marketplace are rare. However, reality suggests that C2C platforms incorporate many different communication channels. For example, TaoBao provides several such channels, including *IM* (WangWang), the *internal message box*, and a centralized *feedback mechanism* (reputation system).

Instant Messaging (IM): In the last decade or so, however, we have witnessed a surge of web-based IM tools – Babble/Loops (IBM), ICQ (Mirabilis), MSN Messenger, Skype (eBay), QQ (Tencent), and WangWang. IM tools have been applied in virtual teams (Erickson and Kellogg 2000; Hoffman and Novak 1996), workplace communication (Quan-Haase et al. 2005), and social communication (Li et al. 2005). Outside the organizational context, C2C users in online markets have reaped benefits from using IM tools in practice; however, we are unaware of any formal investigations of the value that they may create in online C2C marketplaces.

Internal Message Box: Another communication tool used in both TaoBao and eBay is the internal message box. This is designed to enable buyers to leave a short focused text message related to a specific item. The message can be shown under the webpage of a particular item. When a seller logs in to his/her online shop, TaoBao indicates the existence of new messages in their internal message box. This function is similar to that of email, which is considered as a CMC tool facilitating interaction (Chen et al. 2004). The short note function provides both the sender and receiver with the time to think before writing, and the information can be archived and retrieved (Sivunen and Valo 2006). Thus the electronic message box enables effective social interaction and facilitates information exchange.

Feedback Mechanism: Formal studies of the feedback mechanism (or reputation system) in online auctions were initiated by (Ba and Pavlou 2002). Researchers consider feedback mechanisms as effective communication tools, (Pavlou and Gefen 2004). This communication tool documents the transaction ratings of buyers and sellers in the marketplace, and it has been widely adopted by several C2C platforms. According to previous empirical studies (Dellarocas 2003; Pavlou and Gefen 2004), this online word-of-mouth communication acts to accumulate and disseminate information about a seller's transaction records in C2C platforms. Research related to feedback mechanisms has demonstrated its effectiveness on building trust and rendering price premiums to sellers in online transactions, e.g., (Ba and Pavlou 2002; Dellarocas 2003; Pavlou and Gefen 2004).

### ***Trust and Guanxi in Traditional Business and Online C2C Marketplaces***

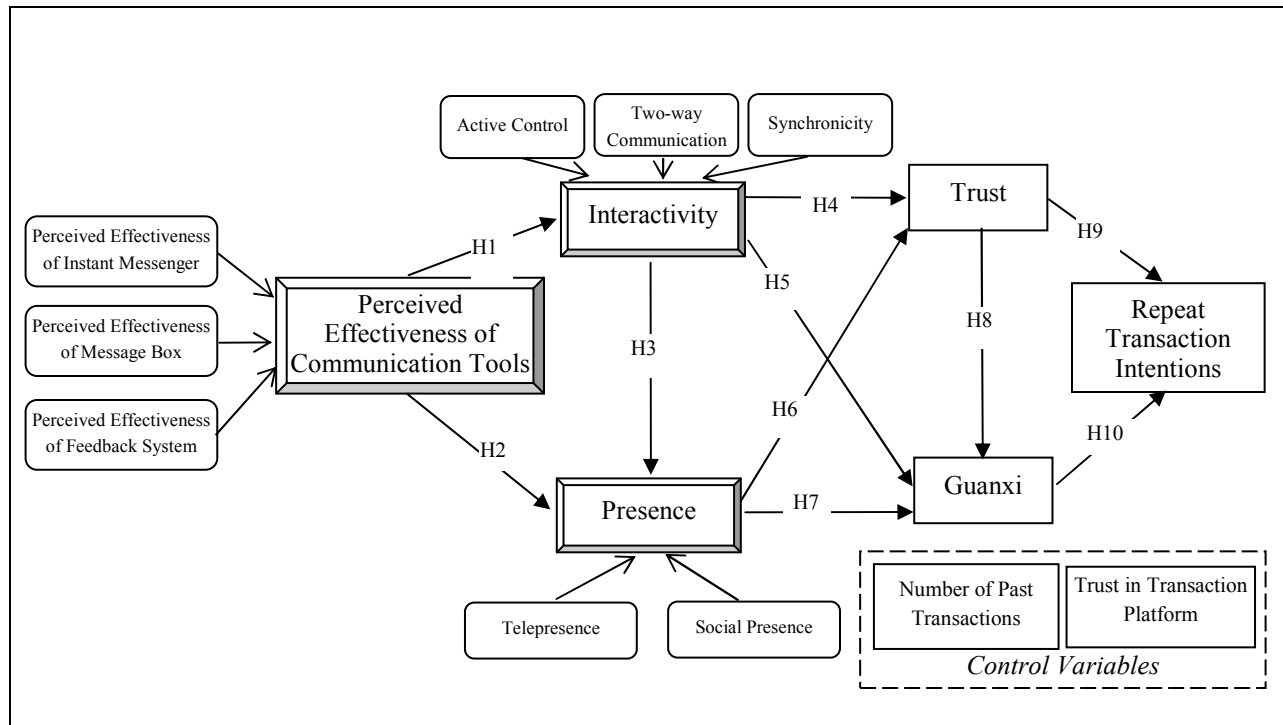
Trust and guanxi are generally regarded as key determinants of business success, especially in China (Wong and Tam 2000). Guanxi means an interpersonal relationship or a close personal connection in a social dyadic network. The management and marketing literatures suggest that trust and guanxi are indeed two distinct concepts: the former is the belief in another party's honesty, credibility and benevolence, while the latter emphasizes the informal relationship which is considered to be affective and reciprocal (Wang 2007). Trust enhances a buyer's confidence in conducting transactions (Gefen et al. 2003) while guanxi goes beyond trust in business because of the privilege of relationship or interpersonal commitment (Arias 1998; Martinsons 2008). Because guanxi relates to a social network where reputation and mutual obligations are formed and informally guarded, it alleviates the risk involved in the business partnership (Hsiao 2003) and sequentially lubricates transactions (Wang 2007), business negotiations, government approval, organization management, and nearly everything else in China (Xin and Pearce 1996).

Trust building in the B2C and C2C contexts is a major research stream in studies of e-commerce. In the past decade, empirical research has verified the importance of various trust building strategies including institutional mechanisms (Pavlou and Gefen 2004) and feedback mechanisms (Ba and Pavlou 2002; Pavlou and Gefen 2004), as well as website design through an emphasis on perceived ease of use and perceived usefulness (Gefen et al. 2003). Trust can create positive feelings towards transactions and sequential transaction behavior, as indicated by a large body of studies concerning the direct effect of trust in online transactions, e.g., (Pavlou and Gefen 2004). Although commercial websites do not usually involve actual interactions with consumers, social presence can be embedded in

the website and may help engender trust (Gefen and Straub 2004). However, compared to traditional business, guanxi has only been investigated sporadically in e-commerce (Hsiao 2003; Martinsons 2008; Ou and Davison 2007), with scholars contending that Chinese buyers and sellers rely on guanxi to conduct online transactions due to the relatively weak (although developing) and hence unreliable rule-based institutional system that has been developed to govern commerce in China (Martinsons 2008; Ou and Davison 2007).

## Theory Development

In this study, we focus on the effect of the three major communication tools embedded in TaoBao’s C2C platform - the IM tool (WangWang); the internal message box, and the feedback mechanism. We examine the impact of these tools on interactivity and presence, their consequent influence on the development of trust and guanxi, and the impact of trust and guanxi on future transaction intentions. The proposed structural model that graphically describes this process is shown in Figure 2, and the definitions of each construct in the model are provided in Table 1.



**Figure 2. Research Model**

Legend: Bevels represent second-order factors. Rectangles represent first-order factors measured with reflective scales. Rounded rectangles represent first-order factors used as the formative measures of the second-order factors.

### The Impact of Communication Tools on Interactivity

The proposed communication tools are perceived to enable a higher degree of interactivity, thus creating a feeling of warmth that is perceived as being both physically and psychologically closer to face-to-face transactions. Therefore, the proposed set of communication tools is proposed to enhance the buyer’s interactivity with sellers.

First, as a translucent technology (Quan-Haase et al. 2005), an embedded IM is a convenient way for buyers and sellers to contact each other (Ji and Meeker 2005). The STTT points out that the success of a translucent technology (such as IM) relates to its capacity to signify the presence of interlocutors and portray their conversation (Erickson and Kellogg 2000). The presence of interlocutors brings awareness and accountability into play in a transaction; thus, the perception of presence promotes communication and negotiation. Since IM can spawn an instant reaction (message dialogue window) once a message is received, this forms a two-way near-synchronous form of communication that is lifelike and close to the transparency associated with traditional face-to-face communication. These message windows stimulate users’ senses, which allows for higher degrees of interaction in the process of

**Table 1 Constructs and Conceptualizations**

Constructs	Definitions	Scales and source
Perceived Effectiveness of Communication Tools	The extent to which a buyer believes that the embedded instant messenger, internal message box, and feedback system in the online C2C platform are able to enable effective communication between sellers and buyers.	Newly developed based on (Pavlou and Gefen 2004)
Interactivity	The extent to which a buyer believes that a communication system enables two or more communication parties to actively control the characteristics of the interaction as they act on each other and on the messages, through the communication medium, and the degree to which such communication acts are synchronized. In sum, this concept encompasses active control, two-way communication, and synchronicity.	Adapted from (Liu 2003)
Presence	The extent to which a buyer perceives the immediacy (i.e., the physical distance) and intimacy (i.e., the psychological distance), between the buyer and seller. In summary this concept encompasses telepresence (i.e., immediacy) and social presence (i.e., intimacy).	Adapted from (Khalifa and Shen 2004; Steuer 1992)
Trust	The buyer's positive expectation regarding one specific seller's conduct.	Adapted from (Pavlou and Gefen 2004)
Guanxi	The buyer's perception of an interpersonal relationship with one specific seller.	Newly developed by this study based on (Arias 1998)
Repeat Transaction Intention	The buyer's future online repurchasing intention with one specific seller.	Adapted from (Pavlou and Gefen 2004)

communication. Meanwhile, TaoBao enables the function of listing all the online sellers in one page (see Figure 1), which provides users with more control over their engagement in IM-mediated conversations. Buyers can select the seller they wish to talk to via the platform embedded IM – WangWang – and so maintain control over the initiation of conversations. The presence flash, name and avatar accentuate the seller's communication availability in the online environment, which helps create a two-way communication environment similar to traditional environments. At the same time, some research on IM has focused on its provision to interlocutors of more active control (Nardi et al. 2000), interactive two-way communication (Hoffman and Novak 1996; Li et al. 2005) and (near-) synchronicity (Hoffman and Novak 1996; Li et al. 2005; Nardi et al. 2000) - compared to other communication tools. Those studies have provided us a solid ground to evaluate the effects of IM on website interactivity, which encompasses active control, two-way communication and synchronicity in an interaction process (Liu 2003; Teo et al. 2003).

Second, compared to IM tools, the message box functionality offers buyers an opportunity to initiate a conversation with a seller on specific transaction-related issues. The design of the message box allows buyers to review previous conversations between the seller and other buyers. This helps buyers improve their understanding of both products and sellers, in terms of response promptness and problem-solving skills. This online socially translucent process mimics the real-life interactive customer service but in a more flexible way because it allows time buffering.

Third, in most C2C platforms, buyers can examine a seller's credibility by reviewing the seller's feedback profile provided by the feedback mechanism. Both buyers and sellers can rate each other and write detailed feedback comments about the transaction (Pavlou and Dimoka 2006). Although the feedback mechanism is a one-sided mechanism (one can drop a rating and feedback in the system and another party can view it), it has enabled a conversation channel after the transaction. The comment function effectively mimics the real life word-of-mouth practice (Dellarocas 2003). Apart from the design of the feedback mechanism as a feedback rating system, the comment function creates a post-transactional interactive opportunity for buyers and sellers.

Taken together, following STTT (Erickson and Kellogg 2000), the IM, message box and feedback mechanisms, as socially translucent technologies, are designed to mimic the real-life transaction interaction in the C2C marketplaces. Summarizing the effects of these communication tools, we propose:

*H1*: The perceived effectiveness of communication tools has a positive effect on interactivity.

### ***The Impact of Communication Tools on Presence***

One major impediment to efficient online transactions is the physical separation among sellers and buyers. However, the application of communication tools can make sellers more visible and reachable, which increases the intimacy of the online transaction environment. In SPT (Short et al. 1976), two concepts, intimacy and immediacy, relate to social presence and telepresence. The former concerns psychological distance, thus measuring social presence. The latter concerns physical distance, thus measuring telepresence. We argue that since an IM tool signifies the communication availability of online sellers and enables two-way synchronous communication, the atmosphere in the online environment becomes more *sociable*. The avatar and the presence flash, together with controllable responses to messages, make online interactions life-like. Meanwhile, IM's "instant" features also make immediacy of interaction possible. This immediacy weakens consumers' perception of physical distance with online sellers.

Meanwhile, the other communication tools enable buyers to employ different methods, for example, leaving a question in the message box or commenting on the sellers' performance in the feedback mechanism, so as to interact with sellers. The message box enables buyers to 'quote' one specific product picture shown in the seller's shop or one particular webpage. It thus facilitates the buyer-seller communication on specific products, offering buyers a life-like way to ask sellers questions. Moreover, the feedback mechanism provides sellers and buyers with a means of online word-of-mouth communication. By accumulating and disseminating information about a seller's past transactions, this communication channel signifies the seller's reputation, as well as the life-like responses of the buyer's feedback. In sum, we suggest that these embedded communication tools make online transactions more sociable, and help buyers become less conscious of physical distance. This goal is consistent with STTT's suggestion on the functionality of a socially translucent technology – bridging the interlocutors' perceived distance in the digital world (Erickson and Kellogg 2000; Quan-Haase et al. 2005). Accordingly, we propose:

*H2*: The perceived effectiveness of communication tools has a positive effect on a buyer's sense of presence.

### ***The Impact of Interactivity on Presence***

Through the open channels in online C2C marketplaces that allow buyers to engage in two-way active and synchronized communication with sellers, interactivity is likely to create feelings of being psychologically closer to sellers, as well as making buyers less conscious of the physical distance from the sellers. In other contexts, it has been shown that interactivity is a significant factor eliciting the sense of presence, i.e., intimacy and immediacy, in the context of advertisements (Fortin and Dholakia 2003) and online communities (Khalifa and Shen 2004). Likewise, Ghose and Dou (Ghose and Dou 1998) also verified that the more interactive functions a website provides, the more likely that the site is able to transfer the sense of presence. Based on these arguments, we propose:

*H3*: Interactivity has a positive effect on a buyer's sense of presence.

### ***The Impact of Interactivity on Trust and Guanxi***

A number of researchers have documented the critical role of interactivity to build a good dyadic relationship, i.e., guanxi (Berthon et al. 1996; Ghose and Dou 1998; Teo et al. 2003). For example, Berthon and his colleagues (Berthon et al. 1996) argue that the interactivity with a seller is critical in converting a visitor into a real buyer. This result is in line with Hoffman and Novak's theory that the relationship between online buyers and sellers changes when the level of website interactivity changes (Hoffman and Novak 1996). This has been empirically verified by Light and Wakeman (Light and Wakeman 2001). Likewise in online C2C marketplaces, a seller's real time response to buyers' questions and provision of open channels for communication are more likely to build a buyer's trust than those sellers who show no intention to reply consumers' enquiries. Accordingly, we propose:

*H4*: Interactivity has a positive effect on a buyer's trust in a seller.

*H5*: Interactivity has a positive effect on a buyer's guanxi with a seller.



### ***The Impact of Presence on Trust and Guanxi***

With regard to the effects of presence, SPT (Short et al. 1976) and related medium research about CMC suggests that task performance will improve if the social presence of the medium is matched with the communication requirements of the task (Karahanna and Straub 1999). Some studies have indicated that presence is a conduit to online *trust* (De Vries 2006; Fortin and Dholakia 2003; Gefen and Straub 2004; Lowry et al. 2007) and *guanxi* (Lowry et al. 2007). This is because presence potentially bridges the discrepancy between offline and online commerce in terms of face-to-face interaction. Although it is generally accepted that e-commerce cannot involve interpersonal interaction among buyers and sellers, embedded communication tools can overcome this limitation through their potential to enhance interactivity and presence. Since e-commerce may involve dealing with buyers' enquiries and complaints, a higher degree of social presence is likely to meet buyer's expectations and service needs. Research has indicated that social facilitation or shopping tasks are conducted better when the involved parties are present in the richer medium, especially with uncertain tasks (Gefen and Straub 2004). Since IM enable real-time interaction among buyers and sellers, the immediacy and intimacy created in the interaction meet the expectation of buyers in the transaction process, emulating the processes that occur in a physical environment. Thus, trust is easier to establish when the buyer perceives higher levels of social presence and telepresence. These arguments are in line with the statement that "trust needs touch" (Handy 1995), albeit in this context, mediated by communication tools.

Compared to an isolated or distant situation, people are more likely to build an interpersonal relationship with others in a warm and sociable environment (Steuer 1992). (Wiesenfeld et al. 1998) pointed out that face-to-face communication is effective when initiating a relationship with customers. Similarly, when a buyer notices that a seller is present online (such as in IM or the transaction platform), it is more likely that he/she will engage in an immediate conversation with the seller, rather than leaving a message and waiting for an answer. Thus, the affection and personal tie are triggered by the seller's presence. Therefore, we propose:

*H6: A buyer's presence has a positive effect on the buyer's trust in a seller.*

*H7: A buyer's presence has a positive effect on the buyer's guanxi with a seller.*

### ***The Impact of Trust in Building Guanxi and Enhancing Repurchase Intention***

Prior research suggests that trust is the foundation of *guanxi*, and it leads directly to relationship marketing success (Wong 1998). The development of *guanxi* in a long-term perspective depends on trust because trust fosters a focus on consistent and favourable conditions upon which both buyers and sellers can intrinsically rely (Wang 2007). Online trust is one precursor of transaction intentions, as well as the foundation of a long-term customer relationship (Bart et al. 2005; Shankar et al. 2002). More specifically, (Shankar et al. 2002) claimed, after demonstrating the honesty, reliability, consistency, and trustworthiness over time, that the online seller can generate buyers' relationship commitment, repeat purchases and loyalty as the outcome results of online trust. Accordingly, trust initiated through an online communication channel is an initial step taken in the formation of a relationship, and it determines a sequential information exchange and movement (Jarvenpaa and Leidner 1999). When the buyer thinks that the seller is trustworthy, there is a higher chance that *guanxi* can be developed, even online. Meanwhile, research suggests that trust in general leads to trust-related outcomes such as purchase intention, actual transactions (Gefen and Straub 2004; Pavlou and Gefen 2004) and repurchase intention (Gefen et al. 2003). Thus, we propose:

*H8: A buyer's trust in a seller has a positive effect on guanxi with the seller.*

*H9: A buyer's trust has a positive effect on the buyer's repeat transaction intention with a seller.*

### ***The Impact of Guanxi on Repeat Transaction Intentions***

*Guanxi* is a key element in Chinese business. Traditionally, Chinese people were only prepared to transact with other people whom they already knew, people with whom they had *guanxi* (Wong and Tam 2000), especially given the lack of a trustworthy, rule-based system to govern commerce (Martinsons 2008). Such an arrangement certainly restricts the scope of business, but it also reduces the level of uncertainty and increases the psychological comfort in transactions. In this respect, the tangible benefits of *guanxi* are to ease business operations and facilitate transactions (Fock and Woo 1998; Wong 1998). Given that online C2C marketplaces in China are self-regulated, interpersonal *guanxi* is considered to be an effective means to facilitate transactions by reducing uncertainty. Thus we propose:

*H10: A buyer's guanxi has a positive effect on the buyer's repeat transaction intention with a seller.*

**Control variables**

*Number of past transactions with the seller.* We argue that the larger the number of past transactions a buyer has with a seller, the higher the probability the seller is viewed as trustworthy, with a corresponding impact on his/her future transaction intention (Pavlou 2003). We expect that the more frequently a buyer buys from a particular seller, the more likely he/she will build a long-term relationship (i.e., guanxi) with that seller (Arias 1998; Tsang 1998).

*Trust in the transaction platform.* As suggested in the literature, consumers’ trust in the transaction platform is a critical factor in online shopping (Lee and Turban 2001) by increasing trust in the community of sellers (Pavlou and Gefen 2004) as a whole, thus also influencing buyers’ transaction intention with sellers on that particular platform.

**Research Methodology**

**Research Instruments**

Building upon the measurement scale of the perceived effectiveness of institutional structures (Pavlou and Gefen 2004), we developed similar measures for the constructs of perceived effectiveness of IM, feedback mechanism, and message box. The perceived effectiveness of communication tools, interactivity, and telepresence - are modeled as second-order formative constructs. Similarly, following (Liu 2003), we used three independent but correlated measures, i.e. active control, two-way communication and synchronicity, to form a second-order formative model for the construct of interactivity. Likewise, we adapted two first-order factors - telepresence and social presence (Khalifa and Shen 2004) - to form the second-order factor of presence. Trust in the transaction platform was based on (Pavlou and Gefen 2004). The number of past transactions with the seller is measured with the number of times that the respondent had transacted with the given seller who is the focus of the rest of the research instrument.

In order to guarantee the reliability and validity of the measurement scales, a card sorting exercise was conducted. A panel of judges, consisting of academic and non-academic professionals and students was formed. In this exercise, the level of agreement was measured using Cohen’s Kappa (Cohen 1960). A Kappa score of 93% indicates that most item responses were placed under the theorized constructs, showing adequate reliability (Moore and Benbasat 1991).

**Research Sample**

TaoBao is the study’s context. Most C2C platforms (such as eBay and TaoBao) have adopted internal message box and the feedback mechanism, while TaoBao’s embedded IM tool is a new technology application. In TaoBao, we randomly selected 40 major categories of products. For each of these categories, we clicked in the sellers’ feedback system, which documents the buyers’ detailed feedback, and in this way we were able to identify buyer user names and buyers’ WangWang contacts. We used this contact information to invite 30 buyers in each category (n=1,200 buyers) to participate in an online survey. In the first page of the online survey, the participants were asked to fill out the survey based on their most recent successful transaction experience. We also collected respondents’ comments on WangWang using an open-ended question. Therefore, the data reflected C2C buyers’ views on communication tools, their transaction experience, as well as their future repeat transaction intention with that particular seller.

**Table 2. Demographic Characteristics**

	Items	Percentage		Items	Percentage
Gender	Male	45.1%	Age range	16-20	2.7%
	Female	54.9%		21-30	80.5%
				31-40	16.3%
				41 and above	0.5%
Education level	Primary/secondary school	3.8%	Household income per year (NB: €1 = RMB11)	Under RMB40,000	15.1%
	Colleges	10.3%		RMB40,001-70,000	36.8%
	Undergraduate	50.3%		RMB70,001-100,000	23.2%
	Graduate/master or above	35.7%		RMB100,001 or above	24.9%
Online purchases in the last year (times)	1-5	11.4%	Contacts in WangWang	None	3.8%
	6-10	10.8%		1-20	46.6%
	11-15	13.0%		21-50	22.3%
	15-20	10.0%		51-99	14.0%
	21 or above	54.6%		100 or above	13.3%

In this study, RMB20 (approx US\$2.5; €1.8) was offered as an incentive for participation, which was transferred to the respondents through a third party escrow system (AliPay) available to TaoBao users. The data collection lasted one month. In sum, we sent out 1,200 invitations, and 185 valid responses were received (15.4% response rate).

## Data Analysis

### Measurement Validation

Reliability tests show Cronbach's alphas of all constructs range from 0.73 to 0.96, indicating adequate reliability (Hair et al, 1998). Items whose individual factor loadings were lower than 0.60 were dropped from subsequent data analysis in order to achieve better construct convergent validity. After this process, we had 37 remaining items for 13 first-order constructs. For the measurement model, the composite reliabilities of the first-order constructs ranged from 0.85 to 0.97, which were within the commonly accepted range of greater than 0.70 (Gefen et al. 2000).

For convergent and discriminant validity, the square root of the Average Variance Extracted (AVE) of all constructs was above 0.8, ensuring that the AVE for each construct is greater than the squared correlations between constructs. The results of the principal components factor analysis indicated that all items load on their respective constructs, and they are all higher than all cross loadings (omitted for brevity). To test for the existence of common method bias, the principal components factor analysis indicates that each principle factor explains roughly equal variance. Meanwhile the correlation matrix (see Table 3) suggested that 0.66 is the highest correlation, less than the indicator of common method bias – 0.9 (Pavlou et al. 2007). Combining all the above conditions together, the measurement validation indicated that constructs used in the research model had satisfactory convergent and discriminant validity.

**Table 3. Descriptive Statistics, Correlation Matrix, and Average Variance Extracted of Principal Constructs**

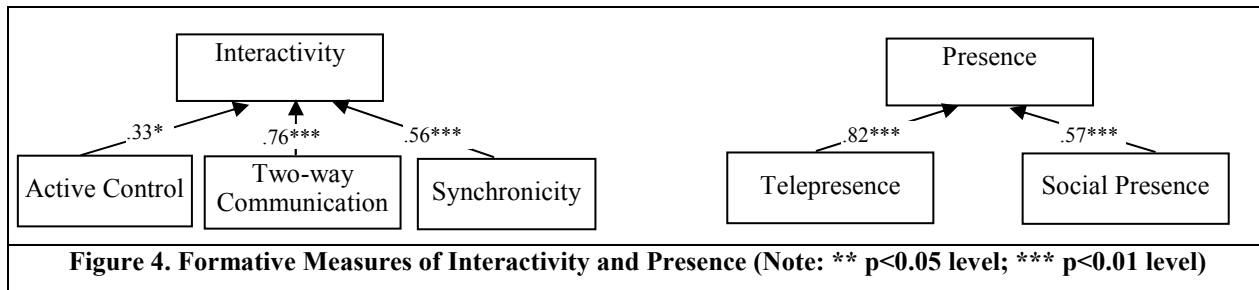
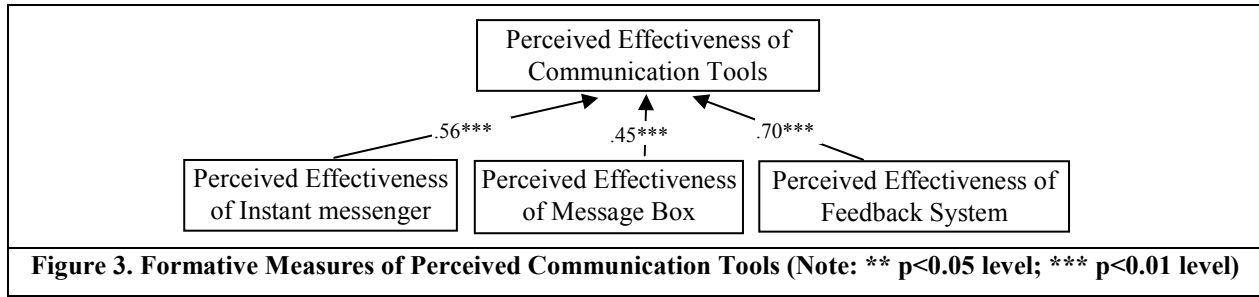
First-Order Constructs	Mean (STD)	Reliability	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Perceived Effectiveness of Communication Tools: Instant Messenger	5.9(0.9)	.88	<b>.81</b>												
2. Perceived Effectiveness of Communication Tools: Message Box	3.9(1.3)	.92	.09	<b>.89</b>											
3. Perceived Effectiveness of Communication Tools: Feedback System	5.7(1.0)	.95	.38**	.08	<b>.90</b>										
4. Interactivity: Active Control	5.2 (1.0)	.87	.32**	.21**	.48**	<b>.88</b>									
5. Interactivity: Two-Way Communication	5.5 (0.9)	.86	.29**	.09	.28**	.46**	<b>.87</b>								
6. Interactivity: Synchronicity	5.6 (1.1)	.97	.33**	.16*	.29**	.29**	.47**	<b>.97</b>							
7. Presence: Telepresence	4.4(1.2)	.92	.22**	.21**	.27**	.34**	.26**	.25**	<b>.86</b>						
8. Presence: Social Presence	4.8(1.2)	.96	.37**	.28**	.24**	.35**	.34**	.36**	.66**	<b>.93</b>					
9. Trust	5.7(0.9)	.97	.20**	.11	.30**	.48**	.30**	.39**	.28**	.33**	<b>.94</b>				
10. Guanxi	4.8(1.0)	.85	.21**	.11	.24**	.39**	.36**	.29**	.43**	.44**	.48**	<b>.81</b>			
11. Repeat Transaction Intention	5.6(0.9)	.85	.25**	.12	.29**	.29**	.19**	.16**	.22**	.28**	.33**	.26**	<b>.81</b>		
12. Trust in Transaction Platform	5.2 (1.0)	.93	.21**	.25**	.33**	.46**	.26**	.20**	.39**	.42**	.42**	.27**	.22**	<b>.88</b>	
13. Number of Past Transactions	1.6(1.5)	1.0	-.03	-.15*	-.06	.04	-.03	-.13	-.05	-.11	.21*	.10	.16**	-.09	<b>1.0</b>

Note: \*\*Correlation significant at  $p < 0.01$  level; \* Correlation significant at  $p < 0.05$  level;  
Reliability in this table means composite reliability. Diagonal elements are the square root of the average variance extracted (AVE) from their indicators; Off-diagonal elements are correlations between first-order constructs

### Testing Second-Order Factors

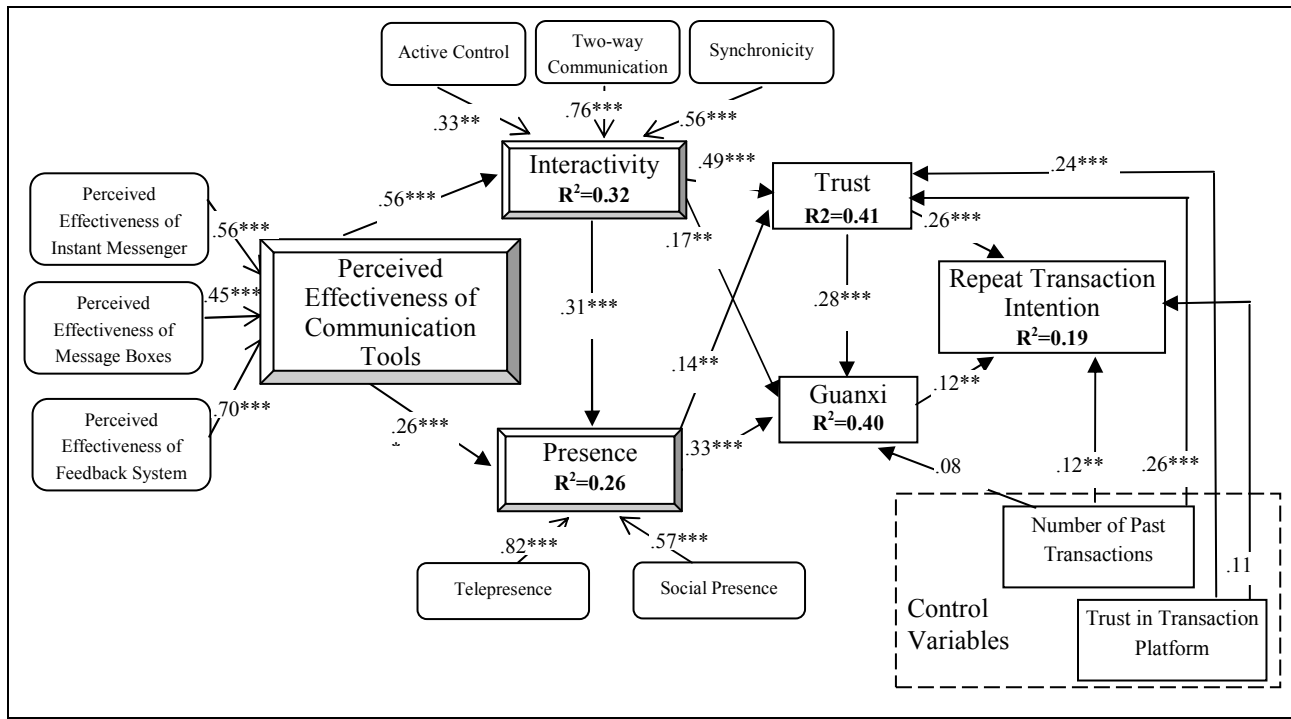
For the formative constructs, we modeled the coefficients of each first-order factor to the second-order factor using a principal components factor analysis and pulled the first-order factors together as the formative measure of perceived effectiveness of communication tools in PLS for the statistical model. Figure 3 indicates that all first-order factors for the perceived effectiveness of communication tools significantly loaded on the latent second-order factor.

We also use the same method to evaluate the other two second-order factor constructs, i.e., interactivity and presence (see Figure 4). The results demonstrate the validity of the formative second-order models.



**Testing the Structural Model**

The structural model was examined with PLS regression. Figure 5 shows the complete structural model of this study including the formative measures for the second-order factors. The PLS results indicate that the research model is supported by the data. The degree of explained variance in trust and guanxi are 41% ( $R^2=0.41$ ) and 40% ( $R^2=0.40$ ), respectively. Meanwhile, repeat transaction intentions is also explained with a variance of 19% ( $R^2=0.19$ ).



**Figure 5. PLS Results of Structural Model with Formative Measures (Note: \*p < 0.10, \*\*p< 0.05, \*\*\*p<0.01)**

Legend: Bevels represent second-order factors. Rectangles represent first-order factors measured with reflective scales. Rounded rectangles represent first-order factors used as the formative measures of the second-order factors.

The PLS results indicate that the perceived effectiveness of communication tools has a significant effect on both interactivity ( $b=0.56$ ,  $p<0.01$ ) and presence ( $b=0.26$ ,  $p<0.01$ ), supporting H1 and H2. Moreover, the path between interactivity and presence is also significant ( $b=0.31$ ,  $p<0.01$ ), also supporting H3. The variance explained for interactivity and presence are 32% and 26%, respectively. In terms of the role of interactivity and presence, the results support H4 (interactivity  $\rightarrow$  trust:  $b=0.49$ ,  $p<0.01$ ), H5 (interactivity  $\rightarrow$  guanxi:  $b=0.17$ ,  $p<0.05$ ), H6 (presence  $\rightarrow$  trust:  $b=0.14$ ,  $p<0.05$ ), H7 (presence  $\rightarrow$  guanxi:  $b=0.33$ ,  $p<0.01$ ). Both trust ( $b=0.26$ ,  $p<0.01$ ) and guanxi ( $b=0.12$ ,  $p<0.05$ ) have a significant role on repeat transaction intention, supporting H8 and H9, respectively. The path coefficient between trust and guanxi is found to be significant ( $b=0.28$ ,  $p<0.01$ ), also supporting H10.

The data also show the number of transactions with one particular seller to enhance the buyer's trust in that seller ( $b=0.26$ ,  $p<0.01$ ), and repeat transaction intentions ( $b=0.12$ ,  $p<0.05$ ), but has a modest impact on guanxi ( $b=0.08$ ,  $p>0.10$ ). A buyer's trust in the transaction platform can transfer to his/her trust in a seller ( $b=0.24$ ,  $p<0.01$ ), but it only moderately enhances the buyer's repeat transaction intentions with that particular seller ( $b=0.11$ ,  $p>0.10$ ).

During the data collection process, we used one open-ended question to capture buyer evaluations of IM in TaoBao. Consistent with the findings from the quantitative data, the respondents gave positive comments on WangWang, documented as "the most convenient way for prompt communication". Some of our respondents commented that WangWang helps buyers to "get timely product info, bargain price, ask about the delivery process and know the sellers better". Another comment from one survey participant indicates that "WangWang tells me whether the sellers are online. Normally, I can get sellers' reply very soon on WangWang. This tool helps me make buying decisions quickly. I think WangWang has facilitated the buying-and-selling network building in TaoBao". These comments provide us additional support on the leveraging function of IM tools in communication and online transactions.

### ***Robustness Checks<sup>3</sup>***

Besides testing the proposed full model, we examined the mediating role of interactivity and presence in the relationship between the perceived effectiveness of communication tools and trust and guanxi. An alternative model capturing the direct link from the perceived effectiveness of communication tools to trust and guanxi was structured and tested in PLS. The results (omitted for brevity) showed that the direct effect of the perceived effectiveness of communication tools on trust and guanxi is insignificant when interactivity and presence are included in the model. This test provides support for the mediating role of interactivity and presence in the proposed research model.

Our data analysis included the 7 participants (about 4%) who did not have any contacts in their WangWang. To avoid the noise from this group, we conducted the PLS analysis without this sample. Using Chin's methods<sup>4</sup> on multiple group analysis and the suggested the Smith-Satterthwait test to compare the regression coefficients calculated based on the two samples, the results show no significant difference between these two models.

## **Discussion**

### ***Key Findings***

This research has several key findings. Although the online C2C marketplace is generally considered as a platform for impersonal one-time buyer-seller transactions, our study indicates that there is evidence of both trust and guanxi, which do contribute to buyers' future repeat purchases. Our model explains that guanxi, which has been generally ignored by e-commerce researchers, is a significant antecedent of buyers' repeat transaction intentions with sellers, although online buyer-seller transactions are relatively shallow relationships compared to inter-firm business relationships that are prevalent in traditional environments. Guanxi is an essential business concept in China, and our results suggest that it does exist and has a significant effect in the context of online C2C marketplaces. This finding explains why most sellers in TaoBao keep their IM status online or even employ customer service staff for staying in touch with their buyers. Through various rich communication tools, buyers and sellers can establish a certain degree of interactivity and presence with each other in online environments.

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<sup>3</sup> We are indebted to the anonymous reviewers for suggesting these tests.

<sup>4</sup> Available at <http://disc-nt.cba.uh.edu/chin/plsfaq/multigroup.htm>

Trust has been a key component in e-commerce research, and our results indicate that trust is also a critical factor for buyers' repeat transactions with sellers. While this finding is expected, our research offers another lens to consider the formation of trust in a continuous business relationship by including the concepts of interactivity and presence. Presence is a critical factor in building both trust and guanxi. This indicates that sociable and personal service is crucial in the context of C2C transactions, especially in China. Provided with a sociable, warm and personal service, buyers have more reasons to believe the seller has the ability, integrity, and benevolence to transact appropriately.

Accordingly, the full mediating effects of interactivity and presence (as verified in the robustness check) suggest that interactivity and the consequential perception of the psychically and physiologically proximity with the sellers are the building blocks of guanxi. On the other hand, transactions without any interaction, in which the automatic process replaces human interaction, have created a barrier to establishing deeper or substantial relationships during online C2C exchanges. This rationale also explains the insignificant path coefficient between the number of transactions and guanxi: the seller-buyer social interaction (as an experience result) has overwhelmed the effects of past automatic transactions (as an outcome result) on establishing guanxi. This finding is somewhat different from the eBay model where there is a high degree of automation and no clear concept of interactivity and presence in transactions, resulting in a lack of interpersonal interaction that cannot bring buyers and sellers closely together.

The impact of communication tools in C2C transactions is a central issue in this study. Our data indicate that the proposed communication tools play a key role in improving the website's interactivity and buyers' sense of presence with sellers. The IM, as an effective communication tool, usefully signifies the reachability of sellers and facilitates interactive communication between buyers and sellers in online C2C marketplaces. The internal message box also plays an important role in facilitating transactions. The online feedback system resembles live word of mouth, also mimicking the reality of offline transactions. Therefore, most C2C platforms include these functionalities as well.

### ***Theoretical and Practical Implications***

Although researchers have invested significant efforts in studying online C2C marketplaces in the past decade, the online Chinese marketplace is relatively less examined. This study contributes to both research and practice by including the concept of guanxi and the embedded IM tool in understanding the C2C phenomenon in China. Compared to other C2C platforms, TaoBao's embedded IM tool, WangWang, is unique. Our research has verified WangWang's leveraging effects on communication and its contribution to the success of TaoBao. Practically, our study shows that Chinese online buyers like to talk and communicate with sellers before they transact. TaoBao has recognized and formalized this need, embedding the IM as an element in the transaction process. Considering this special characteristic, other C2C platform designers and online sellers should consider this feature carefully. By being online and reachable, trust and guanxi between online sellers and buyers will be significantly enhanced. More importantly, the interaction via the IM tool offers both buyers and sellers an opportunity to build something more than mere trust, which is the deeper relationship going beyond an automatic purchase process. This communication-focused design of the socially translucent technology has proved to render the sellers and the transaction platform a competitive advantage.

Guanxi, as a product of trust and social interaction, is verified as a critical factor in online transactions. However, little research has collected evidence on understanding how guanxi can be formed and how it influences transactions in online environments. Our results indicate that guanxi could strengthen the impersonal links among buyers and sellers in online C2C marketplaces via an interactive website and the cultivation of presence. Our data suggest that 86.15% of 400 sellers always keep themselves present online, thereby providing an opportunity to be approached by buyers, which helps build guanxi with potential and existing buyers via rich communication tools. Faced with strong competition from thousands of sellers in the online C2C marketplace, guanxi may render sellers a competitive advantage. However, this competitive advantage is not achieved within the context of a single transaction or a few days. Rather, it relies on a long-term relationship management strategy. While trust and guanxi may play different roles, they are both critical to the development of long-term business relationships which is consistent with the marketing theories of trust and guanxi (Garbarino and Johnson 1999; Wang 2007) in traditional business.

Integrating Social Translucence of Technology theory (Erickson and Kellogg 2000) and Social Presence theory (Short et al. 1976), this research suggests that communication tools are important determinants of trust and guanxi in online C2C marketplaces via interactivity and presence. In turn, trust and guanxi both facilitate buyers' repeat transaction intentions. This process offers a different lens by integrating the role of communication tools in online C2C marketplaces. The study also offers a more holistic picture of the antecedents of repeat online transactions.

Our research indicates that the embedded IM tool, together with the feedback system and internal message box, successfully helps the formation of trust and guanxi between buyers and sellers, via interactivity and presence. The conceptualization of the effectiveness of IM and guanxi aims to formalize these two constructs for the future research on China's C2C market. Distinct from other C2C platforms, our research projects the criticality of communication before, during, and after online C2C transactions. As highlighted by Hsiao (2003, p.186): "in the guanxi network, 'my word is my bond' becomes the norm in business dealing". The punitive side of guanxi is "losing face" (i.e., negative reputation) if the involved parties cannot keep their words in the relationship network. The IM tools enable the sellers to deliver the bond, and allow the buyers to guard the promise carrying during the transactions. In the interactive process via different communication tools, trust and guanxi are established.

The nature of mostly young buyers (aged 21-30) in the online Chinese C2C marketplace also deserves attention. These buyers are usually not shy of using new technologies and applications (Morris and Venkatesh 2000) and look for informal interaction in general (Herbsleb et al. 2002). The design goal of C2C platforms can thus anchor more on the youth and interactivity. C2C platforms, and each individual seller in the C2C marketplace, should design their respective websites in a more interactive way in order to enable buyers to develop both trust and guanxi with sellers. Website interactivity can be achieved by employing communication channels such as an IM tool. IM, although a relatively new feature in the C2C market, has successfully helped TaoBao to differentiate herself in China's C2C marketplace and was quite likely instrumental in forcing eBay CN to bail out of the Chinese online marketplace.

### ***Limitations and Suggestions for Future Research***

Although trust and guanxi are explained with a satisfactory extent of variance, the scope of this study can be expanded to gain a more complete understanding of buyers' C2C transaction behaviour. Future research can include more variables in order to achieve a more holistic view of guanxi building and consumers' repurchase behavior in online C2C marketplaces, such as sellers' credit numbers and after-sales service using IM tools, and the sellers' characteristics, such as skills in answering questions and handling conflicts in dyadic relationships with buyers.

Guanxi, considered as a critical factor in this research, also necessitates a more in-depth investigation in the context of C2C, B2B, and B2C marketplaces. Developing a theory of guanxi in e-commerce will benefit our understanding of long-term dyadic relationship development in online environments. Research questions, such as considering guanxi in the e-commerce research demand an inside, emic view to investigate the natural elements, and will thus enhance our understanding of the cross-cultural application of technology.

Finally, a more focused study on the effects of IM tools to reduce uncertainty and increase information transparency in the C2C marketplace is also worthy of a more detailed examination.

### **Conclusion**

In e-commerce research, while the concept of trust has been widely examined, guanxi is a late comer. In this study, we apply the marketing and management literature on guanxi so as to develop the understanding of online Chinese C2C marketplace. The proposed linkage of the perceived effectiveness IM and other communication tools to trust and guanxi (via other mediators) proved to be useful. This study suggests that rich communication tools effectively bridge the physical and psychological distance between online buyers and sellers, helping them develop an effective dyadic relationship. In this way, they offer a compensatory method to address an inherent deficiency of online marketplaces – the limited opportunity for online sellers to signify their willingness to communicate with buyers and develop guanxi. No matter whether in the contexts of B2B, B2C or C2C, the development of guanxi is critical to facilitating online transactions, at least in China. This study has demonstrated the practical implications of the existence of guanxi in online C2C marketplaces. It also stresses the need to design a communications network that can shape the loosely-connected web, as well as manage interactivity, presence and trust as the building blocks of guanxi. IM and other communication tools provide such an opportunity for developing guanxi between online buyers and sellers via rich communication tools.

## Appendix 1 Items and Factor Loadings<sup>5</sup>

Measures and Source	Factor Loadings
<b>Perceived Effectiveness of Instant Messaging</b> (New scale based on (Pavlou and Gefen 2004))	
1. I feel that TaoBao's instant messenger (i.e., WangWang) functions as an effective communication channel for me to communicate with this seller.	.713
2. I have great dialogues with this seller in WangWang.	.768
3. I believe that WangWang has facilitated the communication between this seller and me.	.800
<b>Perceived Effectiveness of Message Box</b> (New Scale based on (Pavlou and Gefen 2004))	
1. TaoBao's message box is not an effective (1)/is a very effective (7) communication channel for me to communicate with this seller.	.876
2. TaoBao's message box has provided a good communication channel between this seller and me.	.877
3. The message box provided by TaoBao did not help me at all (1)/has helped me a lot (7) in the communication process with this seller.	.864
<b>Perceived Effectiveness of Reputation system</b> (Adapted from (Pavlou and Gefen 2004))	
1. I feel confident that TaoBao's ratings and feedback mechanism provides accurate information about this seller's reputation.	.828
2. A considerable amount of useful feedback information about the transaction history of this seller is available through TaoBao's ratings and feedback mechanism.	.761
3. I believe that that the ratings and feedback mechanism in TaoBao is effective for buyers to know about this seller.	.881
4. I believe that the ratings and feedback mechanism in TaoBao is reliable and dependable so as to help me evaluate this seller.	.859
<b>Interactivity: Active Control</b> (Adapted from (Liu 2003))	
1. I felt that I had a lot of control over my experience at this seller's website.	.746
2. While I was on this seller's website, I could choose freely what I wanted to see.	.815
<b>Interactivity: Two-way Communication</b> (Adapted from (Liu 2003))	
1. This seller facilitates two-way communication between him/herself and visitors.	.849
2. This seller gives visitors the opportunity to talk to him/her.	.906
<b>Interactivity: Synchronicity</b> (Adapted from (Liu 2003))	
1. This seller responded to my questions very quickly.	.866
2. I was able to get information from this seller very rapidly.	.834
<b>Presence: Telepresence</b> (Adapted from (Khalifa and Shen 2004; Steuer 1992))	
1. When browsing this website, my body was in the room, but I felt my mind was inside the world created by this seller.	.673
2. When browsing this website, I felt that I was immersed in the world this seller had created.	.735
3. This seller-generated world seemed to me to be "somewhere I visited" rather than "something I saw".	.784
4. I felt I was more in the "real world" than the "computer world" when I was browsing this seller's website.	.751
<b>Presence: Social presence</b> (Adapted from (Khalifa and Shen 2004; Steuer 1992))	
1. There is a sense of human contact in this seller's website.	.704
2. There is a sense of personalness in this seller's website.	.818
3. There is human warmth in this seller's website.	.813
4. There is a sense of human sensitivity in this seller's website.	.802
<b>Trust in Seller</b> (Adapted from (Pavlou and Gefen 2004))	
1. I think this seller is reliable.	.807
2. I think this seller is dependable.	.808
3. I think this seller is honest.	.801
4. I think this seller is trustworthy.	.801
<b>Guanxi</b> (New Scale based on (Arias 1998))	
1. I share a sense of relationship with this seller.	.614
2. I feel a sense of association and connection with this seller.	.713
3. I have built a cooperative relationship with this seller.	.839
<b>Repurchase Intention</b> (Adapted from (Pavlou and Gefen 2004))	
1. Next time I need to shop for a similar product, I would like to buy from this seller.	.687
2. Next time I need to shop for a similar product as a gift for a friend, I would like to use a website with characteristics similar to those of this website.	.850
3. I would buy from online sellers with similar characteristics to those of this seller in the future.	.790
<b>Control Variables</b>	
<b>Trust in the Transaction Platform</b> , adapted from (Pavlou and Gefen 2004)	
1. As an auction host/intermediary, TaoBao can be trusted at all times.	.777
2. As an auction host/intermediary, TaoBao can be counted on to do what is right.	.827
3. As an auction host/intermediary, TaoBao has a high level of integrity.	.818
4. TaoBao is a competent and knowledgeable auction host/intermediary.	.796
<b>Number of Past Transactions</b> (Adapted from (Pavlou 2003))	
Before filling in this survey, how many times of transactions had you transacted with this seller?	.620

<sup>5</sup> Due to the page limit, cross loadings are omitted for brevity.



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