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THE IMPACT OF SOCIAL CONSTRUCTS ON CONTINUANCE INTENTION IN ONLINE AUCTION: A COMPARISON OF COMMUNITY vs. TRANSACTION PERSPECTIVE

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Abstract

This study analyzes social constructs from different types of actor behavior (i.e. transaction-oriented and community-oriented) to understand the influencing factors of their intention to use with online auction. We introduce social influence process and social capital theory to conceptualize research model, and a survey-based study was conducted. The simultaneous analysis of several groups was applied to test the research hypotheses. Our results verified that varied social constructs promote continuance intention for different types of online auction behavior, which are believed to contribute to the online auction development and management. We also conclude with a consideration of academic implication of the findings.

Introduction

Online auction is a complex and dynamic online service system, where different interaction and transaction pattern are embedded within networks of interdependencies [5,16,51,55,64]. Some of auction actors bid for second-hand items while others buy new goods from traders, as well as some harmful activities (such as bid shielding, shilling) are take place. Until now, there is still ambiguity about if the online auction is a market or a virtual community for resource exchange.

From market perspective, researchers argued that auction members usually conducted transaction with varied traders or other members (named as transaction-oriented behavior in this study), and trust mechanism is critical to helping the online consumers make a purchase decision [26,31,37,58]. From community perspective, some researches recognize that social factors with in auction community are equally important to influence online behavior (named as community-oriented behavior in this study). In this respect, Chua et al. (2007) pointed out that auction community members with strong attachments to the community have intimate knowledge to discover abnormal transaction pattern. Skillful and faithful members self organize into anticrime communities and expertise criminals and oppose their activities

using several mechanisms including vigilante justice, community education, and cooperation with auction website management. Ba(2001) also pointed out that online communities such as eBay can be used as “a social structure to provide online trust”.

As a result of varied social interactions occur in online auction, recent researches suggest that online auction is a complexity of value network in which interacts with social-contextual influences [7,16]. However, most of online auction researches focus on individual-level characteristics or technology perspective [14,17,20,31,35,36,44,46,63,69] (static resource) rather than on properties of the social interaction, relationship and group/community context (dynamic resource). Additionally, little research has actually provided research model and empirical evidence to investigate which social factors surrounding the transaction-oriented behavior and community-oriented behavior, what are the relationships among those factors and how they affect the actors' continuance intention. In short, online auction research based on social influences concept is still in its infancy, and lacks of empirical research model for investigate online auction behavior. Consequently, to investigate which phenomena are responsible for the description of different auction behavior patterns within varied social interaction context is important to the online auction management team and auction researchers.

In summary, social constructs, besides technology factors and individual factors, should be considered as one of the important determinant of future auction usage. Moreover, two perspectives, transaction-oriented and community-oriented, are considered as different motivations and behavior in online auction. By adding social capital and theory-building extension of the social influence process, this study contributes to online service research a theoretical framework in order to investigate the social factors surrounding the online behavior, such as online auction continuance, and the relationships among them. Furthermore, this model was conducted an empirical test in order to determine the different effectiveness of social factors on transaction-oriented behavior and

community-oriented behavior. This emphasis allows us to shift the focus from an individual level to a community level by taking into account the interplay between individuals and the community.

This remainder of this paper is organized as follows. The first section reviews the literature of social identity derived from social influence process and discusses the three dimensions of social capital in the auction community. Relevant research streams are then integrated to provide construct definitions and a theoretical foundation for the research model and hypotheses, followed by a description of research design including empirical data collecting and instrument construction. Next, the results of model testing are presented and their implications are discussed. Finally, limitation and future research are outlined.

Literatures Review

Social factors and continuance intention in auction community

This study defines continuance intention as user plans to continue using already adopted online auction systems [9]. Continuance intention to usage is a conceptually distinct construct from initial adoption. The latter occurs before initial acceptance of an IT/IS, online service, or product. For example, technology acceptance models [17,62] explain why users adopt new systems or online service. However, such models do not investigate reuse of systems or online services post-adoption [60]. Previous studies have pointed out that continuance intention exerts a key positive influence on the success of online communities, with effects including greater community participation in online communities [2]. Since online auctions are a commercial context as well as a virtual community, this study suggests that understanding continuance intention of auction actors is essential to the online auction management.

An auction behavior study conducted by Raffaelli and Noy (2005) noted that social factors are important social influence sources and resulting bidding behavior. In a similar vein, Leenders (2002) proposed that communication and social comparison are two underlying process to trigger social influence. His study argued that actors rely on frequent and vivid communication to help them understanding peer's ideas, beliefs, and attitude. Moreover, another social influence process, social comparison, may cause affect social identity to play a role in antecedence of online behavior. In the social comparison process or searching for a social identity, actor compares himself to those peers whom he considers their behavior to be acceptable as their frame of reference. In a similar vein, Dholakia et al. (2004), as well as Algesheimer et al. (2005), find that social identity is a critical social influence on intention to participate and

community engagement. Social identity refers to the common identification with a collectivity or social category which creates a feeling of similarity to other group members. Social identity theory explains the tendency for people to group themselves rely on some common characteristics [41,59]. A social actor with strong social identity has a perception of oneness with a group of people [10,32]. This theory suggested that creating a common identity will lead to common behavior and develop cohesiveness among group members [6,21,41].

Furthermore, recent studies regarding online behavior research sketch that online social actions (e.g. making use of virtual communities as social and information networks, consumer decision-making processes, and knowledge sharing) are positively correlated with concepts of social capital and social identity [13,15,19,25,32,39]. In this respect, Dholakia et al. (2004) use the social identity perspective to explore the social behaviors within the virtual communities, and suggest that further research should extend their results combining the social capital theory as a broad view in examining the relationships between social factors and social action in online context. Social capital is considered a proxy for the ability to mobilize resources embedded in relational networks to achieve higher status [43] via "a series of non-negotiated or reciprocal exchanges" [57]. Previous studies employed the concept of social capital to assess the quality of relationships resulting from social interactions within communities and how they affect the ability of actors to achieve shared goals [3,54]. Social capital is sometimes viewed as a pool of resources that should be tapped via the social ties embedded in social networks.

According to above discussion, this study consider that social capital and social identity might completion each other's effects to cope with the antecedence of social-contextual behavior in the online auction context. Specifically, what are the different consequences of social factors on behavior between transaction-oriented actors and community-oriented actors is still enigmatic and worthy of further investigation. Hence, the remainder of this section will introduce literatures of social capital and social identity studies related to online interaction or virtual community.

Dimensions of social capital in online auction community

Despite the widespread application of social capital theory, its succinct definition remains challenging. This lack of conceptual clarity contributes to excessive-versatility [45]. Recently numerous studies have identified three dimensions of online social capital: structural, cognitive and relational

[1,49,61,65,66]. The cognitive dimension refers to resources that enable shared interpretations and meanings within a group [49,65]. Furthermore, the cognitive dimension comprises values, attitudes, beliefs, and perceptions of support affecting interdependence [38,49]. Meanwhile, the relational dimension involves social actors trusting other actors within the group and being willing to reciprocate favors or other social resources in the trading process [49,65]. The structural dimension is created when community actors communicate each other.

Given the varied components of each of the three dimensions of social capital as presented in the literature, the different types of interaction media (such as Internet vs. Face-to-Face) and communities (such as knowledge-sharing communities vs. transaction-oriented communities) also add to the differences in considering the composition of the three dimensions of social capital. For example, two studies on knowledge-sharing community, Chiu et al.(2006) and Wasko& Faraj (2005) identified different elements of social capital. Table 1 compares the elements identified between the two studies. Thus, it may be necessary to identify the key elements of social capital in transaction-oriented communities by clarifying the characteristics of online auction interactions.

	Wasko and Faraj (2005)	Chiu et al., (2006)
Structural dimension	Centrality	Social Interaction Ties
Relational dimension	Commitment / Reciprocity	Trust / Norm of Reciprocity Identification
Cognitive dimension	Self-related Expertise / Tenure in the Filed	Shared Language / Shared Vision

In an online auction, trading is the major activity in online auction community and is considered as social interaction [67] of auction actors in this study. Transactions and interactions between two parties are recorded in auction websites following the completion of a trade and reciprocal rating through the reputation mechanism. The number of reputations revealed in auction websites was determined by subtracting negative comments from positive comments. However, only positive comments were considered evidence of reciprocal behavior between two actors in the auction community. Negative and neutral ratings are not counted toward social interaction, because they represent unacceptable behaviors and imply a negative impact on the relationship. Moreover, unlike other commonly occurring interactions (e.g., Q&A or online forums), a positive reputation is a valuable asset for auction actors because it results

from a series of negotiated and reciprocal activities (such as negotiation for price, payment and logistics). Furthermore, reputation rating between pairs of traders with the latter rating overwriting earlier ratings. For example, an auction actor (e.g., seller) may conduct several transactions with another actor (e.g., the same buyer); however, only the latest evaluation is disclosed. Thus, this study considers "positive reputation" as a form of social interaction and employs it to measure 'Centrality' that is the key element in the structural dimension of social capital in online auctions [65].

The relational dimension of social capital typically focuses on trust, commitment, or reciprocity [49,61]. Trust is essential in creating friendly online transaction environments [4,5,27,40,58]. Auction actors can only assess the condition of goods via pictures, descriptions, and Q&A , and also have only limited information about their transaction counterparts in general [11]. Designing an environment that provides traders with increased certainty and promotes trust therefore is important. This study thus considers "trust" to be the key element in the relational dimension of social capital in online auctions.

From the community perspective, shared vision is also a key element of cognitive dimension of social capital in the study of Tsai and Ghoshal [61]. Shared vision significantly affects actor cohesion and community fostering for various community types. Royal and Rossi [56] noted that a shared vision reflects "the influence a group may have over its members by encouraging commitment to a common set of ideas" and "may lead group members to feel that they share a common future." [56] Shared vision can be critical in creating a meaningful sense of community. Online auctions represent one type of community, and teams managing auction websites should note that sense of community is vital for achieving positive outcomes in terms of business objectives for auction websites [11,47,56]. This study thus considers "shared vision" to be the key element in the cognitive dimension of social capital.

Social identity theory

Previous studies regarding organization and group research analyzed social identity process which is generated through self-categorization in the face-to-face communication context [18,33,39,52,59]. They proposed that social actor categorize each other into "in-group" and "out-group" based on perceived similarities (we) and differences (they) and forms an important part of our self concept [33]. Recently, several researches have reported the importance of social identity for social action in online interaction context. In this respect, Bagozzi and Dholakia's (2002) virtual community study noted that social

actor "construes him- or herself as a social category (e.g., "member of virtual community Y") and acts as an agent of the group in concert with other group members" and thus enhance a sense of emotional involvement with the community, which are positively related to intention that underlies participation behavior [21]. Chiu et al. (2006) argued that social identity acts as an influencing factors associated with resource exchange in online context. Their research pointed out that "the perception of social unity and togetherness of the community will elevate one's activeness to share knowledge and increase the depth and breadth of shared knowledge." Following similar arguments, Loyarte and Rivera (2007) stress the importance of social identity to cultivate communities of practice (e.g. open software communities). De Valck et al. (2009) also noted the importance of social identity on participation in virtual communities either group-based communities or network-based communities. In a similar vein, this study considers that there is a tendency for auction actor to develop cohesiveness within an auction community regardless of face-to-face interaction.

Hypothesized Model

Follow the abstract with a first-level heading that introduces the body of the paper. All paragraphs should begin flush left and right justified. Single-space the body of the paper.

Antecedence of auction continuance intention

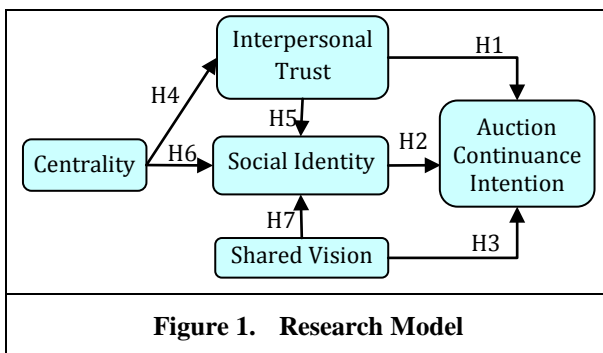


Figure 1. Research Model

The relational dimension of social capital exists when actors have a definite affinity with the group, trust other actors within the group, and are willing to reciprocate mutual actions during trading [8,65]. As mentioned previously, this study contends that trust is one of the key elements in the relational dimension of social capital in transaction-based online communities. Morgan and Hunt (1994) noted that trust is key factor that lead directly to cooperative behaviors among exchange partners. According to the studies of Paldam and Svendsen(2000) and Pollack et al.(2004), trust describes the mutual expectation (for example, members acting in mutually supportive ways, or at least not intentionally harming others) arising within a community characterized by regular cooperative behaviors and commonly-shared

norms[50,53]. With the formation of trust relationships between two actors, the actors concerned become more likely to improve their collaboration efficiency by facilitating coordinated actions [54] and reducing risks involved in the transaction [48]. Consequently, it is reasonable to expect that social actors with high level of trust in other actors can acquire higher continuance intention to interact with their exchange partners [61]. This study thus hypothesizes:

H1: Stronger interpersonal trust leads to stronger continuance intention of online auction actor.

Social identify refers to members' sense of belonging and positive feeling that the person comes to view himself or herself as a member of the community [6,15]. Previous studies identify social identity is a key social influence variables impacting virtual community participation [6,15,21,42]. Bagozzi and Dholakia (2002) note that digital environments may be perceived as socially rich environments allowing social identity to develop for community members and influence their social action intention. Chiu et al. (2006) suggested that social identity provides a perception of social unity and togetherness of the virtual community, and finally enhances the quality and quality of knowledge contribution of community members. Dholakia at al. (2004) noted that social identity motivates a social actor to actively participate in online social interactions in order to maintain a positive self-defining relationship with other community members. Building on these insights, we argued that auction actor with stronger social identity could enhance a sense of emotional involvement with the online auction community, and finally fosters actively social interaction and citizenship behaviors in auction settings. Hence, we hypothesize the following:

H2: Stronger social identity leads to stronger continuance intention of online auction actor.

Tsai and Ghoshal (1998) argued that organization members with high level shared vision have enhanced perceptions regarding how to communicate with other members and minimize misunderstandings during their interaction. In the study of Burroughs and Eby of psychological sense of community in the workplace, group members with a clear, shared vision were found to be of greater team orientation and sense of community, and thus increased intention to interact with others[12]. Koh et al. (2007) similarly noted that community members with a clear vision for their communities may stimulate participation [41]. The job of actors in online auctions is to search for and evaluate products, negotiate and transact with other actors. Actors who perform their job with a high level of shared vision may gain mutual understanding through shared meaning system [32]

and common set of ideas [56], which is possible to get a detailed understanding of transaction risk during the pre-transaction stage, and finally encourages continuance intention for conducting transactions. Based on this argument, the following hypothesis is established:

H3: The actors' shared vision is positively associated with their auction continuance intention.

Antecedence of interpersonal trust

Social capital has been analytically divided into the three dimensions identified above. Scholars have also suggested the existence of close interrelationships among the characteristics contained in the above three categories [49]. This study examines the interplay among these elements in the three dimensions of social capital.

Numerous studies have suggested that interpersonal affect, trust, and trusting relationships generally result from strong, symmetrical interaction ties [28,29,49,61]. On the one hand, frequent social interaction or high centrality leads to actors sharing more information or common perspectives with other actors and creating trusting relationships; on the other hand, as Tsai and Ghoshal noted [61], "an actor occupying a central location in a social interaction network is likely to be perceived as trustworthy by other actors in the network." English-Lueck et al. (2002) has pointed out that the strong and positive social interaction "act as a source for reciprocal relationships and provide a structure for strangers into friends," and finally help to build and nurture trust relationships [22]. This study thus expected an auction actor with high centrality to be likely to develop good judgment regarding the behavior of other actors and to enhance their trust in other actors based on their experience of interaction. Moreover, for auction actors interacting with others via an auction site where users generally use pseudonyms, reputation helps decide whether to engage in a transaction. The availability of transaction histories and reputation can potentially encourage trustworthy behavior and discourage negative actions. An auction actor with a positive reputation, manifesting in the form of social interaction, tends to occupy a central position in a collective network. This is more likely to induce trust from others, thus initiating new transaction opportunities. This study thus hypothesizes the following:

H4: Higher levels of centrality lead to a stronger interpersonal trust in the auction community.

Antecedence of social identity

Several studies also suggested that social identity plays a role in the verification of trust in economic transactions context [22,24]. In this study, interpersonal trust refers to an auction actor's expectation about others' social behaviors are

similar and acceptable, which could foster sense of belonging and positive feeling toward the auction community in online setting. Consequently, this study argued that actors' social identity could be established through the enhancement of their trust in other actor. Thus, we set up a hypothesis here:

H5: Stronger interpersonal trust leads to stronger social identity in the auction community.

Centrality refers to the number of ties that a social actor links to other actors in a social network. Evidence from social network and virtual community research reveals that dense network ties create channels for the share of common language and information, which is like to encourage sense of belonging. As examples, Krogh (2002) pointed out that community members will develop a shared sense of identity by intense and dense interaction. Podolny and Baron (1997) stated that dense network ties is the primary bases for "conveying a sense of personal belonging within a collectivity and clear normative expectations associated with one's role", and finally forming social identity in a group. Dholakia et al. (2004)'s virtual community study noted that interaction is an important factor for the formation of social identity. This implies that social actors with dense social ties are able to form social identity due to they are more likely to experience collective action than those with sparser ties. Thus, we set up a hypothesis here:

H6: Higher levels of centrality lead to a stronger social identity regarding the auction community.

Evidence from social capital research reveals that shared vision binds community members together and defines the values of a group and its members [15,49,61,65]. Because of this, once the actors have accepted the values and vision regarding their virtual community, they will create a sense of belonging identify with the community more. In this regard, Herrmann (2003) suggested that social identity can be achieved or maintained through "the engagement and the alignment of a community's members and the evolution of their shared meaning system." This implies that a shared vision is required to ensure members' collective action and enhance the mutual understanding of its' future goals. Accordingly, this study argued that a shared vision can help auction actors feel similarities with other members, such as shared goals, concerns, and community purpose [61], and finally encourages social identity and group-oriented behavior. Thus, we set up a hypothesis here:

H7: Stronger shared vision lead to a stronger social identity regarding the auction community.

Research Method

Sampling and subjects

Table 2. Operationalization of Constructs and Descriptive Statistics of Measurements

Constructs(Reference)/Measurements		Transaction-oriented actors(N=156)				Community-oriented actors(N=196)			
		Min.	Max.	Mean	Std. Deviation	Min.	Max.	Mean	Std. Deviation
Auction continuance intention (Reference: Bhattacharjee (2001))									
ACI1	I intend to continue interacting with actors of Yahoo! auction websites.	1	5	4.03	0.75	2	5	4.27	0.68
ACI2	I intend to continue interacting with actors in Yahoo! auction website rather than seeking out actors of other sites.	1	5	4.03	0.68	1	5	4.21	0.68
ACI3	If I could, I would like to discontinue my interaction with the actors of Yahoo! auction website.	1	5	3.99	0.69	1	5	4.18	0.70
Social identity (Reference: Chiu et al. (2006))									
SI1	I feel a sense of belonging towards the Yahoo! Auction community.	1	5	3.74	0.71	1	5	3.75	0.79
SI2	I have the feeling of togetherness or closeness in the Yahoo! Auction community.	1	5	3.38	0.90	1	5	3.49	0.89
SI3	I have a strong positive feeling towards the Yahoo! Auction community.	1	5	3.71	0.71	1	5	3.82	0.65
SI4	I am proud to be a member of the Yahoo! Auction community.	1	5	3.41	0.91	1	5	3.69	0.84
Shared vision(Reference: Chiu et al. (2006))									
SV1	Members in the Yahoo! Auction community share the vision of helping others answer their problems.	1	5	4.17	0.68	3	5	4.40	0.56
SV2	Members in the Yahoo! Auction community share the same norm of transaction.	1	5	4.11	0.83	2	5	4.36	0.71
SV3	Members in the Yahoo! Auction community share the same expectation that the auction website as popular.	1	5	4.13	0.71	2	5	4.36	0.60
Interpersonal trust(Reference: Chiu et al. (2006))									
TRS1	Members in the Yahoo! Auction community will not take advantage of others even when the opportunity arises.	1	5	3.74	0.75	1	5	3.93	0.74
TRS2	Members in the Yahoo! Auction community will always keep the promises they make to one another.	1	5	3.65	0.76	1	5	3.93	0.76
TRS3	Members in the Yahoo! Auction community would not knowingly do anything to disrupt the conversation.	1	5	3.90	0.69	1	5	4.10	0.65
TRS4	Members in the Yahoo! Auction community behave in a consistent manner.	1	5	3.81	0.74	1	5	3.82	0.80
TRS5	Members in the Yahoo! Auction community are truthful in dealing with one another.	1	5	3.82	0.71	1	5	3.94	0.68
Centrality(Reference: Wasko and Faraj (2005))									
This study adopts degree of centrality as manifestation of structural capital. In transaction networks of online auction, a dyadic link is created between two actors when one rates reputation to their counterpart of transaction. These links were recorded in reputation page of website.		1	778	84.83	122.69	1	1956	140.36	234.35

The sample data for the study was taken from Yahoo! Taiwan Auction, the largest online auction website (market share reach 87.1% in 2007) in Taiwan [34,68]. This study used snowball sampling to construct a transaction network of auction actors using a self-developed web crawler program. Firstly, several auction actor (namely root layer sampled actors) were randomly chosen from the auction website. Next, data was collected for auction actors (namely first layer sampled actors) who had transacted with these root layer sampled actors. We continue to collect sampled actors with repeated snowball and remove duplicate actors until third layer. Further, this study uses simple random sampling to select auction actors as research subjects from transaction network. We sort the auction user ID in alphabetical order and number them consecutively. Next, a computer-generated random table is used to select individual subject. Each research subject received an e-mail message soliciting his or her participation in this survey. Respondents were directed to

complete a web-based survey. The online survey was considered appropriate given the context of online auction, in addition to other advantages of low cost, fast response and lack of geographic restrictions [65]. During our data collection stage, the respondents were enticed to take part in a raffle with prizes by entering their own IDs in the auction site. The identification data allowed us to filter out repeated respondents.

Finding actors of transaction-oriented model and community-oriented models

In general, auction actors can participate in forum discussions provided by auction website to exchange auction experience. According to Wasko & Faraj (2005), Chiu et al. (2006) and Chua et al. (2007), an actor who frequently posted their experience on forum is helpful in knowledge sharing and, in turn, fostering community development. Consequently, this study identified two types of auction behavior; transaction-oriented model and community-oriented model, based on

whether participate in forum discussions. Auction actors were asked to answer two questions. One is “I have read article about auction experience from auction forum”, and the other is “I have posted article about auction experience in the auction forum”. Three options for these questions: “Never (0)”, “Sometime (1)”, and “Usually (2).” We classify actors as sample of community-oriented model if sum of two questions is 2 to 4 while others are sample of transaction-oriented model if sum of two questions is 0 or 1. In other word, the actors who have conducted online transaction and never read article or sometime read but never shared any experience in the auction forum only consider “online auction” as a shopping channel of market. In contrast to transaction-oriented actors, community-oriented actors not only conducted transaction, but also shared information or experience to enhance their ability to cope with varied situations in the online context [16].

Instrument construction

Centrality is the measurement adapted from mathematic graph theory. Further, this study modifies and identified measurements to assess the five multiple-items constructs in the current research context based on above researches. Measurements related to research model and descriptive statistics are showed in Table 2. Respondents were asked to record their responses using a 5-point Likert scale ranging from strongly disagree (=1) to strongly agree (=5).

Content validity: pretest and pilot test

A pretest of the questionnaire was performed using five Ph D. students in the IS area to assess its contextual relevance, ease of understanding, sequence of items, and logical consistencies. A pilot test was conducted involving 20 graduate students with experience of using online auction websites. Participants were asked to provide feedback regarding the length of the survey and the relevance and wording of the questionnaire items. The comments collected from these experts and student led to several minor modifications of the wording and the item sequence.

Results

Evaluating the measurement model: convergent validity and discriminant validity

The measurement model was tested using AMOS 7.0. Four multiple-items constructs, namely auction continuance intention, shared vision, interpersonal trust, and social identity, were required to assess convergent validity and discriminant validity.

Table 3 lists the goodness-of-fit of the measurement model the scale properties (standardized item loading and t value). In line with the suggestion of O’Leary-Kelly and Vokurka (1998), and Hair et al. (1998), two common statistic tests were applied for assessing the unidimensionality of a measure: the overall model fit (e.g., using χ^2 /df statistics) and the significance

		Initial measurement model				Revised measurement model			
Construct	Item	loading	t-statistic (for λ)	Construct reliability(CR)	AVE	loading	t-statistic (for λ)	Construct reliability(CR)	AVE
Auction Continuance Intention(ACI)	ACI1	0.834		0.90	0.74	0.833		0.90	0.74
	ACI2	0.903	20.39			0.903	20.39		
	ACI3	0.848	18.92			0.848	18.92		
Social Identity (SI)	SI1	0.79		0.70	0.40	0.785		0.75	0.51
	SI2	0.53	9.12			0.503	8.66		
	SI3	0.795	12.89			0.813	12.89		
	SI4	0.243	4.14			eliminated			
Shared Vision (SV)	SV1	0.748		0.77	0.53	0.748		0.83	0.62
	SV2	0.783	13.63			0.783	13.63		
	SV3	0.834	14.19			0.834	14.19		
Interpersonal trust (TRS)	TRS1	0.733		0.89	0.62	0.733		0.89	0.62
	TRS2	0.797	14.47			0.798	14.48		
	TRS3	0.801	14.54			0.801	14.55		
	TRS4	0.771	14.00			0.771	13.99		
	TRS5	0.824	14.97			0.824	14.96		
Model fit:		χ^2 /df=3.051,(χ^2 =256.31,df=84,p<.001), GFI=.913, AGFI=.876, NFI=.911, RMSEA=.076				χ^2 /df=2.362,(χ^2 =167.682, df=71, p<.001), GFI=.935, AGFI=.904, NFI=.94, RMSEA=.062			
All Standardized item loadings (λ) were significant at p = .001 level.									

of individual item loading (λ). Most of fit indices in Table 3 indicate adequate model fit, and all estimated standard loadings are statistically significant (t value > 1.96) while an item (SI4 $\lambda = 0.243$) is excessively low loadings and "Modification Indices" provided by AMOS showed that SI2 and SI4 are highly correlated and collinearity ($MI = 56.635 > \text{cutoff} = 50$). Hence, we eliminated SI4 and re-test measurement model. The revised measurement model showed in right of Table 3, and the unidimensionality of a measure is confirmed by statistic results in this study. Construct reliability (CR) is a common statistic test for assessing the reliability of a measure. As suggested by Bagozzi & Yi (1988), construct reliabilities should exceed 0.70. Table 3 shows that the composite reliabilities of each construct ranged between 0.75 and 0.90, which are acceptable reliability values.

	ACI	SI	SV	TRS
ACI	0.86*			
SI	0.64	0.71*		
SV	0.66	0.52	0.79*	
TRS	0.54	0.56	0.43	0.79*

*Diagonal of the table are square root of AVE, others are correlations.

Convergent validity was evaluated using the following criteria: (1) for each individual, item loading (λ) should be statistically significant (exceed 0.7) [23]; (2) construct reliabilities should exceed 0.70, or average variance extracted (AVE) should exceed 0.50 [30]. 0 shows that all estimated standard loadings in the revised measurement model were statistically significant (t value > 1.964), and the loading of most standardized items exceeded or approximated the cutoff of 0.70. Construct reliability was 0.75 and 0.90; AVE was 0.51 and 0.74. Hence, most criteria for convergent validity were met. Moreover, model fit of the revised measurement model was better than that of the initial measurement model.

Discriminant validity - the extent to which different constructs diverge from one another - was assessed using the method developed by Fornell and Larcker (1981), who suggested testing whether the square root of AVE of each construct exceeded the correlations between two constructs. As shown in Table 4, all of the square root of AVE (diagonal of the table) exceed the correlations between two constructs. In summary, the items were acceptable given the specifications of the modified measurement model. Thus, this study used the items in the revised measurement model for hypothesis testing.

Structural model: hypothesis and model testing

The research model and hypothesized relationships were tested collectively using AMOS 7.0. In order to compare the different effect of social factor on two types of auction behavior, the simultaneous analysis of several groups was applied in this study. Table 5 shows goodness of fit, the standardized path coefficients, path significances.

Model test results show that inconsistent effects of social factors on continuance intention between community-oriented actors and transaction-oriented actors. In examining hypotheses 2 which explicates the associations between social influence and auction continuance intention, we find that social identity influences auction continuance intention significantly in community-oriented model rather than transaction-oriented model. Considering the direct impact of three dimensions of social capital on auction continuance intention, we find that shared vision and interpersonal trust do influence continuance intention in both models. Moreover, critical ratios for differences between community-oriented model and transaction-oriented model is insignificant ($|-0.451| < 1.965$ while $p = 0.05$) in terms of the effect shared vision and interpersonal on continuance intention. That is to say, the regression weights between shared vision and auction continuance intention could be considered to be equal in both models.

Considering the relationships among three dimensions of social capital and social influence variables, the paths from shared vision and interpersonal trust to social identity are significant in spite of which model is tested. Meanwhile, the relationship between centrality and social identity is significant in community-oriented model while that does not significantly affect identify in transaction-oriented model. On hindsight, some results are perhaps not surprising while other results may be slightly below expectation. In the next section, we focus on the insight provided by these results for the interpretation of how social constructs affect varied types of auction actor.

Discussion and Conclusion

This study helps understanding the complex process in which social influence variable and social capital affect auction continuance intention across a variety of different actor behaviors, such as community-oriented and transaction-oriented. The analytical results show that intention to use between community-oriented actors and transaction-oriented actors stem from different social constructs. These findings raise several interesting issues discussed below.

Table 5. Results of simultaneous analysis of several groups

hypotheses	Path (note: ** p<0.01; * p<0.05)	Standardized Regression Weights		Critical Ratios for Differences between Parameters
		Community-oriented model	Transaction-oriented model	
H1	Interpersonal Trust → Auction Continuance Intention	0.211**	0.296*	0.52
H2	Social Identity → Auction Continuance Intention	0.349**	0.222	-0.137
H3	Shared Vision → Auction Continuance Intention	0.375**	0.521**	-0.232
H4	Centrality → Interpersonal Trust	0.157	0.118	-0.148
H5	Interpersonal Trust → Social Identity	0.283**	0.683**	1.599
H6	Centrality → Social Identity	0.191*	-0.091	-2.454*
H7	Shared Vision → Social Identity	0.381**	0.355**	-2.147*
Model fit:	$\chi^2/df=1.962$, ($\chi^2 =323.575$, $df =168$, $p<.001$), $GFI =0.896$, $AGFI =0.852$, $NFI =0.889$, $RMSEA=0.051$, $CFI=0.942$			

Understanding how social factors affect intention of transaction-oriented actors and community-oriented actors.

The results of model testing show that the antecedents to intention of transaction-oriented actors are slightly divergent from those of communication-oriented. We find that two of three dimensions of social capital, shared vision and interpersonal trust, affect social identity and continuance intention in both models. These results are consistent with our previously published study supporting the role of social capital in fostering auction community[64]. These results suggest auction management teams should promote a common understanding of collective goals and proper ways of acting regarding to an online auction, which is critical to sustain the development of online auction.

In addition, the relationship between social identity and community-oriented actor's intent to use was significant while transaction-oriented actor's intent to use was insignificant. These differences could be results from different motivation and interaction between both types of actors. For instance, transaction-oriented actors may search for low price goods in online auction or compare goods with other online shops. In this case, actors usually contact several strangers and conduct one-time transaction. Accordingly, we consider that the transaction-oriented actor just a "buyer" who searching for the lower price of goods in the online auction. On the contrary, the community-oriented actors not only search for lower price of goods, but also share other resource each other, such as knowledge and information exchange. These results are consistent with the qualitative study of Chua et al. (2007), in which pointed out that community activities and social interaction are embedded in some group behavior of auction actor and help other auction actors against harmful behavior. Taken together, these findings imply that actors who usually participate in forum activity could easily access social resource (e.g. new bidding items, experience, skill, or fraud information) and, in turn, affect their intention to participate in auction activity through social comparison process (expressed by searching for

social identity).

Explaining the links among social capital and social influence process

The empirical test showed that three dimensions of social capital significant affect social identity of community-oriented actor while only two dimensions of social capital, interpersonal trust and shared vision, directly impact social identity of transaction-oriented actor. These results reveal that most of social capital elements could encourage auction actor to search for social identity through social comparison process in which knowledge or other resource are shared and exchanged among auction actors. Meanwhile, the critical ratios for differences between parameters reveals two paths were significant. one is centrality to social identity, the other is shared vision to social identity. Both path showed that standardized regression weights of community-oriented model stronger than that of transaction-oriented model. In this case, we consider that the exchange of social resource and social interaction among community-oriented actor may are more effective than transaction-oriented actor in stimulating social influence process and fostering social identity of actors. Taken together, different motivation and interaction pattern of auction actors may perceive selectively and differently various aspects of antecedence of online behavior. Auction management teams and online behavior researchers should noted these findings.

Academic implication and contribution

The major contribution of this study is the development of an integrated research model regarding online auction community based on three dimensions of social capital and social influence process, which demonstrated that varied social constructs promote continuance intention in online auctions. The findings of this study provide valuable insights regarding how social constructs can be fostered to achieve management objectives in an online community such as an online auction site while previous empirical studies' attention has focused on technology perspective.

Previous studies have shown the effectiveness and associability of three dimensions of social capital – shared vision (key element of cognitive dimension), centrality (key element of structural dimension), and interpersonal trust (key element of relational dimension) [15,61,65]. However, few studies have empirically tested the relationships among these dimensions and social identity in the context of online communities, especially in the context of transaction-oriented communities. This study tests the theoretical relationships for the three dimensions of social capital proposed by Nahapiet & Ghoshal (1998) and social influence process proposed by Leenders' (2002). The finding that several social factors significantly affect auction continuance intention might seem an interesting idea to those who consider that trust is a dominant driving factor of online interaction. This makes the results consistent with those found by Chua et al. (2007). They pointed out that community members with strong attachments to the community have intimate knowledge to discover abnormal transaction pattern. In short, Sense of community (of which shared vision and social identity are key elements) as well as bilateral relationships such as trust are critical to auction community development.

Furthermore, this study's close examination of how the social factors affect continuance intention between transaction-oriented and community-oriented actors reveals two interesting implications. Firstly, different interaction and transaction pattern are embedded within the interaction of auction actors, and researchers should apply multiple perspectives to explaining the antecedent of online auction behavior in terms of different interaction backgrounds. Secondly, as mentioned early, online auction is a complexity of value network in which interacts with social-contextual influences. We consider that further exploration of the dynamic relationship among social factors, intention, and behavior regarding online auction is worthy to study.

Managerial implication and contribution

Auction managers should note that auction actors could be divided into transaction-oriented and community-oriented, and their participation intention results from varied social factor. From transaction-oriented perspective, the results of model testing identified that interpersonal trust and shared vision play two vital role underlying auction continuance intention when all the social actors are faced with similar online environments and communication media characteristics. This is in contrast to the previous understanding that media characteristics dominate perception. Managers are recommended to not only consider pervasive media elements on a web site, but also the level of involvement in promoting interactions. From community-oriented perspective, to form a community and to exchange embedded resource or knowledge of members can help auction users reduce risks or frauds

and enhance their intention to visit online auction. This study thus suggests that auction website management teams should stress the importance of fostering shared vision and social identity in establishing actor's sense of belonging to a transaction community, while previous studies focused on adopting a third-party trust mechanism to establish a trust and safe transaction environment.

Limitation and future study

In spite of these contributions, it is important to recognize the attendant limitations of this research. Firstly, measuring centrality is difficult without more network information, without such data, the process by which social networks develop and the ways network structures change over time cannot be determined. Therefore, the exposed connectivity-based network configuration was used as an indicator; the strength of ties and recessive links deleted by sellers were not analyzed. Thus, future studies should clarify the dynamic nature of network structuring by analyzing more longitudinal data and additional measures of network configuration as indices of social networks. Future research may also examine the different dependent variables based on various communication activities such as online discussion forums.

A second limitation of this study was the sampling method. Given the nature of online auctions (e.g., the widespread use of pseudonyms and insufficient demographic information), standard sampling and estimation techniques were inappropriate. Thus, we contend that the true nature of population of an auction community is a hidden population which is difficult to characterize. Therefore, snowball sampling was employed. Unfortunately, the inherent problems of snowball sampling were unavoidable. For example, actors who are isolated from social networks may have been overlooked, and the more productive actors within a population may have been overrepresented. Given the inherent biases of the survey method, we recommend that future studies examine multiple samples or a larger sample size to minimize bias and strengthen the validity of the analytical results. A final limitation was the low response rate. As mentioned above, comparing responsive and unresponsive subjects was difficult because of the limited auction population and the anonymous conduct of social activity. This limitation could be overcome by collecting data for multiple samples and re-verifying the model and hypothesis.

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