

**Conceptualizing and validating the social capital construct in consumer-initiated
online brand communities (COBCs)**

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Abstract

Social capital plays a significant role in understanding online community relationships in the marketing field. However, the construct of social capital has not been studied in the context of consumer-initiated online brand communities (COBCs). This paper develops a model of social capital in COBCs as a higher order reflective latent construct having four first-order dimensions. Responses of 353 members from 35 Volkswagen COBCs in China were obtained and analysed using Structural Equation Modelling. The data supports our model of social capital in COBCs, providing a greater understanding of social capital in COBCs that will help Chinese marketers utilise COBCs more effectively.

Keywords: social capital; online brand communities; consumer-initiated online brand communities; social media.

Introduction

Since the development of the Internet and digital media, the concept of brand community has attracted immense interest among managers and scholars (e.g., Yoshida, Miyazawa, and Takahashi, 2014). Muniz and O'Guinn (2001, p.148) define brand community as “*social entities that reflect the situated embeddedness of brands in the day-to-day lives of consumers and the ways in which brands connect consumer to brand, and consumer to consumer*”. With no geographical nor time limitations, users of brand communities can communicate freely with each other through chat rooms, message boards, event calendars, and other systems on web or mobile devices. Such communities have always been of particular interest to marketers because they provide insights into understanding consumer behaviour (Muniz and O'Guinn, 2001). As brand communities are built upon consumer's sharing attributes through brands or consumption activities (McAlexander, Schouten, and Koenig, 2002), community members possess a fairly well-developed understanding of their feelings and perceptions toward the brand, and their connections to other users.

Recently, online brand communities (OBCs) have emerged and evolved into online marketing environments, whereby groups of individuals - who are voluntarily related to each other online through their interest in the same brand or product (Casaló, Flavián, and Guinalú, 2008) – communicate and share experiences. There are several classifications of OBCs, but by and large they can be categorised according to their different hosts (Kim, Choi, Qualls, and Han, 2008), namely, consumer-initiated and company-initiated OBCs. *Consumer-initiated* OBCs (COBCs) are voluntarily established by their members, members' activities centred on their expression of experience and attachment to brands or products; *company-initiated* communities OBCs are built or sponsored by the brand owners in order to establish relationships with customers and obtain product feedback from them (Kang, 2004). A major difference between these two types of communities is their formation. Company-initiated

OBCs are largely commercially based as it is formed around brands; the company value represents strong relationship between consumers and the company and its products.

Consumer-initiated OBCs are formed by consumers and brand users, making the consumers central to these communities (Jang, Olfman, ko, Koh, and Kim, 2008). Consumers joining COBCs are not only looking for brand-related activities, but also look for social activities (Bagozzi and Dholakia, 2002; 2006).

A COBC has four unique characteristics. *Consciousness of kind* refers to the feeling that binds every individual member with the brand; *shared rituals and tradition* are the processes used by members to transmit and reproduce the community meaning; and *a sense of moral responsibility* reflects the commitment among members. In particular, *communication* is a major characteristic of OBC, since its existence is directly based on posting messages and other members' responses (Ridings *et al.*, 2002). In this respect, people do not meet face-to-face regularly; the speed and frequency of response would be considered as the key element of this kind of community communication. With regard to these specific characteristics, a customer-centric model is developed to understand the COBC's community setting (McAlexander *et al.* 2002). There are three components comprising a COBC, the brand and consumer experience which provide the source for the establishment of brand communities; relationships among members gathering around the brand; and the aggregation of the community members (Oh and Kim, 2003).

Prior studies largely consider the context of company-initiated OBCs, still focus on developing the consumer-brand relationship through consumers' participation (e.g. Kozinets, 2002; Cova and Pace, 2006; Jang *et al.*, 2008). However, the consumer experience and the social influence of OBCs have not been fully explored in COBCs. Social capital plays an important role in understanding the nature of social relationship and networks among individuals within organisations and communities (Bourdieu, 1986; Coleman, 1988; Putnam,

2000). Recently, it has been studied in the context of online communities and has become a useful theoretical framework to understand these interactive relationships (e.g. Blanchard and Horan, 1998; Pigg and Crank, 2004; Bauer and Grether, 2005; Scott and Johnson, 2005).

There is a need to extend the understanding of social capital in the COBCs context. To this end, we propose a model of social capital in COBCs and validate it using data from 353 members of 35 Volkswagen COBCs in China.

Literature Review

Defining Social Capital

The concept of social capital has emerged as a popular and dominant research theme across a variety of disciplines in order to understand the wide range of social phenomena involved (Dhakal, 2010; Lang, and Ramirez, 2017). It is originated in the social science and humanities literature (Huysman and Wulf, 2004) and was firstly used to describe the relational resources embedded in cross-cutting personal ties that are useful for the development of individuals in community social organisations (Jacobs, 1961). The role of social capital has been examined with regard to the development of human capital (Coleman, 1998), the creation of intellectual capital (Nahapiet and Ghoshal, 1998), and in its economic performance (Woolcock, 1998; Worldbank, 1999), geographical regions (Putnam, 1993) and nations (Fukuyama, 1995). Further, as the result of the development of the Internet, social capital has been discussed and examined in the online realm (Lee and Lee, 2010). It is noted that many individuals do have more opportunities today to interact with others through web surfing and online communication (Ellison, Steinfield and Lampe, 2007). Therefore, social capital leads itself to multiple definitions and interpretations from different perspectives.

Previous descriptions of social capital can be categorised at two levels: individual and group levels. The use of social capital on an individual level is similar to human capital that

emphasises an individual's access and use of embedded resources in social networks to the expected return; such as finding a better job, learning and getting information, and generally improving personal relations (Lin, 1999; Flap, 1995; Kim and Aldrich, 2005). A typical definition from Lin (1999, p.35), suggesting that social capital is "... *the resources embedded in as social structure which are assessed and mobilised in purposive actions.*" At this level, the focal point is to analyse "how individual invest in social relationships; and how they capture the embedded resources in such relationships to obtain a return" (Lin, 2001).

Conversely, the group level of social capital stands for a collective asset, with discussion focused on: how certain groups develop; and how such a collective asset can enhance group value (Bourdieu 1985; 1986; Coleman, 1988, 1990; Putnam, 2000). Thus, social capital can be defined as "... *features of social organisations such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit*" (Putnam, 1995, p.67). This definition suggests that social capital facilitates co-operation and mutually supportive relationships in communities and nations.

Although the description of social capital varies somewhat from scholar to scholar, there is an agreement that social capital is a kind of resource derived from relationships with other people in a social network (Throsby, 1999). These resources may include information, ideas, leads, business opportunities, financial support, power and influence, emotional support, even goodwill, trust and cooperation (Ports, 1998). The word "social" emphasises that the resources are not personal assets; no single person owns them. The word "capital" emphasises these resources and can encourage cooperation and enable individuals or groups of people, to create value and achieve a common goal. Social capital is an intangible asset that resides in social relationships, which cannot be traded in the market (Robinson, Schmid and Siles, 2002). The constructs of social capital depend on the development of social relationships, and these relationships are built on social connections in communities. In other

words, the concept of social capital implies that its development takes place within a community (Australian government discussion paper, 2005).

Measuring Social Capital

Social capital grounded in social relationships, is obviously a complex and multidimensional concept (Hazelton and Kennan, 2000). It is difficult to define and measure in empirical studies across different disciplines. Nahapiet and Ghoshal (1998) have proposed a three-dimensional construct of social capital: a structural dimension, a cognitive dimension and a relational dimension. Many researchers in a wide range of empirical studies have accepted this model of social capital (e.g. Moran, 2005; Wasko and Faraj, 2005; Chiu *et al.*, 2006; Wu, 2008). However, Nahapiet and Ghoshal's approach is predominately built on structural and network-based social capital, which has less consideration of social capital's information benefits (Koka and Prescott, 2002). Thus, some suggest a communication dimension to replace the cognitive dimension since they believe the communication enables the utilisation and stock of social capital (e.g. Hazelton and Kenan, 2000, Widen-Wulff and Ginman, 2004). This communication dimension so far has always been considered at the conceptual level. In addition, the manifestation of each dimension of social capital varies, as the ultimate value of a given form of social capital depends on contextual factors (e.g. Widen-Wulff and Ginman, 2004; Hsieh and Tsai, 2007). Due to these critics, more insight about social capital construct should be gained.

Conceptualising Social Capital Construct in COBCs

Drawn from prior social capital studies, we add the communication dimension as the fourth dimension to establish a more comprehensive construct of social capital, which

conceptualise Nahapiet and Ghoshal's (1998) model for applications in COBCs. The elements of our model are presented as figure 1 and are explained below.

< Insert Figure 1 Here >

Structural dimension

The structural dimension refers to the overall patterns of connections between actors, that is, it relates to an individual's ability to make connections to others within a community; these connections can help to reduce the amount of time and investment needed to obtain information (Nahapiet and Ghoshal, 1998). Interaction ties are seen as the fundamental proposition of structural social capital, which provides access to resource and information (Nahapiet and Ghoshal, 1998; Hazleton and Kennan, 2000; Koka and Prescott, 2002). In this case, social relationships are established through interaction ties that can reduce the amount of time and investment necessary to gather information and knowledge (Tsai and Ghoshal, 1998). A COBC consists of a group of people with different backgrounds, abilities, knowledge and experiences of a specific brand or product; therefore, motivating interaction among those individuals is very important. Granovetter (1973) emphasises the strength of social ties as the amount of time spent together with other members, and the emotional feelings of intensity and intimacy. Within COBCs, social capital resides in the relationships among registered community members; the interaction ties represent the strength of these relationships, the amount of time spent, and frequency of communication among members. The structural dimension of social capital in COBCs is manifested as interaction ties which provides a cost-effective way for community members to access to a wider range of information and resources.

Cognitive dimension

The cognitive dimension of social capital represents those resources providing shared representations, interpretations and systems of meaning among parties, is normally reflected as shared language and vision, which can facilitate and influence the conditions for the combination and exchange of resources (Nahapiet and Ghoshal, 1998). For example, shared language provides a common conceptual apparatus for participants to understand each other, and to build a common and shared vocabulary in their communities. In COBCs, shared language also plays an essential role to improve the efficiency of communication among members with similar interests and experience of the same brand or product. It may also support the development of new product ideas and concepts by enhancing combination capability (van Vuuren, 211). Thus the cognitive dimension in COBCs is manifested as shared language which provides a common understanding for all participants (Chiu *et al.*, 2006).

Relational dimension

The relational dimension describes the kind of personal relationships people have developed with each other through a history of interactions (Nahapiet and Ghoshal, 1998). Identification and commitment are a manifestation of the relational dimension of social capital in online networks (Wasko and Faraj, 2005). Within a COBC, the relational dimension of social capital exists when members have strong identification with collective activities (Lewicki and Bunker, 1996) and commitment contributed to other fellow members and their community (Coleman, 1990; Ellemers, Kortekaas, and Ouwerkerk, 1999). In this study, identification arises from an individual involvement and represents members' sense of belonging toward the COBC, which is helpful in explaining customers' willingness to maintain long-term relationships with the community (Bagozzi and Dholakia, 2002). The relational dimension of social capital in COBCs is manifested as identification and

commitment. Identification acts as a resource influencing members' motivation to combine and exchange information and knowledge (Nahpiet and Ghoshal, 1998). Commitment is reflected as individual members' moral responsibility and attachment to their COBC.

Communication dimension

We view the communication dimension as a visible condition necessary for information and utilisation of social capital (Widen-Wulff and Ginman, 2004). It enables social capital can be stoked, assessed, and used to achieve various organisational objectives through communication behaviour, such as information exchange, problem identification, behaviour regulation and conflict management (Hazelton and Kennan, 2000). In other words, communication is believed to influence the mobilisation of social capital (Chan, 2008). Several predominant researches have implicit and explicit assumptions on the role of communication impacting upon social capital (Chan, 2008). First of all, the utilisation of social capital does not happen instinctively, that the embedded resources have to be transmitted and accumulated through communication among people (Bourdieu, 1985). Secondly, communication is used for social control (Coleman, 1988), since its essentiality to develop social ties and facilitate the flow of information so as to enforce the norms and control member's behaviour in a society (Coleman, 1990). Thirdly, communication is significantly to increase interaction (Putnam, 1998). Especially in an online realm, the Internet works as a supplementary communication channel to help individuals maintain existing ties, and have more opportunities to interact with others (Quan-Hasse and Wellman, 2002). Therefore, we can argue that communication play significant roles in impacting social capital's utilisation.

Within a COBC, a group of individuals get together to produce questions and answers as a process of analysing, storing, using and refusing information to establish shared knowledge

toward a specific brand or product, thus the communication process is seen as a basis for collective creativity, innovation and productivity in the community (Cronin, 1995; Kim *et al.*, 2008).

The communication dimension has four functions to stock and utilise social capital: information exchange, problem identification, behaviour regulation and conflict management (Hazelton and Kennan, 2000). In particular, information exchange is the fundamental aspect, because of its importance to gather knowledge and contribute to the relationships between people within a network or organisation (Huotari, 2000). In favourable conditions, the positive results of information exchange between members would influence and shape people's attitudes, problem solving and decision-making (Widen-Wulff *et al.*, 2008). In this case, information exchange is in connection with the three other functions of the communication dimension of social capital, which could further bind together individuals into a strong social environment (Hazelton and Kennan, 2000; Nahapiet and Ghoshal, 1998; Widen-Wulff *et al.*, 2008). Therefore, the communication dimension of social capital is manifested as information exchange in COBCs

Method

Data were collected through a web survey from members of 35 Volkswagen COBCs in China. We received 408 responses, of which 55 responses were deleted because of incomplete information. We further discarded 2 responses of COBC members who had not reached the legally driving age of 18 years. At the end, we were left with 351 usable responses (see respondents' demographic data in Table 1).

The items to measure the social capital construct were borrowed from prior studies. All the construct items were measured using five-point Likert scales with anchors strongly disagree (=1) and strongly agree (=5). Items for measuring interaction ties were adopted from

Chiu *et al.*, (2006). This scale consists of 4 items measuring close relationship; time spent interacting, and frequent communication with other COBC members. The shared language scale is also adopted from Chiu *et al.*, (2006), and it is measured by items such as common terms, meaningful communication pattern and understandable messages. Identification dimension was captured with items adopted to reflect an individual's sense of belonging, attachment with the community, shared vision and close relationship with other COBC members (Chiu *et al.*, 2006). Commitment in COBC was about a member's willingness and effort to maintain their loyalty relationship with his/her community. The items were derived from previous studie of Wasko and Faraj (2005). Two major characteristics of information exchange – quality and quantity – are widely accepted as measurements for information exchange (Lu and Yang, 2010). The quality of information exchange among COBC members was measured from four aspects: reliability, accuracy, timeliness and relevance. Due to limited access to COBC members' profile, the quantity of information exchange was assessed by asking respondents that the total number of times they had posted in their community in the past one month.

< Insert Table 1 Here >

Results

Measurement model of social capital construct

Confirmatory factor analysis (CFA) was applied to assess the construct validity of the six scales (interaction ties, shared language, identification, commitment, quality of information exchange and quantity of information exchange) in AMOS 22 software. Table 2 presents the results of the CFA analysis. All the items were modelled as the reflective indicator of their reflective latent dimensions. We modelled social capital as the correlated factors model using maximum likelihood approach, which yielded acceptable, fit with the data ($X^2 = 337.1$, d.f. =

143, p value = .000, CFI = 0.94, TLI = 0.93, RMSEA = 0.062, SRMR = 0.043). The model shows good fit with the data (Hu and Bentler, 1999).

< Insert Table 2 Here >

Construct reliability and variance extraction

The social capital construct reliability was calculated using this formula - $(\sum \lambda)^2 / [(\sum \lambda)^2 + \sum (\theta)]$, which came out to be 0.963, higher than the normally acceptable value of 0.6 (Bagozzi and Yi, 1988). The conventional Cronbach Alpha value for the scale was 0.93. Another related measure is average variance extracted (AVE), which measures the total amount of variance captured in relation to the total amount of variance due to measurement error. The AVE was calculated using this formula - $AVE = (\sum \lambda^2) / [(\sum \lambda^2) + \sum (\theta)]$, all of the AVE values were above the recommended threshold value of 0.5 (see table 3) (Fornell and Larcker, 1981). Lambda (λ) in both the equations is the standardised loading for each observed variable and (θ) is the measurement error associated with each observed variable.

< Insert Table 3 Here >

Construct validity of social capital construct in COBCs

The excellent fit indices produced CFA of the trait-only model and provide the evidence of construct validity. To further test the factor structure of the social capital construct, the fit of the trait-only model was compared with the fit yielded by four alternative conceptual possibilities: (a) independence model; (b) orthogonal first-order factors model; (c) one-general factor model; and (d) trait plus method factor model. The alternative models are compared using the chi-square difference test in table 4.

< Insert Table 4 Here >

The results above support the hypothesised factor structure of the construct. The trait-only model shows significant reduction in the chi-square value over the independence, one general factor, and orthogonal first-order factors models, which mean that the trait-only model fits data better than the alternative conceptual possibilities. The fit indices of the trait-only model are far superior to all the other alternatives. The trait plus method factor model produced Heywood case (negative variance of the method bias latent). As Rindskopf and Rose (1988) suggest, unnecessary introduction of a method factor in the model or over squeezing of data may have produced the Heywood case.

< Insert Figure 2 Here >

The confirmatory analysis supports our model of social capital in COBCs. The findings are consistent with the theoretical proposition originally put forward by prior studies that social capital resides in social relationships in both physical and online virtual communities (e.g. Putnam, 2000; Alder and Kwon, 2002; Daniel *et al.*, 2003; Rafaeli, *et al.*, 2004). The final trait model is presented in figure 2.

Discussion

A COBC is conducted from a social aggregation of brand users. Consumers are central to the communities, and their experience plays a significant role in forming and enhancing their relationships with the brand, community and other fellow members (McAlexander *et al.*, 2002). It emphasises the relationships and communication among community members, producing more consumer-generated content. Nowadays, as consumer's lifestyle has changed with the popularity of digital media and Internet usage, consumers' purchase journey has changed as well, especially for high-involvement product. They now participate in COBCs

seeking advice and review requirements from other consumers before they make purchasing decisions.

Much of the prior research starts with a community approach to understand the development of COBCs (e.g., Muniz and O'Guinn, 2001, McAlexander *et al.*, 2002; Schau and Muniz, 2002; Amine and Sitz, 2004; Kang, 2004; Kim, Bae and Kang, 2008). However, these research do not go beyond the community nature of a COBC. They fail to consider the social aspects that a COBC brings to consumers, and the social influence among consumers that may impact upon the brands and the communities. One of the key contributions of this study is that it integrates the social capital construct with COBCs. This study finds that social capital is significant in bringing information and social benefits for COBC members and exerts a positive influence on consumers' participation. It provides interaction ties which help COBC members to access a broader source of information. Within a COBC, the richness of information about brands or product can encourage consumers' participation in COBC activities. Social capital also increases a member's access to social support from other fellow members in their community. At the same time, they are more likely to build up relationships with others due to their common interests in the brand or product.

A large portion of research on OBC has been conducted in the U.S and European markets. There is a need to direct OBC research to emerging countries. This paper adds to the small number of COBC studies in the context of an emerging country having collectivist cultural values. China has the biggest number of Internet users in the world at 513 million (CNNIC, 2012). Chinese COBCs are heavily reliant on the domestic social network site (e.g. Sina Weibo and Tanent We Chat) since they dominate China's social networking sphere. The active online environment highly motivates Chinese consumers to engage in social-media and user-generated content for making purchase decisions, over 60% of Chinese consumers rely on their social relationships and the advice in social networks (Huang, Kim and Kim, 2013).

Upon considering the particular cultural features, this study also gains understanding into Chinese consumers' characteristics. The COBC members in China are repetitively young, male and urban with a higher education background (CNNIC, 2010). There were over 80 per cent male respondents who were well educated and aged from 25 to 34.

Social capital with an additional communication dimension is an extension of the social capital construct. This four-dimension construct offers three major advantages over the existing three-dimension construct in the context of our exploration of the role of social capital in COBCs. Firstly, as a set of resources rooted in consumer-to-consumers relationships, social capital has many different attributes. Different authors tend to look at different facets and dimensions (Putnam, 1998; Nahapiet and Ghoshal, 1998). Nahapiet and Ghoshal's approach was designed based on measures of constructs often regarded as cause or consequence of social capital, such as, the contribution of social capital to improve a business performance (e.g. Arregle, Hitt, Sirmon and Very, 2007; Burt, 2007) and innovation (e.g. Moran, 2005; Tsai, 2006; Atuahene-Gima and Murray, 2007); how each dimension facilitates the creation and exchange of knowledge (e.g. Wasko and Faraji, 2005; Chiu *et al.*, 2006; Cummings, Heeks and Huysman, 2006). Most of these prior studies do not follow Nahapiet and Ghoshal's identification of each dimension or taking into account of social capital as a whole construct. Therefore, there is a high research priority that is to clarify the dimensions of social capital contextually (Putnam, 1998). Our study validates the construct factor structure and the measurement instrument which will be useful to researchers in testing and exploring the effectiveness of social capital in online marketing contexts. Secondly, our model takes into account communication – the key characteristic of COBCs. Within COBCs, members do not meet regularly face-to-face since the community existence is directly based on postings and other member's response (Ridings *et al.*, 2002). Communication is believed to influence the mobilisation of social capital (Chan, 2008). It has significant functions which

can facilitate the resource accumulation (Bourdieu, 1980), increasing social control (Coleman, 1988), stimulating the level of interaction (Putman, 1998) and giving meaning to a personal achievement (Lin, 1999). In addition, the three-dimension construct ignores the information benefits of social capital. Communication process is needed to develop COBC members' ties to facilitate the flow of information within the community (e.g. Coleman, 1988). Thirdly, our finding distinguishes the communication dimension from the cognitive one. Although these two dimensions both emphasise the necessity of assessing and utilising social capital, they reinforce different aspects in COBCs. The cognitive dimension represents the shared language necessary for providing foundation for the community member to exchange information and knowledge. The communication dimension emphasises the importance of information exchange influencing the mobilisation of social capital.

Research Limitations and Future Research

This study was limited to automobile industry in China. Thus the findings based on this single research area need further validation in different industries or product categories. Future research should examine this four-dimension social capital construct in a wider range of industries or sectors in the context of other emerging countries. Although we separate the four dimensions analytically, we recognise that some of attributes of each dimension are interrelated (Nahapiet and Ghoshal, 1998). Future research could consider inter-relationship among these dimensions, and will then be able to understand this complex construct comprehensively.

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Table 1 Demographics (n=351)

Measure	Items	Frequency (351)	Percentage (%)
Sex	Female	70	19.9
	Male	281	80.1
Age	18-24 years	39	11.1
	25-29 years	118	33.6
	30-34 years	88	25.1
	35-39 years	46	13.1
	40-44 years	20	5.7
	45-49 years	26	7.4
	≥ 50 years	14	4.0
Education	Up to high school	17	4.8
	Diploma or equivalent	83	23.6
	Bachelor degree	182	51.9
	Master degree	58	16.5
	PhD degree	11	3.1
Membership history	≤ 3 months	30	8.5
	4-6 months	43	12.3
	7-12 months	101	28.8
	> 12 months	177	50.4
Frequency of site visit	Daily	72	20.5
	Weekly	103	29.3
	Fortnightly	57	16.2
	Monthly	58	16.5
	Once every 2 months	23	6.6
	Once every 3 months	32	9.1
	Others	6	1.7

Table 2 Summary of Measurement Scales

Construct	Measure	Mean	Std. Dev.	Loading
Interaction ties (INTER)				
INTER1	I maintain close relationships with some members in this community	3.54	0.78	0.75
INTER2	I spend a lot of time interacting with other members in this community	3.35	0.87	0.61
INTER3	I know some members personally in this community	3.74	0.79	0.70
INTER4	I communicate frequently with some members in this community	3.71	0.79	0.77
Shared language (SLAN)				
SLAN1	Members in this community in Xcar.com use a common vocabulary in their discussion in this forum	3.70	0.73	0.70
SLAN2	Members in this community in Xcar.com use technique terms in their discussion in this forum	3.54	0.79	0.70
SLAN3	Members in this community in Xcar.com communicate with each in a way that is easy to understand	3.75	0.78	0.79
SLAN4	Members in this community in Xcar.com use share their own experience in their discussion in this forum	3.93	0.77	0.71
Identification (IDEN)				
IDEN1	I am very attached to this community	3.69	0.72	0.80
IDEN2	I see myself as part of this community	3.69	0.74	0.80
IDEN3	I share the same vision with other members in this community	3.59	0.84	0.70
IDEN4	I am proud to be a member of this community	3.62	0.75	0.72
Commitment (COMIT)				
COMIT1	I feel very loyal to this community	3.66	0.73	0.78
COMIT2	I would feel a loss if this community is not available anymore in Xcar.com	3.57	0.83	0.77
COMIT3	I try my best to maintain the relationship that I have with this community in Xcar.com	3.78	0.75	0.72
Quality of Information Exchange (INFC)				
INFC1	The information exchanged by members in Xcar.com is reliable	3.45	0.81	0.86
INFC2	The information exchanged by members in Xcar.com is accurate	3.44	0.81	0.82
INFC3	The information exchanged by members in Xcar.com is timely	3.56	0.82	0.69
Quantity of Information Exchange (LogPosting)				
LogPosting	The total number of responses in the past one month	2.1	1.5	1.00

Table 3 Correlation, Cronbach Alpha and AVE

Constructs	INTER	SLAN	IDEN	COMIT	INFC QUALITY	INFC QUANTITY
SLAN	0.535*					
IDEN	0.733*	0.589*				
COMIT	0.639*	0.574*	0.774*			
INFC QUALITY	0.522*	0.622*	0.617*	0.541*		
INFC QUANTITY	0.131*	0.013	0.188*	0.141*	0.103	-
AVE	0.504	0.530	0.570	0.600	0.630	-
Cronbach Alpha	0.780	0.811	0.831	0.851	0.794	-

Note: * $p < 0.05$ level two-tailed,
 INTER=Interaction ties; SLAN=Shared language; IDEN=Identification;
 COMIT=Commitment; INFC=Information exchange

Table 4 Model Comparisons

Model	Chi-square	DoF	<i>P</i> <i>value</i>	CFI	TLI	RMSEA	SRMR	Chi-square difference test (DDoF)
(a) Independence model	3482.283	171	.000	0.00	0.00	0.235	0.40	-
(b) Orthogonal first-order factors model	1242.028	153	.000	0.67	0.63	0.143	0.3425	2240.3* (18)
(c) One-general factor model	785.870	152	.000	0.809	0.785	0.109	0.678	456.2* (1)
Trait-only model	337.146	143	.000	0.94	0.93	0.062	0.0426	448.7* (9)
(d) Trait plus method factor model								Heywood case (Negative error variance) due to over squeezing of the data

Note: * p value $< .001$.

DoF = degree of freedom; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; GFI = Goodness of Fit Index; RMSEA = Root Mean Squared Error of Approximation; DDoF = Difference in the Degrees of Freedom

Figure 1 A Conceptual Framework of the Social Capital Construct in COBCs

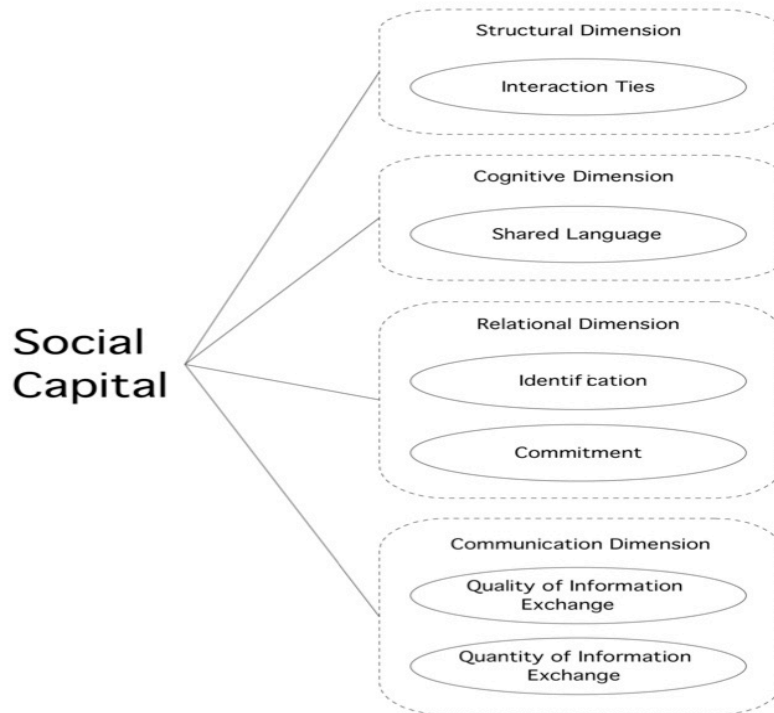


Figure 2 Finalized Trait Model of Social Capital in COBCs

