
Social capital, knowledge-based view and entrepreneurial opportunity

Chiou-Mei Chen*

Department of Information Management,
National Sun Yat-Sen University,
Kaohsiuang 80424, Taiwan

and

Department of Information Management,
Tajen University,
Pingtung 00907, Taiwan

E-mail: chmach@ccsun.tajen.edu.tw

*Corresponding author

Tung-Ching Lin

Department of Information Management,
National Sun Yat-Sen University,
Kaohsiuang 80424, Taiwan

E-mail: tclin@mis.nsysu.edu.tw

Yung-Chih Liou

Department of Information Management,
National Kaohsiung Marine University,
Kaohsiung 81157, Taiwan

E-mail: kliou@mail.nkmu.edu.tw

Yi-Chun Liu

Department of Management,
Taiwan Cooperative Bank,
Taipei 100-12, Taiwan

E-mail: yichin90@hotmail.com

Abstract: This study proposes an empirical framework to investigate the impact of social capital on an entrepreneurial opportunity and organisational knowledge. The results indicate that (1) entrepreneurial opportunity is positively affected by structural and relational dimensions of social capital and absorptive capacity (2) accumulative knowledge is positively affected by structural and cognitive dimensions of social capital (3) absorptive capacity is positively affected by accumulative knowledge. This study presents an efficient mechanism for managers to promote entrepreneurial opportunity and offers comprehensive perspectives for researchers to achieve a better insight in the fields of knowledge management, social capital and enterprise development.

Keywords: absorptive capacity; accumulative knowledge; enterprise development; entrepreneurship opportunity; social capital.

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Biographical notes: Chiou-Mei Chen is a PhD candidate of the Department of Information Management, National Sun Yat-Sen University, Kaohsiung, Taiwan and a Lecturer of the Department of Information Management, Tajen University, Pingtung, Taiwan. Her current research focuses on knowledge management, intelligence capital, IT adoption.

Tung-Ching Lin is a Professor of the Department of Information Management, National Sun Yat-Sen University, Kaohsiung, Taiwan. His research focuses on knowledge management, intelligence capital, organisation/MIS planning and human factors of MIS/MIS.

Yung-Chih Liou is an Assistant Professor in the Department of Information Management, National Kaohsiung Marine University. He received his PhD in MIS from the National Sun Yat-Sen University in 2005. He specialises in the areas of management information systems, knowledge management and ERP implementation.

Yi-Chun Liu is a Management Assistant of Taiwan Cooperative Bank, Taipei, Taiwan. She received her Master Degree in MIS from the National Sun Yat-Sen University in 2006. Her research interest focuses on knowledge management and intelligence capital.

1 Introduction

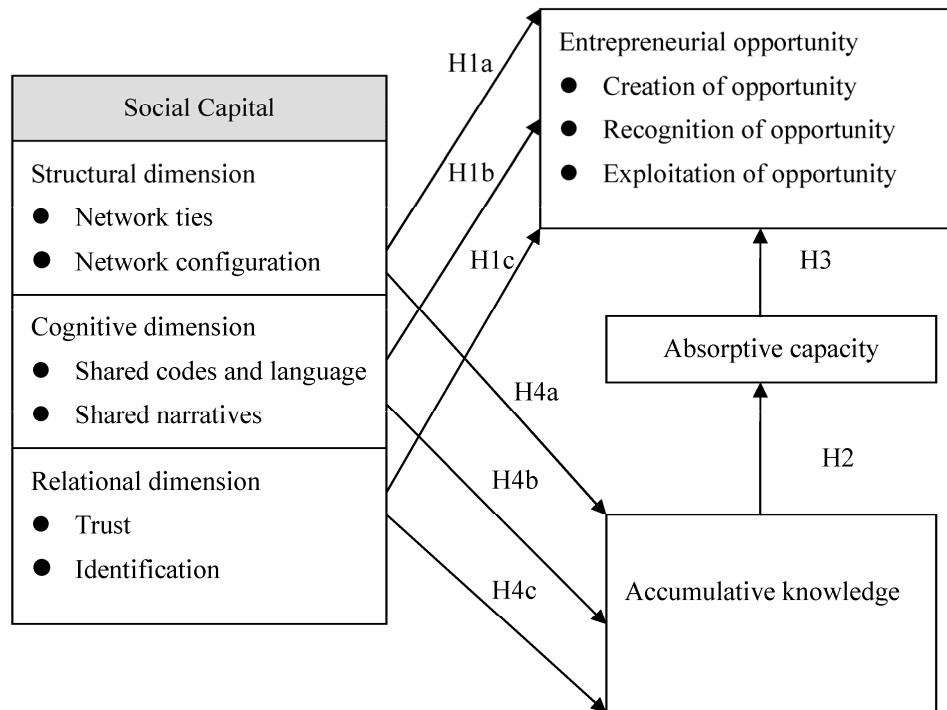
Creating, developing and exploiting entrepreneurial opportunities in organisations are challenges to a manager because, they comprise some of the most important and complicated managerial responsibilities. The importance lies in the fact that organisational renewal is a prerequisite for survival particularly in dynamic industry environments. Many scholars ask, either implicitly or explicitly, why anyone should study entrepreneurship. Data are difficult to obtain, theory is underdeveloped, and many findings to date are the same as those obtained in other areas of business (Shane and Venkataraman, 2000).

In the knowledge economy, tangibles such as land, labour, factory buildings and funds have gradually been replaced by invisible intelligence capital, which has become the new prime resource and currency of competitive advantage. Since 1999, knowledge management research has focused on pursuing the intelligence capital of an organisation (Petty and Guthrie, 1999), but most studies of intelligence capital have emphasised human capital, structural capital and customer capital, and have generally lacked a focus on social capital. Recently, researchers such as Nahapiet and Ghoshal (1998), Carolis (2002), Nielsen (2003), Wu and Tsai (2005) have introduced the social capital concept to

the organisational intelligence capital area. Social capital provides networks of relationship that can lead to competitive advantage. Moreover, social capital is instrumental in creating organisational knowledge and grasping entrepreneurship opportunity (Carolis, 2002).

However, prior studies still lack for revealing the relationship between social capital theory and entrepreneurship opportunity except the Carolis's research (2002). Carolis (2002) integrated the insight from social capital, organisational knowledge and entrepreneurship opportunity, but this conceptual model excluded relational dimension from social capital theory. The relational dimension of social capital describes the kind of personal relation that people have developed with each other through a history of interactions (Granovetter, 1992). Although this concept was originally used in community studies to describe relational resource embedded in personal ties in the community (Jacobs, 1965), this concept has since been applied in a wide range of intra- and inter-organisation studies (Burt, 1992; Nahapiet and Ghoshal, 1998). We also think that the more particular relations of organisational partners build, such as trust and identification, the greater the intensity, frequency and breadth of information exchanged. Therefore, this study includes relational dimension in social capital and integrates absorptive capacity and accumulative knowledge (Cohen and Levinthal, 1990) for extending Carolis's empirical research. The research model of this study is presented in Figure 1.

Figure 1 Research model



The article aims to explore the role of social capital and absorptive capacity in promoting entrepreneurship opportunity. The findings indicate the structural capital, relational capital and absorptive capacity to promote entrepreneurial opportunity are effective. For managerial practice, this study provides useful finding for managers to enhance social capital and absorptive capacity in organisational context. For academic, this study offers a perspective for conducting the research and achieving a better insight in the fields of social capital, organisational knowledge and entrepreneurship opportunity.

The rest of this study is structured as follows. Section 2 develops the theoretical arguments leading to the research hypotheses. In Section 3, the methodology used to verify our theoretical framework and the result of the study are presented. Finally, Section 4 identifies some of the limitation of the study and describes its implications for both research and practice fields.

2 Literature review

2.1 Entrepreneurial opportunity

Entrepreneurial opportunity originated from entrepreneurship. The research field of entrepreneurship still does not have a unified concept architecture and lacks an agreed upon paradigm (Kuhn, 1970). Venkataraman (1997) defined the field of entrepreneurship as the scholarly examination of how, by whom, and with what effects opportunity to create future goods and services are discovered, evaluated and exploited. Carolis's research (2002) proposed three dimensions of entrepreneurial opportunity as follows.

Creation of opportunity. Creation of opportunity is the capability of a company to find/acquire new goods, services, raw materials or organising methods (Shane and Venkataraman, 2000).

Recognition of opportunity. If organisations want to grasp entrepreneurial opportunity effectively, they must be able to recognise new opportunities quickly. To recognise an opportunity, an entrepreneur has to have prior information that is complementary with the new information, which triggers an entrepreneurial conjecture (Kaish and Gilad, 1991). Moreover to perceive opportunity is necessary. Even if a person possesses the prior information necessary to discover an opportunity, he or she may fail to do so because of an incapability to see new means-ends relationships (Shane and Venkataraman, 2000).

Exploitation of opportunity. Although the recognition of an opportunity is a necessary condition for entrepreneurship, it is not plentiful. Subsequent to the recognition of an opportunity, a latent entrepreneur must decide to exploit the opportunity.

2.2 Social capital theory

Social capital was first adopted in studies of community (Jacobs, 1965) and family relations (Loury, 1987). Then, it was further extended for use in business (Wu and Tsai, 2005). In a very general sense, the term 'social capital' may be defined as the networks of strong personal relationships that are developed over time and provide the basis for trust, cooperation and collective action in communities (Jacobs, 1965). The concept has been applied since, its early use to elucidate a wide range of social phenomena. Although

researchers increasingly have focused attention on the role of social capital as an influence not only on the development of human capital (Loury, 1977, 1987; Coleman, 1988), but also on the economic performance of firms (Baker, 1990), geographic regions (Putnam, 1993, 1995) and nations (Fukuyama, 1995). Recently, the concept has been introduced within the area of intelligence capital (Nahapiet and Ghoshal, 1998; Carolis, 2002; Wu and Tsai, 2005). Based on definition of Nahapiet and Ghoshal (1998), there are three dimensions in the social capital. They are elucidated as follows.

2.2.1 The structural dimension of social capital

The structural dimension refers to the ability of individuals to make connections to others within an organisation (Krackhardt, 1990). Nahapiet and Ghoshal (1998) divide the structural dimension of social capital into network ties, network configuration and appropriable organisation, with network ties and network configuration being the main variables correlated with explaining entrepreneurial opportunity (Carolis, 2002). These terms are described below.

Network ties. The fundamental proposition of social capital theory is that network ties provide access to resources. Network ties describe established number of relations between an organisation and other external organisations (Nahapiet and Ghoshal, 1998; Carolis, 2002).

Network configuration. Network configuration describes the type of network link. Aspects of a network link include density, linking method, stratum, etc. (Nahapiet and Ghoshal, 1998).

2.2.2 The cognitive dimension of social capital

The cognitive dimension refers to those resources providing shared representations, interpretations and system of meaning among parties (Cicourel, 1973). This dimension includes shared language, codes and narratives. These terms are described below.

Shared language and codes. Language and codes are important tools that people use to discuss, question and exchange information. If members of a group understand the same language and codes, it is easier to communicate, exchange and share knowledge than if group members have different ways of communicating. Members of a group that use the same language and codes will have a similar mental model and value set (Pondy and Mintroff, 1979). For example, doctors and lawyers often use terms that common people do not know well, but within a community of doctors or lawyers, colleagues who use the same jargon or specialised terms can cooperate and exchange information efficiently.

Shared narratives. Beyond the existence of shared language and codes, researchers (Nisbet, 1969; Clark, 1972) have suggested that myths, stories and metaphors also provide powerful means in communities for creating, exchanging and preserving rich sets of meanings.

2.2.3 The relational dimension of social capital

The concept of relational dimension focuses on the particular relations people have, such as prospect and friendship that influence their behaviour. This dimension is divided into

four categories: trust, norms, obligations and identification (Nahapiet and Ghoshal, 1998). Although these four factors are highly interrelated and developing simultaneously, prior studies indicated the elements such as trust (Dyer and Singh, 1998; Rousseau et al., 1998) and identification (Constant, Sproull and Kiseler, 1996; Burgess, 2005) within the relational dimension has more robust relevance to the motivation of knowledge exchange. Hence, this study only adopts trust and identification factors of relational dimension as its empirical foundation. They are elucidated as follows.

Trust. Misztal (1996) defined trust as the belief that the 'result of somebody's intended action will be appropriate from our point of view'. It indicated the positive attitude that people hold toward others' behaviours are based on their good intention and concern. Prior researches have shown that where relationships are high in trust, people are more willing to be engaged in social exchange in general and cooperative interaction in particular (Gambetta, 1988; Ring and Van De Ven, 1992, 1994; Fukuyama, 1995; Putnam, 1993, 1995; Tyler and Kramer, 1996).

Identification. Nahapiet and Ghoshal (1998) defined identification as the process whereby individuals see themselves as one with another person or group of people. Identification is a condition where the interests of individuals merge with the interests of the organisation, resulting in the creation of an identity based on those interests (Johnson et al., 1999). Burgess (2005) argued that knowledge exchange serves to benefit organisations, thus it follows that strong levels of organisational identification would be expected to increase employees' motivation to engage in knowledge sharing activities.

2.3 *Social capital and entrepreneurship opportunity*

2.3.1 *The structural dimension of social capital and entrepreneurship opportunity*

The structural dimension refers to the ability of individuals to make connections to others within an organisation, such as network ties, network configuration (Krackhardt, 1990). Network ties and configuration can enhance and keep close relations with cooperative partners or other external units. Baum et al. (2000) stated density of networks may provide enormous amount of information and are relatively easy to collect external information. Collecting external information can enhance organisational learning. Lee, Tan and Chi (2008) also found organisational learning positively effect on product innovation. Carolis (2002) proposed the structural dimension of social capital provides more resource channels and new knowledge with greater width and depth. This leads to greater ease in finding, assessing and utilising entrepreneurship opportunities. The network ties and configuration also directly affect the recognition of entrepreneurial opportunities. Recognition of an opportunity implies the discovery of latent benefits to be made from an undervalued resource or a unique combination of resources in the dynamic industry environments. Aldrich and Zimmer (1986) also found that stronger social ties can enhance the capability of opportunity exploitation by intensifying the frequency, breadth and depth of information exchange. Furthermore, Cooper, Woo and Dunkelberg (1989) found that people are more likely to exploit opportunity if they have developed useful information for entrepreneurship from their previous employment, presumably

because such information reduces the cost of opportunity exploitation. Therefore, this study proposes the first hypothesis:

Hypothesis 1a. The structural dimension of social capital is positively related to the ability to grasp entrepreneurship opportunities.

2.3.2 The cognitive dimension of social capital and entrepreneurship opportunity

The cognitive capital is an important foundation for encouraging members to share, exchange and transfer knowledge. Tsai and Ghoshal (1998) stated that shared codes and language facilitate a common understanding of collective goals. Carolis (2002) also stated common systems of meaning among individuals intensify communications and lead to generate or judge whether a new goods, services, raw materials or organising methods is worth being invested. Thus, shared codes and language that emerge from network relationships can facilitate the combination and exchange of organisational knowledge. By accumulate organisational knowledge can affect the creation, recognition and exploitation of entrepreneurial opportunities. In a word, shared codes, languages and narratives have a major impact on the creation, recognition and exploitation of entrepreneurial opportunities through interaction with information channel. Based on above statements, this study proposes the following hypothesis:

Hypothesis 1b. The ability to grasp entrepreneurship opportunity is positively influenced by the cognitive dimension of social capital.

2.3.3 The relational dimension of social capital and entrepreneurship opportunity

The relational dimension of social capital can be best understood in the current context as the asset that resides in social relationships (Walker, Kogut and Shan, 1997) and that emerges or exists in social structures through interaction between members (Adler and Kwon, 2002). Carolis (2002) looked at the relationship between social capital theory and entrepreneurship opportunity, but that conceptual model excluded relational dimension from social capital theory. Nevertheless prior studies proposed the more particular relations of organisational partners build, the greater the intensity, frequency and breadth of information exchanged. For example, trust has been viewed as an antecedent of cooperation relationship (Gambetta, 1988; Ring and Van de Ven, 1994; Gulati, 1995). Trust can enhance the members' willingness to share knowledge (Disterer, 2001; Bock and Kim, 2002). Trust affects cross-generational knowledge flows (Liebowitz et al., 2007). Moreover, Kramer (1996), Lewicki and Bunker (1996) found that identification with a group or collective can enhance relation and strong identification will encourage members to share knowledge (Constant, Sproull and Kiseler, 1996; Nahapiet and Ghoshal, 1998). These strong relations may facilitate more communication and intimacy and lead people to discuss and diffuse more in-depth knowledge. By exchanging, discussing or diffusing knowledge, affect creation, recognition and exploitation of new opportunities. Based on above statements, this study proposes the following hypothesis:

Hypothesis 1c. The ability to grasp entrepreneurship opportunity is positively influenced by the relational dimension of social capital.

2.4 *Absorptive capacity and accumulative knowledge*

Absorptive capacity involves assimilating and exploiting knowledge at the individual or the organisational level. Prior knowledge enhances the assimilation and exploitation of new knowledge. Some portion of that prior knowledge should be very closely related to the new knowledge to facilitate assimilation, and some fraction of that knowledge must be fairly diverse, although still related to permit effective, creative utilisation of the new knowledge. The basic role of prior knowledge suggests two features of absorptive capacity that will affect innovative performance in an evolving uncertain environment (Cohen and Levinthal, 1989b). First, accumulating absorptive capacity in one period will permit its more efficient accumulation in the next. Second, the possession of related expertise will permit the firm to better understand and therefore, evaluate the import of intermediate technological advances that provide signals as to the eventual merit of a new technological development. Thus, in an uncertain environment, absorptive capacity affects expectation formation, permitting the firm to predict more accurately the nature and commercial potential of technological advances. These two features of absorptive capacity – cumulativeness and its effect on expectation formation imply that its development is domain-specific and is path- or history-dependent (Cohen and Levinthal, 1990). Therefore, we infer if an organisation possesses a large amount of relevant accumulative knowledge from the past, it will have a greater capability to absorb outside knowledge. Therefore, this study proposes the following hypothesis:

Hypothesis 2. Absorptive capacity is positively influenced by accumulative knowledge of organisation.

2.5 *Absorptive capacity and entrepreneurship opportunity*

Organisational knowledge contributes to the ongoing innovation processes. Knowledge related capabilities are critical source of resource development of the firm (Nielsen, 2005). Especially, entrepreneurship opportunities are influenced by the cognitive ability. This cognitive ability is the capability to integrate information about the new opportunity with previously acquired knowledge (Shane and Venkataraman, 2000). It also involves absorptive capacity, which is pointed out by Cohen and Levinthal (1990). Victor, Moreno and Llorens-Montes (2006) pointed out absorptive capability influences innovator and entrepreneurial performance. An organisation's absorptive capacity depends on the absorptive capacities of its related members. Organisational absorptive capacity refers not only to the acquisition or to assimilation of information by an organisation, but also the organisation's ability to exploit it. Therefore, absorptive capability facilitates knowledge acquisition and exploitation by affecting conditions necessary for the creation of value through the exchange and combination of existing resources or information. Based on above statements, we infer if an organisation possesses a strongly absorptive capability it will have a greater ability to create, recognise and exploit the new opportunities. Thus, this study proposes the following hypothesis.

Hypothesis 3. Entrepreneurship opportunity is positively influenced by absorptive capacity.

2.6 Social capital and accumulative knowledge

2.6.1 The structural dimension of social capital and accumulative knowledge

The structural links created through the social interactions between individuals in network are important predictors of collective action (Burt, 1992; Putnam, 1995). Density of networks may provide enormous amount of information and are relatively easy to collect external information (Baum et al., 2000). Stronger social ties facilitate the acquisition of resources, such as information and knowledge (Aldrich and Zimmer, 1986). Thus, strong ties can accumulate histories by frequent interactions and promote diffusion of ambiguous knowledge by mutual confiding; thus directly contributing to the transfer of tacit knowledge from one party to the other. Being embedded in network relationships enhances an organisational knowledge by providing the mechanisms for combining and exchanging information (Nahapiet and Ghoshal, 1998). Therefore, structural dimension of social capital will increase exposure to factual information from different sources and affect a firm's accumulative knowledge. This study proposes the following hypothesis:

Hypothesis 4a. Accumulative knowledge is positively influenced by the structural dimension of social capital.

2.6.2 The cognitive dimension of social capital and accumulative knowledge

Cognitive capital refers to those resources that make possible shared interpretations and meanings within a community. It is an important foundation to promote communication and interaction among organisations. Nahapiet and Ghoshal (1998) stated that engaging in meaningful exchange of knowledge requires at least some level of shared understanding between parties, such as shared language, vocabularies, codes and narratives. Nonaka and Takeuchi (1995) proposed advance knowledge is through developing new concepts and narrative forms. Boland and Tenkasi (1995) demonstrated how the existence of a shared vocabulary enables the combining of information. Therefore, shared language or codes facilitates people's abilities to gain access to people and their information, it thus enhances the capability of different parties to combine the knowledge they gained through social exchange. Orr (1990) demonstrated how narratives, in the form of stories, full of seemingly insignificant details, facilitate the exchanging of practice and tacit experience between technicians, thereby enabling the discovery and development of improved practice. Thus, based on above statements, we infer an organisation can enhance acquisition, sharing and combination capability of knowledge with the outside using the same language, vocabularies, codes and narratives. This study proposes the following hypothesis:

Hypothesis 4b. Accumulative knowledge is positively influenced by the cognitive dimension of social capital.

2.6.3 *The relational dimension of social capital and accumulative knowledge*

Carolis (2002) looked at the relation between social capital and the view of organisational knowledge, but exclude the relational dimension from social theory. Nahapiet and Ghoshal (1998) have argued the facets of social capital could be classified into three clusters: the structural, the cognitive and the relational dimensions. Therefore, we examine the relational dimension to propose a model to increase integrality. Prior studies have shown that the elements in relational dimension of social capital are employed within the practices of knowledge sharing. For example, mutual trust could enhance the members' willingness to share knowledge (Disterer, 2001; Bock and Kim, 2002) and will stimulate knowledge sharing even in the context of high ambiguity and uncertainty, strong identification to the group will encourage members to share knowledge for the benefits of whole party even though implementing knowledge sharing requires efforts (Constant, Sproull and Kiseler, 1996; Nahapiet and Ghoshal, 1998). Hence, we infer if an organisation has good relations with network members, members will have a better sense of each other. Therefore, the quality of communication, knowledge exchange and knowledge transfer will likewise be good. Therefore, this study proposes the following hypothesis:

Hypothesis 4c. Accumulative knowledge is positively influenced by the relational dimension of social capital.

3 Research methodology and analysis

To test the proposed research model, we adopted the survey method for data collection. All statistical tests were carried out at a 5% level of significance.

3.1 *Measurement and data collection*

This study developed the items in the questionnaire either by adapting measures that had been validated by other researchers or by converting the definitions of constructs into a questionnaire format. Table 1 presents the operational definition in this study. The survey questionnaire (see Table 2) was using five-point scales anchored from strongly disagree to strongly agree. Data were collected from high-order MBA students (EMBA), international high-order MBA students (IEMBA) and an enterprise's committee master's credit class (CMBA) at the management college of National Sun Yat-Sen University in Taiwan. These samples are composed mostly of responses from high-order executives from industries in the south of Taiwan. There were 155 questionnaires handed out to students on the spot, in class. Of these, 155 questionnaires were returned and 149 were usable (96% effective response rate). The subjects came from multiple industries; they are manufacturing (32.2%), information service (16.8%), finance (11.4%), public utility (2.2%), transport service (2.2%), retail business (4.7%), medical service (4.7%), government (4.0%), educational institution (3.4%) and other (18.8%). The enterprise size is divided into six classes according to the number of employees, they are: under 50 people (18.8%), between 51 and 100 people (10.1%), between 101 and 500 people (26.8%), between 501 and 1000 people (12.8%), between 1001 and 5000 people (21.5%)

and above 5001 people (10.1%). Enterprise history is divided into eight classes, including new enterprises and enterprises with a long history, they are: under five years (12.1%), between 5 and 10 years (14.1%), between 11 and 15 years (11.4%), between 16 and 20 years (16.8%), between 21 and 25 years (13.4%), between 26 and 30 years (8.7%), between 31 and 35 years (5.4%) and above 36 years (18.1%). The positions of survey respondents were mostly medium-order executives and above, they included high-order executives (27.5%), medium-order executives (26.8%), executives at the basic level (18.8%) and engineer or administrative staff members (28.8%).

Table 1 Definitions of the constructs

<i>Construct</i>	<i>Definitions</i>
Network ties	Established number of relations between an organisation and other external organisations (Nahapiet and Ghoshal, 1998; Carolis, 2002)
Network configuration	The depth and breadth of organisational external network relations (Nahapiet and Ghoshal, 1998; Carolis, 2002)
Shared language and codes	Members of group can share languages and codes by getting along and interacting over a long period of time (Nahapiet and Ghoshal, 1998; Carolis, 2002)
Shared narratives	Members of groups can share legends, codes, mythologies, stories or metaphors by interacting over a long period of time (Nahapiet and Ghoshal, 1998; Carolis, 2002)
Trust	When somebody's intended, action is perceived as appropriate, well-meaning, capable, that results in confidence in the individual on the part of other people (Anderson and Narus, 1990; Morgan and Hunt, 1994; Mohr and Speckman, 1994; Misztal, 1996; Lee and Kim, 1999)
Identification	Identification is when members regard themselves as one of the group and accept the values and standards of the group (Kramer, 1996; Lewickiv and Bunker, 1996)
Creation of opportunity	The capability of a company to find/acquire new goods, services, raw materials or organising methods (Shane and Venkataraman, 2000)
Recognition of opportunity	The capability of a company to have the foresight to judge whether a new good, service, raw material or organising method is worth being invested (Shane and Venkataraman, 2000)
Exploitation of opportunity	The capability of a company to develop new goods, services, raw materials or organising methods (Shane and Venkataraman, 2000)
Absorptive capacity	The ability of an organisation to find and absorb new external knowledge, and to commercially utilise that knowledge (Cohen and Levinthal, 1990)
Accumulative knowledge	The sum total of an organisational knowledge about customers, products, services, operations and new investment (Cohen and Levinthal, 1990; Treacy and Wiersema, 1993; Shane and Venkataraman, 2000)

Table 2 The question items and factor loading

<i>Question item</i>	<i>Factor loading</i>
<i>Structural dimension of social capital</i>	
<i>Network ties of the structural dimension</i>	
More cooperative partners and maintaining close relations	0.742
More companies in our supply chain and maintaining close relations	0.780
More professionals than other external units and maintaining close relations	0.729
<i>Network configuration of the structural dimension</i>	
Cooperative partners which are keep close relations with our company belong to a variety of industries	0.761
Deeper relations with cooperative partners	0.847
More deep relation with companies of supply chain	0.743
Deeper relations with professionals or other external units	0.708
<i>Cognitive dimension of social capital</i>	
<i>Shared language and codes of cognitive dimension</i>	
Understanding commonly language and jargon	0.837
Understanding common background knowledge	0.892
<i>Shared narratives of the cognitive dimension</i>	
Understanding our mutual industry's metaphors and stories	0.808
<i>Relational dimension</i>	
<i>Trust of the relational dimension</i>	
We mutually believe that other member's intentions and behaviours are proper	0.748
While our company makes decisions with other relational members, we mutually consider the interests of the other side under most circumstances	0.792
<i>Identification of the relational dimension</i>	
Identifying with common norms and values	0.843
Identifying oneself as one of life community	0.815
<i>Entrepreneurship opportunity</i>	
<i>Creation of opportunity</i>	
Innovating/creating new investment opportunity at a higher rate	0.827
More quickly acquiring information about new investment opportunity	0.871
More channels to acquire new investment opportunity	0.777
Acquiring more accurate information about new investment opportunity	0.839
Acquiring more exhaustive and complete information about new investment opportunity	0.835
Finding more information about new investment opportunity	0.704
<i>Recognition of opportunity</i>	
Quickly discriminate the feasibility of new investment opportunity	0.744
Evaluating the feasibility of new investment opportunity with better judgment	0.657
Owning more exhaustive data that can be used to judge whether to adopt new investment opportunity	0.734

Table 2 The question items and factor loading (continued)

<i>Question item</i>	<i>Factor loading</i>
<i>Exploitation of opportunity</i>	
Higher probability of implementing new investment opportunity	0.609
Exploits new investment opportunity with a greater rate of success in generating profits	0.803
<i>Absorptive capacity</i>	
Investing more to evaluate the feasibility of knowledge/technology	0.620
More channels to acquire new investment opportunity	0.927
Good capability to receive new knowledge/technology	0.892
<i>Accumulative knowledge</i>	
Accumulating more new knowledge/technology related to products or service development	0.949
Accumulating more knowledge about operational processes	0.807
Accumulating more knowledge about markets and customers	0.817
Accumulating more knowledge about new business investment	0.757

3.2 Reliability analysis, convergent and discriminant validity

Partial least squares (PLS) analysis was used to analyse the survey data (Chin and Frye 1995). The first step is to access the convergent validity of the constructs by examining the average variance extracted (AVE). The AVE attempts to measure the amount of variance that a latent variable component captures from its indicators relative to the amount due to measurement error. AVE values should be greater than the generally recognised 0.50 cut-off, indicating that the majority of the variance is accounted for by the construct. In addition, individual survey items that make up a theoretical construct must be accessed for inter-item reliability. In PLS, the internal consistency of a given block of indicators can be calculated using the composite reliability (ICR) developed by Werts, Linn and Joreskog (1973). Acceptable values of an ICR for perceptual measures should exceed 0.70 for exploratory research (Fornell and Larcker, 1981) and interpreted like a Cronbach's coefficient. All ICR and AVE values meet the recommended threshold values. Table 3 summarises the measurement model results.

In addition, discriminant validity indicates the extent to which a given construct is different from other constructs. The measures of the constructs should be distinct and the indicators should load on the appropriate construct. One criterion for adequate discriminant validity is that the construct should share more variance with its measures than with other constructs in the model (Barclay, Higgins and Thompson, 1995). Table 3 demonstrates the constructs' strong discriminant validity. A commonly accepted criterion for construct discriminant validity is that the average variance shared between a construct and its measures should be greater than the variance shared between the construct and other constructs in the model (Barclay, Higgins and Thompson, 1995). The diagonal elements are the square roots of the AVE; the off-diagonal elements are the inter-construct correlations. Good discriminant validity is demonstrated because all the diagonal elements are greater than corresponding off-diagonal elements (Barclay, Higgins and Thompson, 1995).

Table 3 Correlation of constructs, composite reliability, square root of average variance extracted values and Cronbach's α

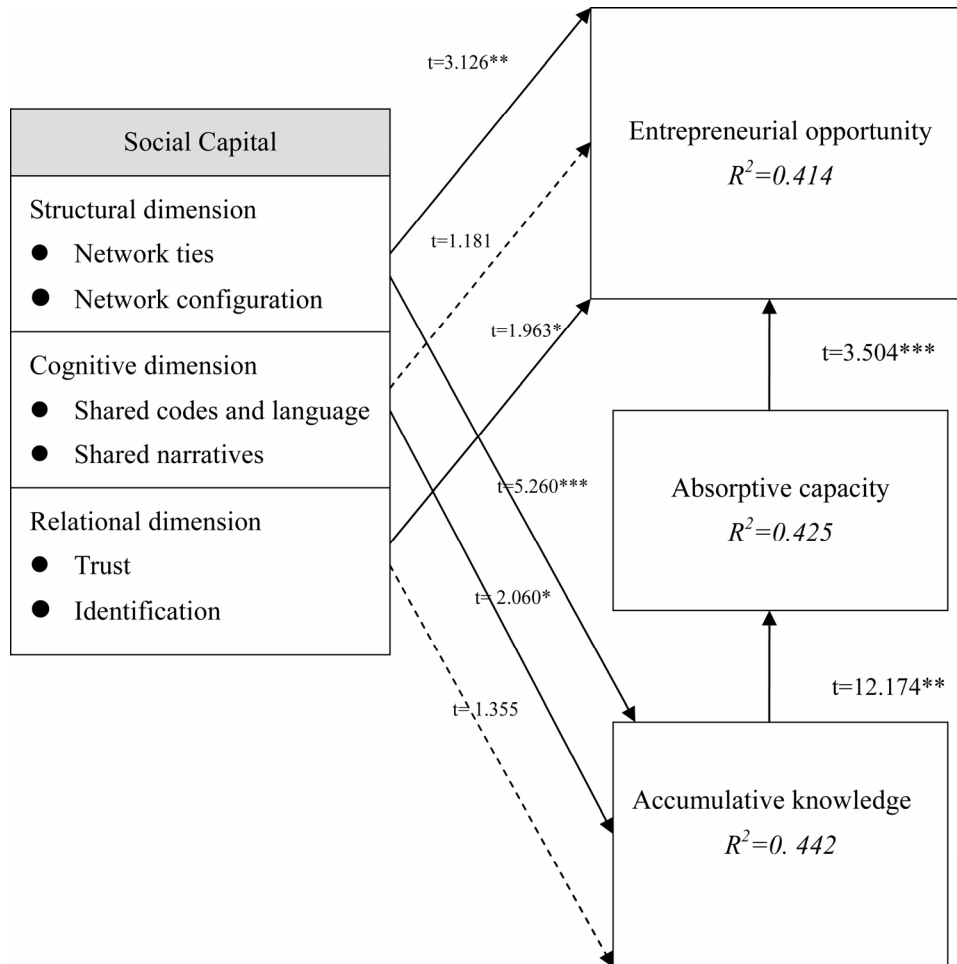
	ICR	Cronbach's α	1	2	3	4	5	6
1 Structural dimension	0.905	0.876	0.760	–	–	–	–	–
2 Cognitive dimension	0.883	0.799	0.507**	0.846	–	–	–	–
3 Relational dimension	0.876	0.812	0.445**	0.546**	0.801	–	–	–
4 Accumulative knowledge	0.861	0.7937	0.598**	0.507**	0.429**	0.824	–	–
5 Absorptive capacity	0.902	0.868	0.538**	0.381**	0.383**	0.652**	0.836	–
6 Entrepreneurship opportunity	0.940	0.952	0.562**	0.387**	0.457**	0.651**	0.514**	0.768

Notes: ** $p < 0.01$ (two tailed significance).

4 Discussion and suggestion

4.1 Discussions

This study provides an empirical framework for linking social capital, organisational knowledge and entrepreneurship opportunity. The results of hypotheses tests are summarised in Figure 2. We summarise and discuss them as follows. The first result is to reveal the interrelationship among entrepreneurship opportunity, social capital and absorptive capacity ($R^2 = 0.536$). Entrepreneurship opportunity is positively influenced by the structural dimension ($\beta = 0.362$, $t = 3.126^{**}$) and relational dimension ($\beta = 0.210$, $t = 1.963^*$) of social capital, but it is not influenced by the cognitive dimension of social capital. The results show that channels of external information, knowledge or resources are the key elements for grasping new investment opportunity and if organisation has good relation that can promote cooperation relationship with other members for acquiring new opportunity. So paying attention to external relationships in a network structure by establishing a good relational network with many links, ties and deep network relationships, can help for promoting entrepreneurship opportunity. Regarding the question of whether an organisation should develop common experiences, language, jargon and stories with other network members, the result demonstrates it is not be supported. We propose that follow-up research explores this question further. Besides, entrepreneurship opportunity is positively influenced by absorptive capacity ($\beta = 0.357$, $t = 3.504^{***}$). This confirms previous academic, which proposed that absorptive capacity is positively related to entrepreneurship opportunity (Cohen and Levinthal, 1990). It also demonstrates that if organisations have better absorptive capability, it is easier to create, recognise and/or utilise new entrepreneurship opportunity to enhance profit-making.

Figure 2 The result of path diagram

Notes: $p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

The second result is to reveal the relationship between social capital and accumulative knowledge ($R^2 = 0.442$). Accumulative knowledge is positively influenced by structural ($\beta = 0.471$, $t = 5.260^{***}$) and cognitive dimensions ($\beta = 0.209$, $t = 2.06^*$), but not influenced by the relational dimension. It is perceived that the structural dimension can provide numerous channels of information and resources, enabling organisations to have greater opportunity to acquire better information more quickly. The cognitive dimension of social capital enables organisations to communicate better via shared codes, language and narratives. If the organisation can exchange knowledge with the outside using the elements of cognitive dimension, it can acquire and use new knowledge effectively. Besides, the hypothesis that the relational dimension influences accumulative knowledge is not supported. This result shows that even though mutual trust (Disterer, 2001; Bock and Kim, 2002) and strong identification (Constant, Sproull and Kiseler, 1996; Nahapiet and Ghoshal, 1998) could enhance the members' willingness to share knowledge, if

organisational activities of knowledge management such as creation, integration or stock are not be fulfilled well, the organisation will be difficult to have accumulative knowledge. Therefore, it is very important to set up the implementation of the mechanism of knowledge management, for example, prior studies (e.g. Feng and Chen, 2007) proposed establishing knowledge management system can indeed promote the effectiveness of activities of knowledge management.

The third result is to reveal the relationship between accumulative knowledge and absorptive capacity ($R^2 = 0.456$). Absorptive capacity is positively influenced by accumulative knowledge ($\beta = 0.676$, $t = 12.174^{***}$). We see that if an organisation possesses more accumulative knowledge, it will have better absorptive capacity to use, obtain, digest, transfer and utilise new knowledge (Zahra and George, 2002). Absorptive capacity is path dependent on accumulative knowledge, as demonstrated by Cohen and Levinthal (1990) and Shane and Venkataraman (2000). Hence, organisations must continuously absorb and create market information, industry messages and core knowledge of technology; otherwise, they may lose the competition advantage.

4.2 *Limitation and future research direction*

Before examining the future research directions, some limitations must be discussed. The first limitation concerns the sample and generalisability. We adopt a convenient sampling scheme, with EMBA, IEMBA and CMBA students at the management college of National Sun Yat-Sen University in Taiwan. Given this, the sample cannot be extrapolated to Taiwan as a whole or other countries. The second limitation is the cross-sectional nature of the study. A third limitation concerns the questionnaire measures of network configuration and social capital. These measure mainly the breadth and depth of an external relational network. This study separates breadth and depth into different questions. Droege and Hoobler (2003) indicated that there is a trade-off relationship between breadth and depth with respect to network configuration and it is difficult for an enterprise to pursue both at the same time. An optimal mix between breadth and depth is required. However, at present, there is still no effective method to define and measure these variables in a more refined manner.

The results of this study suggest a number of directions for future research. The first direction is to suggest that in the future additional research would be useful to conduct research using more than just the opinions of MBA students or perform this kind of survey in different countries and to compare the results. The second direction is further to understand the role of social capital in the development process of enterprise. The third direction is to investigate the internal and external environment of more cases in the long-term, this can elucidate other related factors about how to promote absorptive capacity and entrepreneurship opportunity, and understand how the development process of social capital influences entrepreneurship opportunity.

5 **Conclusions**

This study makes several contributions to the literature. We integrate and extend prior theory and research (Cohen and Levinthal, 1990; Shane and Venkataraman, 2000; Carolis, 2002). It combines the views of social capital theory, organisational knowledge and entrepreneurship opportunity to present a framework which is not fully understood in

previous research. The results of this study are not only empirical the perspective of Carolis (2002) that indicated the relationship among the structural and cognitive dimension of social capital, organisational knowledge and entrepreneurship opportunity is related, but also demonstrate that including the relational dimension of social capital into the concept model is more completed. In addition to that, we verify the absorptive capacity of organisation is an effective antecedent factor for entrepreneurship opportunity. In identifying the interrelationship among social capital, organisational knowledge and entrepreneurial opportunity, we have made a framework. That is, by examining their interrelationships, we established an insight for future research. These results will be useful to academic, particularly in their advocacy of the cultivation of an enterprise's social capital, organisational knowledge and entrepreneurship opportunity. We hope this study can stimulate researchers further to explore the uncertain interrelationship among social capital, organisational knowledge and entrepreneurship opportunity, and further find other relevant factors influencing entrepreneurship opportunity.

This model also provides important practical guidance for implementation. Collectively, the results of this study indicate the social capital and absorptive capacity to promote entrepreneurial opportunity are effective. These results offer suggestions to management about how to promote the organisational social capital and knowledge. First, we suggest manager should create organisational social capital by management strategies, such as fostering dense network tie and configuration, exchanging knowledge with the outside using the same language, vocabularies or codes, promoting intense trust and strong identification with cooperative partners or other external units. Moreover, managers should encourage employees to contact with external environments and organisations because, the more individuals are in regular contact with one another, the more likely they are to create, share and exchange information. Further, organisations can accumulate more knowledge and find more opportunities. Second, absorptive capacity is positively related to entrepreneurship opportunity, this implies continuously acquiring new knowledge is important since absorptive capacity is path dependent. Organisations must continuously accumulate market information and industry messages, invest in long-term in-house R and D and knowledge management system or employ some management mechanisms, such as reforming communication structure, hiring expertise, hiring new personnel, contracting for consulting services or corporate acquisitions.

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