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Clarifying the Link Between Social Capital and MSME Innovation Performance: The Role of Absorptive Capacity

Banjo Roxas
Ph.D. Student, School of Marketing and International Business,
Victoria University of Wellington, New Zealand

A conceptual framework is proposed in this article showing how the social capital of a community shapes the innovation performance of micro, small and medium enterprises (MSMEs) through the exercise of absorptive capacity as the mediating phenomenon between the two. Its significance stems from the unprecedented effort of explaining how community social capital matters in the innovation performance of MSMEs, a departure from previous studies which typically examined market-related or hierarchical social capital in the form of formal networks and directly linking them to firm innovation without due regard to knowledge management within the firm as an antecedent of organizational innovation. The aim is to stimulate further thinking and empirical research on the subject of social capital of a community in an MSME and/or entrepreneurial context.

KEYWORDS: social capital, MSME, absorptive capacity

A fundamental tenet in social capital (SC) theory states that the larger community within which a business organization is embedded is a source of capital. This capital that arises from networks, socials norms and trust, is just as important as financial and human forms of capital which sustain a firm's value-creation processes such as innovation (Narayan & Pritchett, 1999; Renko, Autio & Tontti, 2002; Tsai, 2006). The importance given to this concept is evident in the virtual explosion of research on the conceptual and empirical value of SC in recent years (Lochner, Kawachi & Kennedy, 1999; Kay, 2005; Westlund, 2006).

Despite the plethora of literature on the subject, critical gaps remain. On the conceptual level, SC remains a heavily disputed concept (Schuurman, 2003). There are issues as to whether it is distinct from existing concepts like community or institutions or if it is a capital after all (Lochner et al., 1999). Likewise, measurement of SC has proved difficult and problematic as the search for a sound technomethodology continues (Maskell, 2000; Westlund, 2006). One major issue is the level of aggregation (i.e. household, organization, community or nation) as the focal point of assessment (Schuller, Baron & Field, 2000). Another issue is circularity whereby SC may be argued as an effect rather a cause (or vice-versa). Whether to use quantitative or qualitative means to gauge SC is another focal point of disagreement (Patulny & Svendsen, 2007).

On the empirical level, the link between SC and other variables like economic development, organizational performance, or innovation is not

unequivocal (Annen, 2003). It has become imperative to understand why there is a link between SC and other social phenomena. For instance very few studies have addressed how SC building can help entrepreneurs in overcoming obstacles to small business (Lyons, 2002). While numerous studies have examined the hierarchical and market oriented SC of business organizations (such as alliances, industry clusters, and supply or distribution chains) as well as the personal networks of individuals within the organization, studies examining community SC as a whole and how it relates to business organizations such as micro, small and medium enterprises (MSMEs) is very scarce (Westlund & Bolton, 2003; Suseno & Ratten, 2007; Weber & Weber, 2007). Studies have shown that SC is positively related to innovation, nevertheless, the major question is how so (Dakhli & De Clercq, 2004; Pittaway, Robertson, Munir, Denyer & Neely, 2004).

Furthermore, extant literature is replete with studies proclaiming the importance of knowledge absorption and utilization within the firm (i.e. the firm's absorptive capacity) in pursuit of innovation. For instance, several studies have examined the organizational determinants of absorptive capacity such as the educational background of managers, organizational structure, firm size and combinative capabilities (Cohen & Levinthal, 1990; Van den Bosch, Volberda & de Boer, 1999; Daghfous, 2004; Gray, 2006). It is sound to investigate how community-based SC relates to a firm's absorptive capacity – an effort, which to the best of the researcher's knowledge, is unprecedented.

The conceptual framework proposed in this study refers to absorptive capacity (AC) as the firm's ability to seek, value, assimilate, and apply knowledge received from sources beyond organizational boundaries (Cohen & Levinthal, 1990). A firm with a high level of AC is able to regenerate and enrich its knowledge base and keep abreast of cutting edge scientific developments taking place outside of the firm (Narasimhan, Rajiv & Dutta, 2006). It is therefore considered as a dynamic capability pertaining to knowledge creation and utilization that enhances a firm's ability to gain and sustain a competitive advantage (Zahra & George, 2002). Firms are able to reconfigure its resource base and adapt to changing market conditions in order to achieve a competitive advantage through dynamic capabilities (Zahra & George, 2002).

This study hopes to contribute in providing more insights if not remedies to the issues and research gaps identified above. Its major thesis is that the SC inherent in the community shapes the innovation performance of MSMEs through the latter's exercise of AC. The role of AC is given special emphasis as a variable mediating the relationship between SC and innovation performance as this succinctly explains why SC matters amongst MSMEs in pursuit of innovation (Lin, Li & Chen, 2006). The major goal is to develop a conceptual framework illustrating specific dimensions of SC which are potential sources of knowledge necessary for MSME innovation. In this framework, SC flows into the firm and proves to be valuable as MSMEs exercise their capacity to strategically absorb, assimilate, transform and exploit knowledge (i.e. exercise the firm's AC) generated by the firm's SC found in the immediate community where a particular MSME is situated. The firm's AC will process and generate the much needed knowledge resource that serves as input to the firm's innovation performance.

Grounded on SC theory (Coleman, 1988; Nahapiet & Ghoshal, 1998; Putnam, 2000), this paper posits that SC is a potential resource for MSMEs. Furthermore, firms are able to realize the potential gains from SC of their local community by leveraging the firm's AC. As a result, firms are able to absorb and utilize resources (i.e. exercise its AC) derived from SC in order to sustain or improve the firm's innovation performance. This SC-AC-innovation performance nexus is well-supported by theories of organizational learning (Argyris & Schon, 1978), organizational responsiveness (Kohli, Jaworski & Kumar, 1993; Welsch, Liao & Stoica 2001), transaction costs (Rao, 2003), resource dependency (Pfeffer & Salancik, 1978), and environmental munificence (Castrogiovanni, 1991). All these theories are briefly discussed below.

MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES)

The role of micro, small and medium enterprises (MSMEs) in economic development cannot be overemphasized. Comprising over 98% of total enterprises in Asia-Pacific (APEC, 2003), MSMEs have assumed a leading role in economic development of many countries (Benney, 2000; Lee & Peterson, 2000; OECD, 2005) . In the Asia Pacific region, MSMEs provide over 60% of the private sector jobs and over 30% of total employment; generate about 50% of sales or value added and 30% of direct exports, and account for about 10% of FDI (APEC, 2002). In the Philippines for instance, 99.6% of the total 810,362 business establishments as of 2003 are micro (91.75%), small (7.5%) and medium (0.35%) firms generating 67.9% of the country's total employment (DTI, 2005). Further, it was noted that 50-70 million new small and medium enterprises need to be created in APEC countries over the next two decades if their developing countries are to contribute fully to the overall growth of the APEC region and to achieve international competitiveness (Hall, 2002).

Studies on the importance of MSMEs especially in developing and emerging countries converge on the conclusions that: MSMES stimulate ownership and entrepreneurial skills; they form the backbone of the market economy; they are flexible and can adapt quickly to changing market demands and supply situations, thus a competitive SME sector is a precondition for sustainable development and respond to the demand of globalization; they generate massive long-term employment; they help diversify economic activity and make significant contribution to exports and trade; and they contribute significantly to local development (Benney, 2000; APEC, 2002; Hall, 2002; APEC, 2003; Szabo, 2003; OECD, 2004; Arinaitwe, 2006; Wilkinson & Broughters, 2006).

DEFINING AND CONCEPTUALIZING SC

SC theory proposes that networks of relationships constitute a valuable resource for the conduct of social and economic affairs, providing their members with the collectively-owned capital (Nahapiet & Ghoshal, 1998). Its main theme focuses on the ability of actors to extract benefits from their social structures, networks, and memberships (Davidsson & Honig, 2003). The concept of embeddedness is at the core of this theory which assumes that actions between individuals are so predicated on social relations constraining the so-called rational and self-interested behavior (Granovetter, 1985). These actors behave with bounded rationality within this dynamic systems of social relations from which certain resources may prove beneficial or detrimental in advancing the actors' interests (Simon, 1991). This sociological challenge to the traditional economic interpretations of interactions between people shapes our current understanding of SC.

It is beyond the scope of this paper to examine the historical and conceptual development of SC. It is sufficient to cite that SC has been referred to as: *the sum of resources, actual or virtual that accrue to an individual or a group by virtue of possessing a durable network or more or less institutionalized relationships of mutual acquaintances and recognition* (Bourdieu & Wacquant, 1992, p. 3); *as a set of resources inherent in family relations and in community social organizations that are useful for the cognitive or social development of a child or young person* (Coleman, 1988, p. 96); and *the features of social organization such as networks, shared norms and trust that facilitate coordination and cooperation for mutual benefit* (Putnam, 1994, 1996, 2000, p. 6). Studies have shown that SC generates shared norms, values, and understanding as well as reciprocities arising from social networks which in turn facilitates cooperation within or amongst groups which ultimately supports the achievement of goals (Schuller et al., 2000; OECD, 2001). In this context, a social network refers to the set of nodes (persons or organizations) linked by a set of social relationships (e.g. friendships, affinity, transfer of financial resource, overlapping memberships, etc.)

as well as geographic proximity (Schuller et. al., 2000; Westlund, 2006).

SC emphasizes social relations rather than market- or hierarchically based relations (Davidsson & Honig, 2003). Market-based relations include relationship between the firm and its customers, suppliers, or distributors. Hierarchically-based relations or networks may include relations with the trade unions, government agencies, or non-government organizations such as environmental groups. Davidsson and Honig (2003) suggest that MSMEs operate in a competitive environment. However, even in the fiercest competitive situation, the players' common understanding on what norms, values, and different forms of reciprocities emanating from the local community's SC ultimately determine the extent to which competition generates positive or negative returns to the firms involved (Welsch et al., 2001). Despite the fact that SC is a dynamic social phenomenon similar to culture, its salient features remain relevant when applied to competitive and non-competitive situations.

Furthermore, it is argued that SC is a multi-dimensional concept, a community characteristic and therefore, should be measured at the community level (Lochner et al., 1999; Westlund & Bolton, 2003). In addition to that, in the context of studying economic actors such as MSMEs, SC should be analyzed as a concept of economics, that is, as a form of capital which is a firm resource (Liao & Welsch, 2005; Han, 2006; Westlund, 2006). While financial capital has been a commonly discussed issue in small business development, SC provides another dimension in the analysis of why business organizations survive, prosper or decline. By treating social networks, norms and trust as sources of capital, it allows for quantification of this valuable resource in the same way financial and human capital have been used to gauge the performance of firms (Zhang & Fung, 2006).

The multidimensionality of SC is evident in its conceptual history including the previous attempts to identify specific components that lend the concept to empirical measurement. Westlund's (2006) work provides a detailed review of the conceptual development of SC.

One of the most current attempts to measure SC at the community level is the work of Onyx and Bullen (2000) which is by far the most comprehensive empirical study based on the review of the literature. The work is heavily influenced by the germinal work of Putnam (1993) and Coleman (1990). Onyx's and Bullen's (2000) extensive review of the literature on SC reveals five themes that describe SC: networks, reciprocity, trust, shared norms, and social agency. In 1995, exploratory studies were conducted which generated the preliminary SC scale comprising 68 items with a 4-point Likert-type response scale ranging from 1 (no, not much, or no, not at all) to 4 (yes, definitely or yes, frequently). To validate this SC scale, Onyx and Bullen (2000) administered the questionnaire to 1,211 individuals aged 18-65, living in five urban and rural communities in Australia. Subequent data analysis generated 39 useful items describing eight factors: participation in the local community; social agency or proactivity in a social context; feelings of trust and safety; neighborhood connections; family and friends connections; tolerance of diversity; value of life; and work connections (Onyx & Bullen, 2000). A community, in which the presence of the eight factors is high, is considered to have a high level of social capital.

Subsequently, the study was replicated in the United States in 2004 supporting the validity and reliability of the instrument that Onyx and Bullen developed (O'Brien, Burdsal & Molgaard, 2004). Onyx's and Bullen's framework of SC will be used in measuring SC as used in this study.

ABSORPTIVE CAPACITY (AC)

Knowledge is the most powerful engine of production (Marshall, 1920). This is especially true in the knowledge-based economy that relies primarily on the use of ideas rather than physical abilities and on the application of technology rather than the transformation of raw materials or the

exploitation of cheap labor (Van den Bosch et al., 1999; Westlund, 2006). In this economy, acquisition of know-how is the basis of future innovations (Narasimhan et al., 2006; Tsai, 2006; Tu, Vonderembse, Ragu-Nathan & Sharkey, 2006).

To gain access and fully utilize knowledge in a productive manner, a firm must develop and sustain its AC or the firm's ability to value, assimilate, and apply knowledge received from external sources such as suppliers, customers, competitors, and alliance partners (Cohen & Levinthal, 1990). The concept 'AC' is used to describe the firm's ability to use its prior related knowledge and diverse background to identify the value of new information and to develop this into something creative (Ericksson & Chetty, 2003). Likewise, it is a reflection of the efficiency with which a firm absorbs, relative to what it could have absorbed given the resources it has deployed (Narasimhan et al., 2006). This is because AC is also dependent on the firm's existing internal capabilities in order to absorb new knowledge from external sources.

The theory of organizational learning provides the framework that supports the theoretical importance of AC (Argyris & Schon, 1978, 1996). This theory explains that organizations survive because they actively create, capture, transfer, and mobilize knowledge (i.e. organizations learn) to enable it to adapt to a changing environment. In short, organizational learning is essential to become an adaptive organization.

Applied in the context of entrepreneurship and small business development, organizational learning is entrepreneurial learning which is often described as a continuous process that facilitates the development of necessary knowledge to be effective in starting up and managing new ventures (Politis, 2005). This knowledge could be tacit or codified knowledge. Tacit knowledge refers to the 'inarticulable' contextual frameworks that provide individuals' cognitive processes with the background within which to focus and to attribute meaning to conditional statements (Brusoni, Marsili & Salter, 2005). It is often referred to as 'know how' whereas codified knowledge refers to the availability of messages and generic algorithms that can be easily and (relatively) cheaply transmitted and deployed in a context other than that in which they were originated. This is often referred to as 'know what' (Brusoni et al., 2005).

These two types of knowledge become useful only if the organization has the necessary capacity to absorb, transform, and integrate these knowledge forms into the value creation processes of the organization. The benefits are two-fold: knowledge as an input (i.e. a sort of raw material) to the value-creation process and knowledge that is used to improve the process itself.

Likewise, the theory of organizational responsiveness explains the role of AC. Organization responsiveness is the action taken in response to the relevant information generated and subsequently filtered (Kohli et al., 1993; Welsch et al., 2001). Welsch et al. (2001) argue that organizational responsiveness is related to organizational performance as it reflects speed and coordination with which the actions are implemented and periodically reviewed. Given the available knowledge, an organization is able to steer its operations to create better value and sustain its competitive advantage vis-à-vis the vagaries of the external environment. The strategic exercise of AC allows the firm to respond well to the demands of a turbulent and dynamic environment by continuously aligning internal processes and structures to that of the changes in the environment external to the firm.

TYPES OF ABSORPTIVE CAPACITY

Amidst the plethora of studies on AC, this study adopts the framework developed by Zahra and George (2002) which categorizes AC as either potential or realized. Potential AC makes the firm receptive to acquiring and assimilating external knowledge (Zahra & George, 2002). It entails two major processes: that of knowledge acquisition and assimilation. Knowledge acquisition refers to the firm's capability to identify and acquire externally generated knowledge that is critical to its operation

(Zahra & George, 2002). Knowledge assimilation on the other hand, refers to the firm's routines and processes that allow it to analyze, process, interpret and understand the information obtained from external sources (Zahra & George, 2002).

Realized AC is a function of transformation and exploitation capabilities of the firm (Zahra & George, 2002). Transformation refers to the capability to develop and refine the routines that facilitate the combination of existing knowledge and the newly acquired and assimilated knowledge while exploitation refers to the routines that allow firms to refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge into its operations (Zahra & George, 2002).

Potential and realized AC form the two basic components of the knowledge chain similar to Welsch et al.'s (2001) awareness and responsiveness components of the same chain. This knowledge chain highlights the importance of not just possessing knowledge but also the capacity and willingness to act on that knowledge (Welsch et. al., 2001). This is an important point as previous studies tend to focus on one over the other (Stock, Greis & Fischer, 2001; Tsai, 2006; Tu et al., 2006). As a result, the value creating and process-enhancing effects of knowledge is not fully captured.

INNOVATION

Innovation is traditionally viewed as a creative process involving the application of existing ideas to create a unique solution to a problem (Duncan, 1972). However, innovation also entails creation of new ideas for new purposes. Hence, innovation may refer to any idea, practice, or object that the adopting individual or organization regards as new (Zaltman, Duncan & Holbek, 1973; Damanpour & Evans, 1984; Damanpour, 1991; Rogers, 1995; Hage, 1999). As a discreet event, innovation may refer to the first successful application of a product or process (Cumming, 1998). As a process, it involves the generation, development, and implementation of new ideas or behaviors (Damanpour, 1991). Moreover, innovation is considered as an ongoing process of leaving, searching and exploring which results in new products, new techniques, policy, structure, method, new forms of organization , and new markets (Lundvall, 1992; Nohria & Gulati, 1996).

In the context of firm competitiveness, innovation is an attempt to create competitive advantage by perceiving or discovering new and better ways of competing in an industry and bringing them to the market (Porter, 1990). Constant innovation allows a firm to better meet customer needs, stay ahead of competition, capitalize on strategic market opportunities, and align organizational strengths with market opportunities (Wagner & Hansen, 2005)

TYPES OF INNOVATION

In his thesis on creative destruction, Schumpeter (1934) identified two fundamental forms of innovation through which entrepreneurship is exercised: process innovations and product innovations. Process innovations include a new method of production, or a new source of raw material while product innovations include new goods, new quality of goods, opening a new market or a new industry structure as the creation of destruction of a monopoly position (Schumpeter, 1934). Modern day scholars have looked at product innovation as simply changes in end products or services offered by the organization while process innovation are the changes in the way the firm produces end products or services (Norbert, 1990; Utterback, 1994).

Other studies expanded the product and process innovation typology by including market innovation (i.e. exploitation of territorial areas, penetration of market segments) and organizational innovation (i.e. innovation in marketing, purchasing and sales, administration, management, and staff policy) (Lundvall, 1992; Avermaete, Viaene, Morgan & Crawford, 2003; Chuang, 2005). Studies in the manufacturing sector tend to define

innovation in terms of product innovation (i.e. new or improved products), process innovations (i.e. improved processing or manufacturing methods) and business systems innovation (i.e. new and improved business and marketing practices) (Hovgaard & Hansen, 2003).

Innovation may also be characterized in terms of the degree of strategic and structural change that the firm must undergo to accommodate the innovation in question (Zaltman et al., 1973). In this context, innovation may be considered radical if the advances are so significant that revolutionary alteration of the organization and its support networks must occur to accommodate and implement change (Zaltman et al., 1973; Cooper, 1988). Incremental innovation, on the hand, enhances and extends the underlying technology and thus reinforces the established technical order (Zaltman et al., 1973; Cooper, 1988).

Furthermore, innovation may be classified according to the proximity of the change in relation to the organization's operating core (Lin, 2006). In this context, two forms of innovation are identified: (a) technological innovation which involves the adoption of an idea that directly influences the direct output processes (Daft, 1978; Han, Kim & Srivastava, 1998; Lin, 2006); and (b) administrative innovation which refers to the changes that affect the policies, allocation of resources and other factors associated with the social structure of the organization (Daft, 1978; Han et al., 1998; Lin, 2006).

Strategic thinkers have also thought of innovation within the context of inward or outward focus of organizational growth and development. Firms may strategically engage in creative innovation to effect changes to the firm's structure, technology, or production system driven most significantly by the independent actions of a business person and through the internal workings of the firm (Murphy, 2002). Innovation in this case, is triggered by the firm's own resource base and adopted with the view of the long term development of the firm. The other type is responsive innovation whereby those changes in the firm's structure, technology, or mode of production are essentially driven by unavoidable short-run changes in the business climate, by imitation of other's works, or when external assistance was received (Murphy, 2002). Organizational adaptation and responsiveness to the external environment trigger the innovative activities within the firm.

Amidst the apparent divergence of foci amongst these typologies, the preponderance of evidence suggests that it is most appropriate and beneficial to treat innovation as a multi-dimensional phenomenon with its components occurring at the same time (Cooper, 1988). As a matter of fact, empirical evidence suggests that very few (if there are any) innovations are uni- or even bi-dimensional (Cooper, 1988). Hence, in this study, the innovation performance of MSMEs is characterized along a multi-dimensional model such that innovation has varying degrees of change (incremental or radical), scope or domains of change (administrative or technological), and outputs (product or process innovation). This approach takes into account the fact that firms may pursue different types of innovation depending on organizational structure, size, nature of industry and other contextual, environmental or strategic factors (Damanpour, 1991).

THE CONCEPTUAL FRAMEWORK

Given the theoretical justifications of the links between SC, AC and innovation performance of firms, presented in Figure 1 below is the conceptual framework showing the proposed relationships between and amongst constructs under the three major research domains.

The proposed framework highlights the direct relationship between the various dimensions of SC and AC (both potential and realized) of MSMEs. SC does not only provide MSMEs access to knowledge (potential AC). It also nurtures the process and capabilities necessary to exercise AC.

The knowledge generated and available to the firm becomes valuable only when they are acted upon by the firm through the exercise of realized AC. This in turn influences the degree, scope and result of innovation taking place within the firm.

As previously mentioned, the six dimensions of community-level SC that are used in this study are adopted from the study of Onyx and Bullen in 2000 and replicated in 2004 by O'Brien et al. The Onyx and Bullen model of SC is a result of efforts to determine if SC is a concept with an empirically meaningful reality and if so, to develop a valid yet practical measurement tool to assess a community's SC (O'Brien et al., 2004). Apart from the replication of this Australian study in the United States which revealed similar conclusions, no other efforts have examined the validity of the Onyx and Bullen model. Moreover, the applicability of this model in a developing country setting has not yet been tested to date. This justifies the adoption of the model in the current study. However, Onyx's and Bullen's dimensions called value of life and work connections are excluded as there seems to be neither theoretical nor empirical basis to relate them to other variables in this study. Likewise, these two dimensions are not consistent with other studies on SC.

The dimensions of potential and realized AC are based on the work of Zahra and George (2002) which has been applied on other studies as well (Renko, Autio & Sapienza, 2001; Narasimhan et al., 2006; Tsai, 2006; Tu et al., 2006). It is argued in this study that only realized AC has direct influence on the innovation performance of firms on the premise that knowledge transformation and exploitation indicate that new or improved knowledge has been integrated in the value-creation processes of the firm as manifested by various types of innovations.

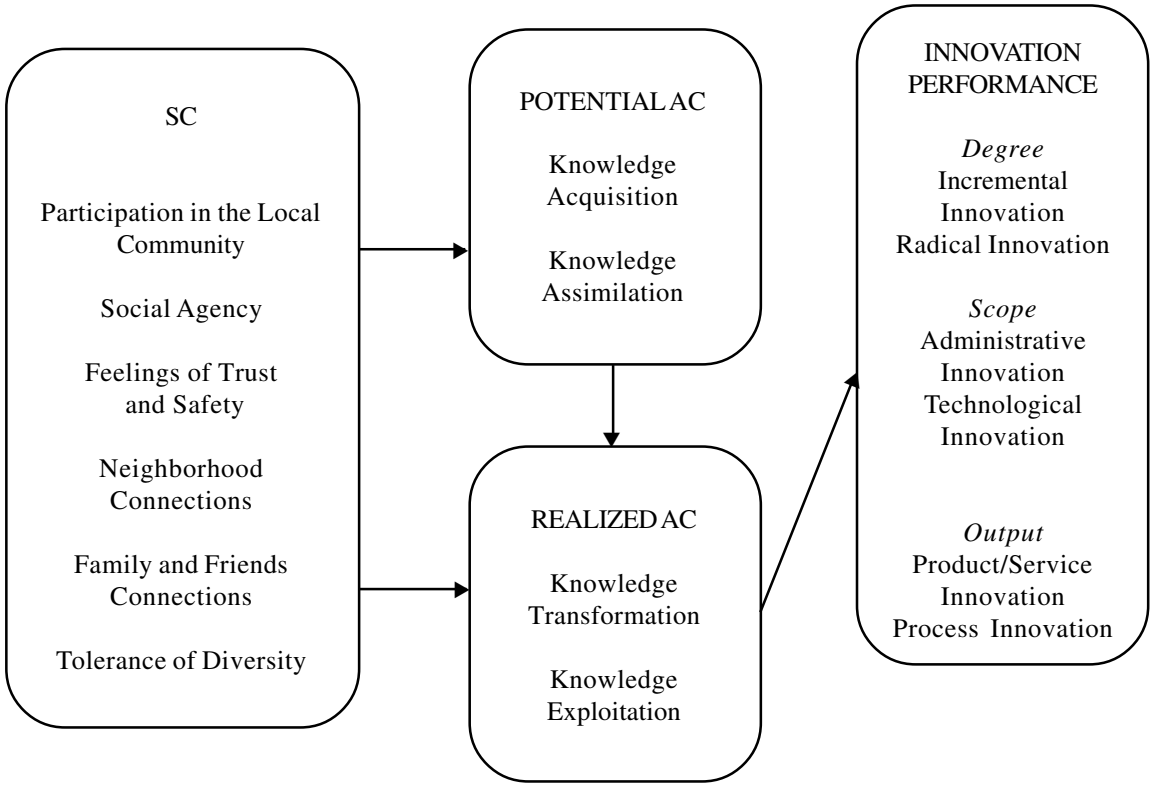

Figure 1. The Conceptual Framework

AC AS A MEDIATING VARIABLE BETWEEN SC AND INNOVATION PERFORMANCE

The most current view on mediational analysis explains that mediation involves a chain reaction whereby an *independent variable* causes a change in the *mediator* which then causes the change in the *dependent variable* (Collins, Graham & Flaherty, 1998). This is, in effect, a *stage-sequential mediation process* suggesting that it must be established that SC relates to AC and that AC must be established to be related to MSME innovation performance. Under this school of thought, it is sufficient to theoretically and empirically establish the sequence of relationships of the variables under study in order to propose the presence of mediation which shall then be subjected to statistical testing. Consistent with Collins et. al. (1998), the conceptual framework builds on several theoretical arguments supporting the SC-AC-firm's innovation performance nexus.

A fundamental argument is offered by organizational learning theories. Organizational learning is a process of knowledge acquisition, assimilation, and exploitation (Argyris & Schon, 1978, 1996; Renko et al., 2001). SC facilitates knowledge acquisition and exploitation by affecting the conditions necessary for the creation of value through the exchange and combination of existing intellectual resources (Renko et al., 2001). In a high technology sector, for instance, it is imperative that knowledge as a scarcer resource, be continually replenished and SC becomes critical in this regard as knowledge acquisition and exploitation are essentially a social process (Renko et al., 2001). SC provides the necessary networks that facilitate the discovery of opportunities as well as the identification, collection and allocation of these scarce resources (Davidsson & Honig, 2003). The availability of these scare resources is essential for the firm to pursue its functional activities to improve or sustain its innovation performance (Welsch et al., 2001).

Another explanation of the SC and AC link may be made in reference to uncertainty and transaction costs. Uncertainty in this case refers to the degree to which future states of the world cannot be anticipated and accurately predicted (Pfeffer & Salancik, 1978). Transaction costs are the costs of specifying what is being exchanged (i.e. attributes) and enforcing the subsequent agreement (Vandenberg, 1999). It is argued that firms are able to exercise AC that leads to innovation because SC reduces the uncertainty and hence the transaction costs faced by organizations in searching and acquiring knowledge from its external environment. SC establishes the playing field which reduces uncertainty and therefore defining actions based on defined expectations (i.e. action based on the knowledge of what others will do given the shared norms and expectations or reciprocity). The *theory of transaction costs* (Rao, 2003) suggests that the presence of SC enables the firm to reduce the costs of engaging in various forms of exchanges with the actors in a given community. These costs include the cost of monitoring the exchanges and implementing agreements to pre-empt and prevent opportunistic behaviour. Reduced transaction costs enable the firm to concentrate on its search for access to valued knowledge-based resources and exploitation of existing resources, to pursue further innovation.

This is also consistent with the work of Pfeffer and Salancik in 1978 on *resource dependency theory* arguing that: "organizations have varying degrees of dependence on external entities, particularly for the resources they require; in many instances, the external control of these resources may reduce managerial discretion, interfere with the achievement of organizational goals, and ultimately threaten the existence of the focal organization; confronted with a costly situation of this nature, management actively directs the organization to manage or alter the external dependence through the use of strategies such as prudent selection of operating domains, merger, cooptation, coalition formation, contractual relationships, or political strategies to influence regulation" (p. 75). Central to the development of these strategies is knowledge management with the view of learning how to maximize existing knowledge base and at the same

time continue to search for ways to acquire knowledge from the external environment. SC plays a key role in this process as it lubricates the flow of information within the community in which a small business owner is a member.

Likewise, the theory of environmental munificence which posits that the scarcity or abundance of critical resources needed by a firm operating within an environment influences the survival and growth of firms sharing that environment (Castrogiovanni, 1996). In this context, environmental munificence refers to the community's ability to support sustained growth of firms (Anderson, Drakopoulou-Dodd & Scott, 2000; Anderson & Tushman, 2001; Goll & Rasheed, 2005). Goll and Rasheed reveal that environmental munificence has pervasive effects on organizational processes as shown by the literature on the subject published over the last two decades. The presence of supportive informal social networks reflects community munificence which has been shown to be positively associated with a range of strategy and organizational options. Specifically, these social networks provide resources as well as access to other resources that are valuable to a firm.

Other arguments posit that firms do not innovate in isolation (De Propris, 2002). Wiethaus (2005) puts forward that research and development efforts of firms are shaped heavily by the firms' external links with the outside environment. Social links to local suppliers, customers and other research and development partners provide faster access to information and knowledge, lower information and knowledge costs, increased supply of information and knowledge, and improved quality of information (Westlund, 2006). All these are expected to result to faster innovation process, higher quality of innovations, or increased innovation potential (Westlund, 2006). Studies have confirmed that innovation can be the outcome of parallel processes of information sharing and of codified and uncodified knowledge spill-over channeled through inter-firm linkages (De Propris, 2002).

However, the focus of Wiethaus's thesis is on the hierarchical and market-related aspects of SC. The theory of innovative milieu (Camagni, 1991) broadens the explanation by proposing that innovatory activities will be more likely in regional or local environments in which there is a high level of untraded interdependencies between firms, agencies and institutions and where there is a common way of perceiving and understanding problems and of finding solutions to them (North & Smallbone, 2000; Dakhli & De Clercq, 2004). An innovative milieux is characterized by geographical proximity, informal relationships between firms and other actors in the locality and a collective learning process (De Propris, 2002). Geographical proximity facilitates information and knowledge exchange, as well as enables social cohesion to develop. The model introduces factors of dynamism between the elements of the innovation system that contribute to and generate synergetic and collective learning processes within the milieu. (Camagni, 1991; De Propris, 2002). According to Camagni (1991) the local environment plays a determinant role as innovation incubators as it acts like a prism through which innovations are catalyzed and give the area its particular creative complexion (Camagni, 1991).

As a result, "*regions or localities offer an important source of competitive advantage even as production and markets become increasingly global. Geographic proximity promotes the repeated interaction and mutual trust needed to sustain collaboration and to speed the continual recombination of technology and skill. When production is embedded in these regional social structures and institutions, firms compete by translating local knowledge and relationships into innovative products and services; and industrial specialization becomes a source of flexibility rather than of atomism and fragmentation*" (Saxenian, 1996, p. 8).

DIMENSIONS OF SOCIAL CAPITAL

The following section presents the propositions explaining the relationships between SC and AC

and that of AC and MSME innovation performance based on theoretical and/or empirical evidences supportive of the relationships as suggested by the conceptual framework.

Participation in the Local Community. This refers to the extent to which people actively engage in community activities through volunteer work, membership in local organizations, and extension of help in various local events or projects (Leonard & Onyx, 2004). This construct shows a strong resemblance to Dhakli's and De Clercq's (2004) associational activity which describes the general tendency of people in a society to be active members in associations and voluntary type organizations. Participation in the local community normally results to stronger ties within the community and the building of bonding SC which are both essential to communal problem-solving as well as opportunity-seeking (Maloney, Smith & Stoker, 2000). It encourages repeated interactions between and amongst community members which consequently build relational trust, foster reciprocity, reliability and dependability (Dakhli & De Clercq, 2004).

Therefore, for a small business owner who is also an active participant in that community, the community becomes a potent source of knowledge shared among all members. Hence, associational activity fosters firm innovation among MSMEs by increasing their exposure to different ideas, skills or expertise in a non-threatening and informal way, and provides different and unique sources of information, financial funding, and political support (Dakhli & De Clercq, 2004). Such activity increases information and knowledge exchange at both individual and organizational level which in turn increases the propensity for MSME innovation (Dakhli & De Clercq, 2004). Innovation is facilitated by greater linkages among individuals such as social participation, interconnectedness with the social system, exposure to interpersonal communication channels and belonging to highly interconnected systems. All these are positively associated with early adoption of innovation (Narayan & Pritchett, 1999). It is proposed in the study that:

P_1 - High level of participation in the local community is positively associated with high level of MSME AC.

Social Agency. Social agency or proactivity in a social context refers to the way in which people are proactive and consistently assert themselves in their dealings with others (Leonard & Onyx, 2004). A community with strong social agency tends to have proactive agents and creators of their worlds because they are well armed with well-meaning intentions, knowledge of the social rules, as well as a factor called 'activation" which compels oneself into action (Leonard & Onyx, 2004). A community high on social agency promotes active involvement and has open communication channels among members of the local community. Social agency shows strong resemblance to 'norms of civic behavior' (Dakhli & De Clercq, 2004) which have been shown to drive higher tendency of community members to share ideas and information and consequently provide room for extensive knowledge transfer and free flow of ideas and resources (Dakhli & De Clercq, 2004). Because community members deliberately take the efforts of interacting with each other, it increases the possibility of building and strengthening more social ties which consequently open up communication channels, thereby allowing information and other forms of resources to flow from one member to another. It also allows for collective problem-solving through sharing of ideas, skills and expertise which may be valuable to a small business owner. Therefore it is proposed in this study that:

P_2 - High level of social agency is positively associated with high level of MSME AC.

Feelings of Trust and Safety. This dimension deals with the extent to which one feels that his/her neighborhood is a safe place indicated by minimal if not absence of crime and that people can be trusted (Leonard & Onyx, 2004). Feeling of safety implies that no harm is expected from the course of events within the community. Studies have

shown the detrimental effects on business of low level of safety (i.e. presence of crime) in the community such as difficulty in attracting skills into the locality, increased costs of security measures, as well as hesitation to implement business expansion (Hopkins, 2002). Trust entails willingness to take risks in a social context based on a sense of confidence that others will respond as expected and will act in mutually supportive ways (Leonard & Onyx, 2004). Feelings of trust implies expectations that arises within a community of regular, honest, and cooperative behavior, based on shared norms on the part of the other members of that community (Fukuyama, 1995; Suseno & Ratten, 2007). These communities do not require extensive contractual and legal regulation of their relations because prior moral consensus gives members of the group a basis for mutual trust (Fukuyama, 1995). In this context, reciprocity is of prime importance as it builds trust by developing within the community the sense of confidence or social insurance that help will be provided should it be needed.

Several studies have shown the beneficial effects of trust. Building on the premise that innovation takes place when there is barter of knowledge, continuous contact with other entities, and the building of stable networks of relationships (Maskell, 2000), a feeling of trust becomes essential as it reduces the need for rigid control systems normally set up to protect an individual or firm from predatory or opportunistic behavior (Dakhli & De Clercq, 2004; Wu & Leung, 2005; Suseno & Ratten, 2007). It has been shown that tight monitoring and control systems reduce creative thinking and block the free flow of ideas from one entity to another (Dakhli & De Clercq, 2004). Given that the cost of sharing know-how is expensive, mutual expectations and lesser agency risk facilitate interpersonal and inter-organizational communication, enhance knowledge acquisition and reduce the need for formal monitoring, allowing the firm to invest more effort into the acquisition, assimilation and exploitation processes (Renko et al., 2001; Suseno & Ratten, 2007; Weber & Weber, 2007). In short, feelings of trust and safety allow for greater openness to the potential for value creation through exchange and combination of resources between business partners and that of other members of the local community (Wu & Leung, 2005). Hence, it is proposed in this study that:

> *P_3 - High level of feelings of trust and safety in the community is positively associated with high level of MSME AC.*

Neighborhood Connections. Onyx and Bullen (2000) implicitly refers to neighborhood connections as the strength of closeness or ties that bind neighbors in a community. The degree to which neighbors know each other well such that exchange of favors is a way of life characterize a high level of SC. This is very similar to the concept of informal social networks which refer to the relationships among social entities and the patterns and implications of these relationships (Schuller et. al., 2000).

SC emphasizes information channels or social network that connect the organization to the outside world enabling it to maintain closure or the existence of sufficient ties to guarantee the observance of social norms (Hoffman, Hoelscher & Sherif, 2005). It also emphasizes social norms or general internalized sets of accepted behavior for members of the social network that enable participants to communicate their ideas and make sense of common experiences. Hence SC increases efficiency of action and reduce external unknowns (Hoffman et al., 2005). A fundamental benefit of neighborhood connections is that opportunities in various forms are generated through social networks (Anderson & Miller, 2003). Empirical evidence shows that small business owners often use social ties and networks to seek information, social support and advice from others, to access financial capital and resources, and to secure legitimacy through endorsements from prestigious actors (Morris, Woodworth & Hiatt, 2006). Hence, neighborhood connections form a significant part of this wide network from which MSMEs absorb and exploit valuable knowledge

about products, markets, business processes, and other entrepreneurial opportunities.

Theories of social contagion and neighborhood effects provide theoretical rigor to these empirical assertions. Social contagion arises from people proximate in social structure using one another to manage the uncertainty of innovation (Burt, 1987). Because innovation entails risks as well as the uncertain balance of costs and benefits, people manage that uncertainty by drawing on others to define a socially acceptable interpretation of the risk (Burt, 1987). This form of social and psychological insurance is only possible if one is well connected to the network such as a neighborhood. Likewise, neighborhood effect occurs when one makes decisions based on what other's have done (Hautsch & Klotz, 1999). This is especially true in a network with members in geographic proximity to one another. On top of these, neighborhood connections encourage cooperation between and among firms, especially with larger firms providing help to smaller ones (Kalnins & Chung, 2006). Therefore, neighborhood connections form part of the critical social network of a small business owner which opens up opportunities for knowledge seeking, sharing and learning. Hence, it is proposed in this study that:

P_4 – Strong neighborhood connections are positively associated with high level of MSME AC.

Family and Friends Connection. Family and close friends are a potent source of SC (Anderson & Miller, 2003). Family socialization inspires autonomy as well as referral of personal networks that provide valuable resources (Davidsson & Honig, 2003). As a matter of fact, family and friends are potent sources of support themselves. Personal relationships were identified as important for product development; these relationships had longevity that lasted over many project cycles and changes in the formal organizational structure (Morton, Brookes, Dainty, Backhouse & Burns, 2006). The elements of these relationships include trust, respect, loyalty, common background and experience and shared social contexts (Morton et al., 2006). The literature on small business and entrepreneurship is replete with studies examining the valuable role played by family and friends as a support system of MSMEs (Morrison, 2000; Cooke, 2001; Anderson, Jack & Dodd, 2005; Luo, Zhuo & Liu, 2005; Arinaitwe, 2006). Results of many studies converge on conclusions that family and friends offer insights or examples on how to manage a business based on their own experiences (i.e., role modeling), psycho-emotional and financial support, and referral to other sources of inputs to business operation. Hence it is proposed in this study that:

P_4 – Strong family and friends connections are positively associated with high level of MSME AC.

Tolerance of Diversity. This refers to the level of forbearance of multiculturalism and a variety of individual lifestyles within the community (Leonard & Onyx, 2004). It implies that SC must allow for diversity and enhance creative experimentation. Recognition and respect for cultural and individual differences within the bounds of shared norms and values form the solid foundation of an open and progressive community. Multiculturalism and lifestyle diversity may synergistically reinforce associational life thereby reaping rewards from the abundance of ideas contributed by community members with diverse backgrounds and professions (Dakhli & De Clercq, 2004). Community members are given the opportunity to share their talents, skills or know-how to others. This is important, such that tacit knowledge is not suppressed. Instead, it is being encouraged to be put forward for others to make use of. This opens up communication channels for diverse and creative ideas to be shared by the community including that of MSMEs. Hence it is proposed in this study that:

P_5 – High level of tolerance of diversity is positively associated with high level of MSME AC.

AC-INNOVATION NEXUS

The role of knowledge (and its management) in innovation is well established and predominant in the extant literature (Drazin & Schoonhoven, 1996; Darroch & Mcnaughton, 2002; Fosfuri & Tribo, 2006; Gray, 2006). Knowledge management literature shows that innovation is possible through knowledge creation and application (Demerest, 1997; Rodney, 2000). In this context, knowledge management refers to the process of critically managing knowledge to meet existing needs, to exploit existing knowledge and to develop new opportunities (Demerest, 1997). It is a management function that creates or locates knowledge (i.e., data, information, and tacit knowledge), manages the flow of knowledge within the organization and ensures that the knowledge is used effectively and efficiently for the long-term benefit of the organization (Darroch & Mcnaughton, 2002). Knowledge management has the most impact in the creation of competitive advantage through innovation because knowledge dissemination and responsiveness to knowledge are ambiguous and unique to the firm (Darroch & Mcnaughton, 2002). Ambiguity and uniqueness of resources are essential elements in developing sustained competitive advantage (Barney, 2001). Consequently, innovative firms have become increasingly adept at scanning the external input environment in an effort to identify and acquire knowledge such as new product ideas, new industrial processes or new market opportunities (Hine & Ryan, 1999). This supports the view that innovation is an information– and communication-intensive process in which knowledge management is central to its effectiveness (Tushman, 1979; Norbert, 1990; Scozzi, Garavelli & Crowston, 2005).

Hence, studies on knowledge management have unequivocally established the link between AC and innovation (Demerest, 1997; Rodney, 2000; Zahra & George, 2002; Politis, 2005). Theoretical and conceptual discussions of knowledge management and AC imply that AC is a sub-domain yet a potent driving force behind knowledge management. From a theoretical standpoint, the assertion that AC is positively associated with organizational innovation is reasonable because AC should lead to better acquisition and application of external knowledge to the internal activities of the firm (Stock et al., 2001). Likewise, the breadth and depth of knowledge exposure has been shown to positively influence a firm's propensity to explore new and related knowledge (Zahra & George, 2002). In short, innovation is all about knowledge creation.

Theories of organizational responsiveness (Kohli et al., 1993; Liao, Welsch & Stoica, 2003) provide further support by arguing that proactive strategists unceasingly monitor and interpret environmental changes, analyze environmental threats and opportunities, and modify organizational strategies to match those changes. These changes are expressed in various forms of organizational innovation. Hence, Liao et al. (2003) concludes that the responsiveness of growth-oriented SMEs (i.e., those that invest on innovations) is expected to increase if they have well-developed capabilities in external knowledge acquisition and intra-firm knowledge dissemination.

The AC-innovation nexus does not fall short of empirical support. A study of 443 New Zealand firms revealed that knowledge acquisition and responsiveness to knowledge are more important for innovation (Darroch & Mcnaughton, 2002). The more different types of knowledge are present, the more complex or specialized the organization becomes, and the higher the rate of radical innovation adoption (Dewar & Dutton, 1986). Furthermore, AC has been shown to improve time-based manufacturing practices such as involvement of shop floor employees in problem-solving, reduction of set-up time, product-oriented process, quality improvement, preventive maintenance of machinery, and supplier dependability (Tu et al., 2006). Consequently, the firm's AC has been shown to positively influence the sales performance of products in the market as well as revenues (George, Zahra, Wheatley & Khan, 2001).

Further empirical evidences support the fact that: potential AC is an important factor to the

innovation performance of firms (Tsai, 2001); codified knowledge shapes the level of innovation among high tech firms (Brusoni et al., 2005); and that lack of foreign market knowledge in the ongoing business is determined both by the firm's AC generated in dyadic relationships with foreign customers and the customer's network (Ericksson & Chetty, 2003). Given the preponderance of evidence linking AC to innovation, it is proposed in this study that:

P_6 – High level of potential AC is positively associated with high level of realized AC.

P_7 – High level of realized AC is positively associated with high level of MSME innovation performance.

CONCLUSION AND RESEARCH IMPLICATIONS

The conceptual framework proposed in this study is a preliminary attempt to clarify the link between SC of the community and the innovation of MSMEs within that community. This link is argued to be explained by the exercise of an MSME's AC. Theoretical explanations and empirical evidences were presented to substantiate the relationships of constructs used in the framework. Even so, there remains a significant set of issues which are worth pursuing in future studies. One primary issue is on whether the dimensions of SC as used in the study are distinct and separable. There appears a major overlap of conceptual definitions between constructs such as participation in local community and social agency. While two specific studies were cited above to have examined the multi-dimensionality of SC, future studies should take precautions on this respect and closely examine the nomological validity of the concept. Likewise, the multi-layer and multidimensional presentation of innovation performance begs the question on whether it is sound to combine these dimensions and come up with an index or for each layer and dimension to be treated as a substantive representation of firm innovation all by itself.

Likewise, the dynamic nature of SC as a possible resource for firms like MSMEs is a valuable research interest. In the same way that culture evolves, so does SC. It is of significance to determine how MSMEs exercise their AC given the changes in the local community's SC structure.

The links between SC, AC and innovation may not be as straightforward as they appear. It is possible that the link may be moderated by human capital as well as existing organizational variables like size, structure, and existing stock of resources. This is a major concern if the model is applied in the context of MSMEs where variations in ownership, management structure and control, and abundance or scarcity of internal resources such as skills, finance and technology are noticeable. Furthermore, AC and innovation may also differ across industries and sectors. The links between AC and innovation may be stronger in the manufacturing industry where innovation is a critical source of competitive advantage relative to the commercial trading industry. This may consequently mask the importance of SC in innovation as one industry may not have a strong emphasis on innovation relative to others.

Furthermore, the proposed framework is based on the conceptualization of SC in Australia and replicated in the United States. It is of great interest to establish the applicability of this model in a developing country setting. Studies looking at SC of urban versus rural communities and their influence on MSME innovation will definitely enrich the understanding of the concept.

Moreover, given the multi-layer and multi-dimensional nature of innovation, it is also imperative to look at the possibly different effects of knowledge on various forms of innovation. The aim is to determine how a particular knowledge base propels a small firm to pursue, say, radical technological innovation. The role of small business process modeling is of importance in this respect.

Finally, measurement issues abound in many studies that deal with new conceptual development. The case of SC is not an exception.

One issue is on whether SC is an objective phenomenon that lends itself to quantification using objective facts and figures or whether it is a subjectively defined concept which derives its meaning and relevance in a specific context from which it is investigated. Likewise establishing the predictive or concurrent validity of SC by comparing it with the results of using other related concepts like informal institutions is a major undertaking worth pursuing in the near future.

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