Enhancing the Innovation Outcomes of Absorptive Capacity in the Organization: A Conceptual Framework

Zeinolabedin Rahmani and Seyed Ali Mousavi

***Abstract*—The purpose of this paper is to contribute to the existing knowledge in the field of innovation by exploring social capital and two other important antecedents of social capital including organizational context and managerial behavior which may contribute to make an increase in the level of absorptive capacity and innovation outcomes of absorptive capacity including innovation capability, innovation performance and ambidextrous innovation competence. A conceptual framework synthesized from a review of the literature is offered. With the help of the proposed model not only the links between variables can be viewed graphically but also organizations will learn that how they can improve their absorptive capacity and innovation activities through high level of social capital.**

***Index Terms*—Absorptive capacity, innovation capability, innovation performance, social capital.**

I. Introduction

Social capital is a unique resource, it cannot be traded on an open market and it cannot be easily exchanged from one organization to another [45]. These features make of social capital a potential source of firm competitive advantage and can help explain the differential success of firms in competitive rivalry [49].

The internal social capital of organizations, generally defined as a resource reflecting the character of social relations within the firm has proved to be a powerful factor explaining several organizational concerns, such as intellectual capital creation, solidarity benefits, higher levels of trust, or firm performance. Organizational context which can be defined as the set of administrative and social mechanisms of influence arise as a key organizational attribute to facilitate the creation of internal social capital in the firm.

On the other hand, Pastoriza et al., (2007) argues that a managerial behavior based on the true concern for the wellbeing of employees and their personal development can be particularly important for the generation of internal social capital [16].

At the same time, it is widely accepted that critical knowledge is not always easily available through external sources [39], which fosters a need for creating knowledge internally [25].

However, with respect to both modes of knowledge sourcing, the capacity to absorb knowledge has become crucial, too. Absorptive capacity is seen as an explanation of competitive advantage [61], innovation [21], and firm performance [44].

In addition, According to Barney (1991), there are many ways that can be undertaken by the company to achieve competitive advantage; however, the most important aspect required in a dynamic environment is success in generating innovation [28].

Therefore, Innovation is a key factor for a company to survive and grow on the long run. So firms in the context of firm competitiveness should consider innovation as 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. Therefore, we decide to provide a conceptual framework which proposes relationship between social capital plus its' antecedents and absorptive capacity plus its innovation outcomes. Theoretical explanations and empirical evidence are presented to substantiate the relationships between the constructs used in the framework.

First of all, we begin by reviewing the literature that elaborates on the Nahapiet & Ghoshal's (1998) dimensions of internal social capital including structural, relational and cognitive. Secondly, we draw upon two important antecedents of internal social capital which have an impact on creation of it including organizational context and supportive managerial behavior. Thirdly we will explain about social competence. Then, we adopted Zahra and George's (2002), four dimensions of knowledge acquisition, assimilation, transformation, and exploitation in our framework for absorptive capacity. Finally, innovation outcomes of absorptive capacity including innovation capability, innovation performance and ambidextrous innovation competence are developed based on the existing literature. Several propositions are derived from the discussion. The final section concludes by implying some managerial implications and directions for future research.

II. Review and Framework

A. *Social Capital*

The contribution of social capital to innovation is achieved by reducing transaction costs between firms and between firms and other actors, notably search and information costs, bargaining and decision costs, policing and enforcement costs [46].

Therefore, the overall hypothesis of the social capital theory in the matter of innovation is that: «Firms in communities with a large stock of social capital will…

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Zeinolabedin Rahmani and Seyed Ali Mousavi, Payam-e-Noor University of Mazandaran, Iran (e-mail: p_z_rahmani@yahoo.com ; s_ali_mousavi@yahoo.com).

always have a competitive advantage to the extent that social capital help reduce malfeasance, induce reliable information to be volunteered, cause agreements to be honored, enable employees to share tacit information, and place negotiators on the same wave-length. This advantage gets even bigger when the process of globalization deepens the division of labor and thus augments the needs for co-ordination between and among firms.» [46].

The following definition encompasses this view and is used in this study to define social capital. For researchers, the term is popular partly due to the broad range of outcomes it can explain [21], the multiplicity of uses for social capital has led to a multiplicity of definitions. Social capital is:"… the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" [35].

The link between social capital and a firm's competitive position is receiving increased attention. Building on applications of social capital at the individual, group, and societal level, more recent work has considered social capital as an organizational-level resource [20],[35].

Researchers have differentiated between "internal" social capital that examines the "closure" or "bonding" that creates internal cohesiveness and "external" social capital that examines "brokerage" or "bridging" linkages to external groups [54], [51].

In this paper, we draw upon Nahapiet & Ghoshal's (1998) dimensions of internal social capital: since it offers a more comprehensive picture of social capital in our opinion and identifies a number of factors affecting the internal social capital divided into three dimensions: structural, relational, and cognitive.

The *structural* dimension of social capital describes the configuration of linkages between people within an organization; the *relational* dimension of social capital "describes the kind of personal relationships people have developed with each other through a history of interactions" [35], and the cognitive dimension refers to those "resources providing shared representations, interpretations, and systems of meaning" [35].

B. Internal Antecedents of Social Capital

We propose that internal social capital, understood as a by-product of other organizational activities [35], is a function of the organizational context in which employees are embedded. Organizational context is a concept borrowed from the strategy process literature [56], and it can be defined as the set of administrative and social mechanisms of influence -over which top management has direct or indirect control- that shape the behaviors, motivations and attitudes of employees [47],[49].

The organizational context is a term employed by Bartlett and Ghoshal (1995 *&* 1996) to refer to fact that some organizations manage to instill in their employees a high level of emotional commitment and enthusiasm beyond that justified by employment practices alone. The organizational context aims to alter not only the behaviors of individuals, but also their motivational and attitudinal state [56], [57].

Bartlett and Ghoshal (1994), in defining "organizational context", draw on Barnard (1938) to suggest that the most important role of managers is to create a context that inspires faith on employees: "faith in the integrity of the objective authority, faith in common understanding, faith in the ultimate satisfaction of personal motives, faith in the superiority of common purpose as personal aim of those who partake in it" [56].

Regarding the relationship between these behavior framing attributes and the three dimensions of internal social capital, Ghoshal and Bartlett (1994) argued explicitly that the creation of a supportive organizational context would induce: Firstly, actions in its members in furthering the interests and the welfare of the organization as an end in itself, not just a mean to their personal end –cognitive dimension-. Secondly, enhance the diffusion of information and mutual cooperation –structural dimension-. And thirdly, it would engender individual-level behaviors that facilitate the development of trust among organizational members –relational dimension-[56].

With respect to the cognitive dimension of social capital, previous literature has noted that some of the managerial practices that create a supportive organizational context enhance associability, such as establishment of clear standards of behavior creating a shared purpose and developing a collective identity [11],[36] or creating a meaningful relationship at work.

On the structural dimension of social capital, literature has underlined that information and knowledge exchange are enhanced by organizational practices that characterize a supportive organizational context, such as equity and transparency in decision-making processes (e.g., [37]), guidance and help [20].

Regarding the relational dimension of social capital, literature has already concluded that some of the managerial practices that create a supportive organizational context enhance shared trust, such as honest, open and candid communication with employees (e.g., [35]), managers' help and guidance to employees (e.g., [2]), or involvement of individuals in collective decision making (e.g.,[49]). Hence, this study proposes that organizational context is positively associated with internal social capital.

There has been little explanation of how individual behaviors within organizations might also facilitate the development of social capital. While authors like Coleman (1990) or Putnam (1993) addressed the importance of individual behaviors in communities, the impact of individual actions on the social capital of organizations has been scarcely addressed. However, research may benefit from multilevel theories that explain how managerial behavior might ultimately explain organizational-level phenomenon such as internal social capital.

Indeed, Rosanas and Velilla (2003) affirm that the process through which the employee trusts and commits with the goals of the organization rarely starts from a mere abstract analysis of the organization and its goals [34]. This process of personal commitment occurs, they argue, as a result of employees' identification with the immediate manager. Thereafter, the identification between the manager and the employee is likely to transcend to the organization [53].

In other words, managerial close interaction with employees mediates to ease the process through which employees identify with the firm. Through the successive interactions between the manager and the employee, relational closeness arises as the employee is more convinced that the manager is honest [33] fair [29] and shows concern for his needs and personal development [2].

These ideas coincide with the work of Pastoriza et al., (2007), who argue that a managerial behavior based on the true concern for the wellbeing of employees and their personal development can be particularly important for the generation of internal social capital. Hence, we propose that managerial behavior is positively associated with internal social capital.

C. Social Competence

Herlitz (2001) argues that to be socially competent could in simple terms be explained as being wise [12].

According to him, a wise person is somebody that learns from his or her experiences both emotionally and intellectually and uses those experiences when meeting new people [12]. This statement corresponds with one of the first definitions of social intelligence provide [22].

In this paper five dimensions of social competence will be adopted to examine the entrepreneurs' social competence. These are social astuteness, interpersonal influence, networking ability, apparent sincerity, and social manipulation. The first four dimensions have in previous research been used to study political skill and the last one originates from Riggio's (1986) study on social skills. Ferris (2002) contended that there were four dimensions underlying structure of the political skill construct. These are:

1) Self and social *astuteness*: Individuals possessing political skill are astute observers of others and keenly attuned to diverse social situations.

2) Interpersonal influence*/control*: Politically skilled individuals have a strong and convincing personal style that tends to exert a powerful influence on those around them.

3) Network building/social capital: Individuals with strong political skills are adept at using diverse networks of people by easily developing friendships and building strong and beneficial alliances and coalitions.

4) Genuineness/sincerity: Tactics of politically skilled individuals are seen as subtle and their motives do not appear self-serving. They appear to others to be congruent, sincere, and genuine.

Riggio (1986) suggests that social manipulation, besides being a social ability, it is also an attitude or an orientation that people might possess. Persons with a high level of social manipulation believe that manipulation might be necessary in some social contexts and are "willing and able to affect the outcomes of social interactions" [52].

D. Absorptive Capacity

Knowledge is the most powerful engine of production [3]. To gain access and fully utilize knowledge in a productive manner, a firm must develop and sustain its absorptive capacity or its ability to value, assimilate, and apply knowledge received from external sources, such as suppliers, customers, competitors, and alliance partners [61].

The concept "absorptive capacity" is used to describe the firm's ability to use its prior knowledge and diverse background to identify the value of new information and to develop this into something creative. Absorptive capacity is therefore considered to be a dynamic capability pertaining to knowledge creation and utilization that enhances a firm's ability to gain and sustain a competitive advantage [23].

Absorptive capacity was introduced by Cohen and Levinthal (1989, 1990) as a critical factor in firms' attempts to utilize external knowledge to spur internal innovation [61]. They defined it as the "*ability to recognize the value of new information,* assimilate *it, and apply it to commercial ends*". Cohen and Levinthal (1990) linked absorptive capacity to a company's outcome, and for them absorptive capacity included innovative capability and innovative performance.

This study adopts the framework developed by Zahra & George (2002) in which they suggested considering it as consisting of the four dimensions of knowledge acquisition, assimilation, transformation, and exploitation [55]. Acquisition is defined as the ability to recognize, value, and acquire external knowledge that is critical to a firm's operations [42], [55]. Assimilation refers to the firm's ability to absorb external knowledge. It can also be defined as a firm's routines and processes that allow it to understand, analyze, and interpret information from external sources [55]. Transformation refers to the firm's ability to develop routines that facilitate combining existing knowledge with newly acquired and assimilated knowledge [55]. Exploitation refers to the routines that allow firms to refine, extend, and leverage existing competences or create new ones by incorporating acquired and transformed knowledge into its operations [55].

In their scheme, knowledge acquisition and assimilation constitute potential absorptive capacity, while knowledge transformation and exploitation constitute realized absorptive capacity [55]. Absorptive capacity has since been very widely used as a critical factor in innovation process of the firm [61], and as a predictor of innovative output at firm level (e.g. [24]).

E. Innovation Capability

Alder and Shenhar (1990) defined innovation as: (1) the ability to develop products to meet the needs of market, (2) the ability to use existing technology to develop products, (3) the ability to develop new products or update existing products to meet the needs of markets, and (4) the ability to acquire new technology to create new opportunities[43].

The "innovation" phenomenon has a connotation of newness: "Innovation is the generation, development, and adaptation of an idea or behavior, new to the adopting organization" [18]; of success: "The first successful application of a product or process" [4], and of change: "Innovation is conceived as a means of changing an organization, either as a response to changes in the external environment, or as a pre-emptive action to influence the environment" [18].

The term "capabilities" emphasizes the key role of strategic management in appropriately adapting, integrating and reconfiguring organisational skills, resources and functional competencies to match the requirements of a changing environment. In high-velocity markets, the ability to renew competencies to accommodate the changing business environment is very important, referred to as dynamic capabilities [15].

The idea of the development of innovation capability also comes relatively close to the view of Pettigrew and Whipp (1991) on the management of strategic change [4]. This, again, is closely linked to the notion that the strategic views, ways of thinking (concepts, cognitions, mental models, and intentions) and decisions of company management play a central role in the carrying out of strategic innovation and change processes.

Our framework was developed according to the concepts of Liao, Fei, and Cheng (2007), which defined innovation capability as the performance of the enterprise going through various types of innovation to achieve an overall improvement of its innovation capability. This construct has three dimensions: (1) product innovation (6items); (2) process innovation (4 items); and (3) management innovation (6 items), [58].

Therefore, some authors took innovation capability as an asset in an organization. Cohen and Levinthal (1990) argued that absorptive capacity was critical for firms' innovative capabilities [61].

Jantunen (2005) also found that most studies in the innovation literature stressed the importance of capacity in using external knowledge, that is, absorptive capacity influenced innovation capability [31].

F. Ambidextrous Innovation Competence

Researchers classify innovation as two separate set of activities: exploration and exploitation. Benner & Tushman (2002) and differentiate between 'exploitative Innovations' which involve 'improvements in existing components and architectures and build on the existing technological trajectory' and 'exploratory innovations' which involve 'a shift to a different technological trajectory' [32], [40].

Both exploitation and exploration are crucial for ongoing operations of organizations and organizational change. Both exploitation and exploration involve a trade-off, because firms with limited available resources may not be able to afford to exploit and explore simultaneously. Such a trade-off reflects a 'key dilemma' for organizations that aim to enhance both 'adaptation to exploit present opportunities' and their 'adaptability to exploit future opportunities' at the same time [60].

Recently, He and Wong (2004) mention, an explorative innovation strategy to contain 'technological innovation activities targeting new product- market domains and 'exploitative innovation strategy' to contain 'technological innovation activities for ameliorating existing product-market [62]. Authors of the strategic management describe exploration, in terms of competence building or competence definition and exploitation, in terms of competence leveraging or competence deployment [59].

Exploitative innovation competence impacts competitive advantage through improvements to quality (enhancing the value of the organization's current products and services) or production efficiencies (reducing the costs of production), while exploratory innovation competence creates competitive advantage through radically new products and services that captures emerging markets and customers. Exploitative innovation enhances the firm's current competitive position while exploratory innovation enhances the firm's future viability. We regard exploitative and exploratory innovation competences as simultaneously achievable and hence orthogonal [3].

An ambidextrous organization that possesses competences to simultaneously exploit and explore is more likely to achieve superior performance than firms emphasizing one at the expense of the other [8]. They focus on exploiting existing capabilities to reduce cost and increase profits while at the same time exploring new opportunities for growth [8].

G. Innovation Performance

Innovation has been traditionally viewed as a creative process involving the application of existing ideas to create unique solutions to problems [48].

However, innovation also entails the creation of new ideas for new purposes. Hence, innovation performance may refer to the process of generating and using any idea, practice, or object that the adopting organization regards as new [19], [38], [23].

As a discrete event, innovation performance may refer to the first successful application of a product or process. As a process, innovation performance involves the generation, development, and implementation of new ideas or behaviors [17].

In his thesis on creative destruction, Schumpeter (1934) identified two fundamental forms of innovation performance 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, whilst product innovations include new goods, new quality of goods, opening a new market, or a new industry structure as the creation of a destruction of a monopoly position [27].

Innovation performance may also be characterized in terms of the degree of strategic and structural change that the firm must undergo to accommodate innovation [23].In this context, innovation performance 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 [23],[30].

Incremental innovation performance, on the other hand, enhances and extends the underlying technology and thus reinforces the established technical order [23],[30].

Furthermore, innovation, as performed by the firm, may be classified according to the proximity of the change in relation to the organization's operating core [5].

In this context, two forms of innovation performance are identified:

a) technological innovation performance, which involves the adoption of an idea that directly influences direct output processes[5]; and

b) administrative innovation performance, which refers to changes that affect policies, allocation of resources, and other factors associated with the social structure of the organization [5].

Hence, in this paper, the innovation performance is characterized using a multi-dimensional model in which innovation has varying degrees of change (incremental or radical), scope or domains of change (administrative or technological), and outputs (product or process innovation).

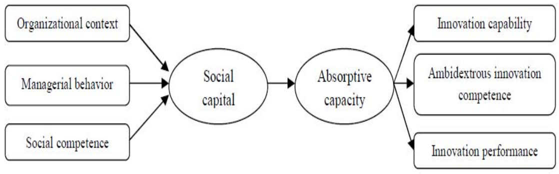

Fig. 1. Our proposed conceptual framework

III. Conceptual Framework

Fig. 1 presents the framework depicting the proposed relationships between social capital plus its' antecedents and absorptive capacity plus its innovation outcomes. We adopted Zahra and George's (2002), four dimensions of knowledge acquisition, assimilation, transformation, and exploitation in our framework and Nahapiet & Ghoshal's (1998) dimensions of internal social capital including structural, relational and cognitive.

IV. Implications and Conclusion

Our proposed framework has laid the groundwork not only to address the factors which have an impact on creation of social capital but also to illustrate the innovation outcomes of absorptive capacity as a result of social capital and absorptive capacity interface.

It advances our knowledge about how social capitals' creation in an organization may bring about growth and competitive advantage through building innovation outcomes; since generating innovation has become a _must be_ characteristic for many businesses and is essential for organization's long-term success. Various managerial implications can be derived from the proposed conceptual framework.

First, the proposed framework not only serves as a guiding foundation for future work on the role of absorptive capacity on the innovation outcomes but also contributes new perspectives to current stream of work on social capital by illustrating organizational context and managerial behavior as key organizational attributes to facilitate the creation of internal social capital in the firm.

Second, organizations aspiring to improve their competitive positions should be mindful of the central role that absorptive capacity has in enhancing their innovation capability and competence. So this framework helps them to consider this issue more precisely.

Third, firms need to enhance the level of their absorptive capacity needed in order to increase the innovation and competitive advantage. Hereby, we proposed that firms can enhance their absorptive capacity by improving their internal social capital through key factors like organizational context and managerial behavior and a third factor called social competence.

However, these are rather general statements and should not be seen as normative suggestions. Instead, firms should aim at breaking out of these normal tracks and find ways to enhance their capacity to absorb knowledge.

From our review of the current literature, we proposed that high degree of absorptive capacity through four dimensions of knowledge acquisition, assimilation, transformation, and exploitation would positively enhance the level of its' innovative outcomes and since social capital is a major factor influencing the capacity to absorb knowledge we explored two important organizational attributes that contribute to the facilitation of internal social capital.

One primary limitation of our approach is that, apart from review of literature and anecdotal evidence, we do not offer a rigorous examination of the propositions put forth in this paper. Clearly, there is need for empirical research and the proposed model yet needed to be proved by gathering data. While we have presumed the antecedents of social capital, future research could examine more attributes and also arrange them in rank order according to importance.

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Zeinolabedin Rahmani was born in Mazandaran,Iran, in 1966.His educational background is listed below:
Aligarh Muslim University (AMU) (India) 2006
Tehran University (Tehran,Iran) 1993 Master of Science degree in Public Management
Isfahan University(Isfahan,Iran) 1990 Bachelor of Science degree in Business Management .He has been assistant professor & chairman of the department of economic & management in Payam-e- Noor University (PNU) since 1993 up to now. Also he has been teaching in Islamic Azad University of Mazandaran since 1994 up to now and Payam-e- Noor University in Dubai (Emirate) since 2009.

Seyed Ali Mousavi was born in Isfahan,Iran, in 1971.His educational background is listed below:
Mazandaran Payam-e- Noor University 2011 (PNU)(Sari,Iran)
Master of Science degree in Executive Management
Science & Technology University of Iran (Tehran,Iran) 1995 Bachelor of Science degree in Telecommunications
He has been project manager of some TV&FM stations in technical department of IRIB in Iran since 1995 up to now.