Chapter 13
Social Capital, Knowledge and Technological Innovation

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ABSTRACT

Firm’s environment is becoming more complex and dynamic, consequently continuous innovation is considered a key element to gain competitive advantage. According to the knowledge-based view, knowledge is considered the central element in the innovation process and its effective management is the key to achieve higher innovation performance. Since social networks involve knowledge and information embedded into inter-organizational network, social capital is considered the engine fuelling the innovation activities. Through an intensive review of the literature, the chapter seeks to uncover the effect of social capital on innovation through enhancing its fundamental knowledge-based activities. The social capital literature provided controversial approaches about its contribution to the innovation performance. The chapter contributes to the literature by mapping the different views, trying to clarify its contribution to the enhancement of knowledge-based activities, and revealing the effect of different social configurations on innovation outcomes. To do so, the chapter first analyzes the different views of social capital and explains its contribution within the organization studies. Further, the key role of the knowledge and its management to the innovation outcomes is discussed. Finally, the chapter clarifies the implications of social capital to the innovation performance and its typologies as radical or incremental ones, as well as designs a theoretical framework for recognizing both its beneficial and constraining effect. Further, the chapter proposes a balanced approach to the structural social capital reconciling two controversial camps in the literature.

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INTRODUCTION

Several transformations in the business environment have changed the competitive environment to be more dynamic and complex. These environmental features are continuously expanding due to the increasing number of the factors influencing the daily operations of the firm, their interdependency, and their dynamicity. Accordingly, the modern firm is urged to cope and adapt to its environmental needs in order to gain competitive advantage, or even to survive. A McKinsey study of the life expectancy of firms have shown a drastic drop of its average value from 30 to 15 years over the period 1975-2005 (Foster and Kaplan, 2001). Another research that examined 6,772 firms from different industries over a period lasting 25 years, have shown that only a small percentage of these firms have recorded high economic performance (Wiggins and Ruefli, 2002). Within this realm, firms are growingly exposed to environmental threats and eventually to market failure, and only few examples succeeded to adapt to changes in the environment and prosper. Being successful today does not guarantee to survive tomorrow. Continuous innovation is considered a key driver to firms’ competitiveness and growth. Thus, as it has been widely taken for granted in the literature, technology, and its underlying knowledge, plays an important role in building firms’ sustainable competitive advantage and guaranteeing their success through developing new products, discovering new processes, altering competitive rules, or readjusting the boundaries of their industry (Utterback, 1994).

A stream of research has emerged recognizing the centrality of knowledge and the capability to create such knowledge as the most important source for sustainable competitive advantage (Toffler, 1990; Prahalad and Hamel, 1990; Drucker, 1993; Nonaka, 1994; Leonard-Barton, 1995; Grant 1996; Zack, 1999; Teece et al. 1990). The literature perceives knowledge as the key element of a firm’s strategy and emphasizes the importance of strategic activities to manage knowledge (Grant, 1996; Huber, 1991) and to translate dispersed, tacit, and explicit competencies into an aggregated body of organizational knowledge (Nonaka, 1994), giving rise to the knowledge-based view of the firm (Grant, 1996; Nonaka and Takeuchi, 1995). Knowledge is the most valuable intangible asset and is considered the core element for innovation (Clark and Fujimoto, 1990). Firms are increasingly drawing on knowledge beyond their boundaries to perform their innovation activities giving rise to the open innovation model (Chesbrough, 2003). As a matter of fact, innovation is the outcome of effective and efficient production, diffusion and exploitation of novel knowledge.

Although overlooked in the literature over a long period of time, social networks are perceived as the main drivers to learn and exploit competencies, especially those lying outside the firm’s boundaries. The social capital of innovators provide information, knowledge and different resources necessary to perform their innovation activities. Though, the literature on social capital and its contribution to the innovation performance is still contentious. Different approaches to social capital has emerged explaining the higher performance of innovation. Focusing on the structural approach, two main perspectives are considered along this chapter: sparse network based on Burt’s structural hole theory and cohesive network based on Coleman’s argument. Both approaches received empirical support by numerous research studies (Hargadon and Sutton, 1997; Burt, 2004; Obstfeld, 2005; McEvily and Reagans, 2005; Uzzi and Spiro, 2005; Fleming et al., 2007). It is still then ambiguous which is the optimal structural configuration of social capital that better contributes to the innovation performance of a focal firm. Therefore, the chapter discusses about the followers of Burt’s and Coleman’s approach by displaying the benefits and risks of both structural configurations to the innovation performance and proposing a balanced approach reconciling both camps.