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How to foster shared innovation within SMEs' networks: Social capital and the role of intermediaries

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ABSTRACT

SMEs need to open up to cooperate with their stakeholders in order to develop sustainable competitive advantages. Sustainable, well-conceived, and well managed innovation networks can offer clear benefits to SMEs. The shared innovation concept aims to capture the strategic approach of innovation, cooperation and sustainability. The aim of this paper is to illustrate how sustainable shared innovation dynamics are promoted in SMEs' network context. The paper presents the Mondragon case study showing the main drivers for developing innovation networks. Among the findings, the role of both context dependent intermediaries and social capital systemic dynamics are highlighted in the development of a shared innovation strategy.

Introduction

Traditionally, large firms have relied on their formal processes, and internal capabilities and skills, to develop innovations. These capabilities have been considered strategic assets tightly controlled by the company. Small to medium enterprises (SMEs) are major innovators (Maula, Keil, & Salmenkaita, 2006), functioning entirely differently to large firms in this regard. Although SME flexibility and specificity can be relevant drivers for boosting innovation, their capacity for innovation is restricted by limited resources (Nieto & Santamaria, 2010), forcing them to focus on small-scale innovation initiatives linked with specific products or services instead of substantial strategic innovation portfolios. Many studies focused on innovation in SMEs (Acs & Audretsch, 1990; Vossen, 1998) have concluded that SMEs' innovation capacities are hindered by the lack of financial and specialised human resources. Their difficulties to manage the whole innovation process by themselves encourage innovative SMEs to collaborate with others (Edwards, Delbridge, & Munday, 2005; OECD, 2010).

Various collaboration models including partnerships, strategic alliances and networks depend on the combination of actors, their roles and the strength of their ties (Lee, Park, Yoon, & Park, 2010). Bilateral cooperation, with larger firms or strategic alliances with other SMEs to enable supplier–customer relationships, has generated a substantial literature (Vanhaverbeke & Cloodt, 2006). As SMEs are usually much specialised, their involvement in networks may effectively enable them to enter wider markets and acquire complementary resources to improve their chances in competition with large competitors (Lee et al., 2010). Therefore, networks, understood as a specific type of relationship linking a set of persons, objects or events (Knoke & Kuklinski, 1983), are a very appropriate model for SMEs (Lee et al., 2010). Sustainable, well-conceived, and well managed innovation networks can offer clear benefits to SMEs (Inkpen & Tsang, 2005; Pittaway, Robertson, Munir, Denyer, & Neely, 2004).

Innovation networks conceptualisation has been developed considering both social or group innovation (Milliken, Bartel, & Kurtzberg, 2003; Montuori & Purser, 1999; Nemeth & Nemeth-Brown, 2003; Paulus, Brown, & Ortega, 1999; Smith, 2003), and shared innovation or communities of innovation (Coakes & Smith, 2007; Hakkarainen, Palonen, Paavola, & Lehtinen, 2004). It has been noted that SMEs use external resources to shorten innovation time, reduce risk and cost and increase the flexibility of their operation (Hagedoorn, 1993), but cooperation must be carefully considered in strategic terms (Lee et al., 2010) to ensure it does not create new problems but overcome the existing ones. In order to be innovative, cooperation has to be inscribed in a shared innovation strategy focused on creating value over time.

The shared innovation strategy is based on cooperative innovation shared among various agents, integrating different resources and capabilities in order to create value for the company and the society (Googins & Escudero, 2014; Porter & Kramer, 2006). A community of innovation is based on key principles including:

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diversity, interdependence and full participation among group members, idea generation and selection, and a supportive climate for innovation (West, 2009). However, two recurring problems arise when trying to develop this strategy. First, risk aversion behaviour due to the threat of an opportunistic behaviour (Krishnan, Martin, & Noorderhaven, 2006; Luo, 2007), and second, the cost derived by cooperation requirement in terms of managerial investment to create trustful relationships with network members (Ahuja, 2000; Coleman, 1988, 1990). Building trustful context reduce both problems and facilitates the development of this strategy. Therefore, this paper focuses on the role of two drivers of shared innovation such as the presence of the three dimensions which shape the social capital (relational, structural, and cognitive) and the presence of intermediaries which foster cooperation between SMEs (Lee et al., 2010).

From this perspective, our aim is to understand how the dynamics of cooperation can be fostered within an innovation network. In this sense, the shared innovation approach (Googins & Escudero, 2014; West, 2009) is considered a suitable perspective to analyse the case of innovation networks in the SMEs context. The shared innovation aims to connect the innovation potential of companies with the needs of society (Googins & Escudero, 2014; Porter & Kramer, 2006) to systematically build new schemes which produce sustainable value for the company and for the society. It captures the strategic approach of innovation, cooperation and sustainability, looking for SMEs to open up to cooperate with their stakeholders in order to develop sustainable competitive advantages. The paper identifies two main drivers of the shared innovative process, the network social capital and the role of intermediaries. In order to reach this purpose, a process of inductive learning is faced. Concretely, in the Mondragon case study, SMEs' innovation network context is selected to identify how successful shared innovation strategies are developed in this context.

The paper is structured as follows. First, SME participation in innovation networks and shared innovation as a suitable approach in this context are argued. Second, shared innovation's drivers for enhancing network innovations are identified. Third, the Mondragon in-depth case-study is analysed and the main lessons learnt from the case are extracted. Finally, the paper identifies how shared innovation in the SME context is developed. Implications for a successful shared innovation strategy in innovation networks are drawn.

The contribution is twofold. First, it allows considering the combined effects of the three dimensions of social capital (Nahapiet & Ghoshal, 1998), and the intermediaries' role in building the shared innovation process. Second, the paper presents a case study focused on innovative networks, providing a good empirical stepping stone for qualitative assessment of the shared innovation strategy. The relevance of the long-term perspective as an essential requirement in shared innovation network is captured in this case study.

Developing innovation networks in the SME context

Collaboration with external agents has become a strategic imperative for firms in the networked world of business (Brandenburger & Nalebuff, 1996; Gulati, Nohria, & Zaheer, 2000). In the last decade, innovation paradigms that address an external focus have been proposed to improve innovation management. Some authors argue that cooperative relationships between firms play a key role in supporting innovation and competitiveness (Becattini, Bellandi, Dei Ottati, & Sforzi, 2003; Eisingerich, Bell, & Tracey, 2010; Porter, 1998). This is particularly relevant to SMEs.

Due to the lack of economies of scale in research, and to the lesser access to information and other critical innovation resources (Mohnnak, 2007), SMEs need to collaborate to complement internal resources. The insufficient capacity to individually manage the whole innovation process leads them to potential pooling of resources and information (OECD, 2010). Networks reinforce SMEs' competitiveness by providing them with a window on technological change, market requirements and strategic choices made by other firms (Bougrain & Haudeville, 2002). Networks are vital providers of various kinds of knowledge, (Pittaway et al., 2004; Tolstoy, 2009). Focusing on building networks with other companies, research facilities, customers and suppliers (Gulati, 1998; Lundvall, 1993) allow SMEs to obtain advantages of large size without its associated disadvantages (Nooteboom, 1994; Rothwell & Dodgson, 1994).

Gulati et al. (2000) define an organisation's network as a set of relationships, both horizontal and vertical, with other actors of strategic significance. However, for SMEs, the participation in innovation networks is not without risks and complexity. First, lack of resources and low bargaining power make it difficult for SMEs to appropriate innovation outputs when collaborating with larger partners. There is an unequal balance of power, which allows the stronger partner to absorb innovations more easily (Katila, Rosenberg, & Eisenhardt, 2008). Different studies have shown that behavioural uncertainty (Krishnan et al., 2006) such as opportunism and the lack of credible commitment have contributed to the instability of strategic alliances (Luo, 2007). Therefore, in the SMEs' context, consideration of the risk aversive behaviour is a very important issue. Second, inter-firm networks are difficult to manage and complex to coordinate, requiring considerable managerial resources. Ahuja (2000) states that strong ties enable trust (Coleman, 1988, 1990) but limit diversity of new ideas, while weak ties provide information benefits (Burt, 1992; Granovetter, 1973) but inhibit trust. Therefore, finding the right balance between trust and innovative opportunities is not simple and emphasises the idea that universal optimal network structure does not exist as it is contingent on the objectives of the network members (Ahuja, 2000).

In this sense, what is the best perspective to analyse SMEs' network innovation? New innovation paradigms have placed innovation in a social context (Ozcaglar-Toulouse, Béji-Bécheur, & Murphy, 2009). The main commonality of these approaches is that the firm is located in relation to a set of agents, considering that "innovation has a powerful social component" (West, 2009, p. 327). Social nature of innovation has been studied by different perspectives. One of the most extended is the open innovation paradigm. It refers to the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and to expand the markets for external use of innovation (Chesbrough, Vanhaverbeke, & West, 2006). This kind of innovation focuses on the exchange of knowledge among internal and external agents, but it does not emphasise engagement of the whole network in a co-constructive, interactive and sustainable process oriented to develop innovations.

The sustainable innovation approach that focuses on the renewal or improvement of products, services and processes, not only delivers improved economic performance but also enhances environmental and social performance (Alakeson & Sherwin, 2004; Biondi & Iraldo, 2002). However, this perspective does not address the social dimension of the network cooperation. In this sense, the shared innovation approach has also appeared as a new perspective on sustainable innovation that focusses on cooperative innovation shared among various agents, with different resources and capabilities, aiming to create value for the company and the society (Googins & Escudero, 2014; Porter & Kramer, 2006). This perspective helps address some of the risks and costs of networks of innovation, balancing enough trust and psychological closeness among the community members to share new ideas freely, and yet enough diversity to force consideration of alternatives (West, 2009). Considering these elements, a challenging question remains unanswered: how can we foster the dynamics of cooperation within SMEs' innovation network?