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The choice of suitable cooperation partners for product innovation: Differences between new ventures and established companies

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ABSTRACT

This article examines the effect of different types of cooperation partners on product innovation in new ventures and in established companies. We argue that the effectiveness of interorganizational cooperation depends on how the resources or capabilities the partners provide match the different characteristics of new ventures and established companies. Specifically, we argue that new ventures cooperate under a cost-economizing and risk-sharing logic; consequently, other new ventures, small firms, universities/research centers and financial institutions are suitable partners. Conversely, large established companies and public administrations are better partners for established companies because they are more motivated to enter into innovation partnerships based on a strategic rationale. We use data from 2473 firms operating in intensive innovation sectors in cluster-like environments in 32 European countries. By using different proxies for product innovation, our results generally confirm our arguments. These findings yield relevant contributions to the study of innovation, new ventures and interorganizational cooperation and provide salient implications for practitioners.

1. Introduction

Interorganizational cooperation is generally regarded as positive for the development and commercialization of new products (e.g., Arranz & Fdez-de-Arroyabe, 2008; Chesbrough, 2003; Faems, Van Looy, & Debackere, 2005; Fitjar & Rodriguez-Pose, 2013; Un, Cuervo-Cazurra, & Asakawa, 2010). Cooperation can be a means to access a partner's complementary assets, to share the costs and risks of product innovation development and to improve the competitive positioning of the new product (e.g., Kang & Kang, 2010; Un et al., 2010). However, although interorganizational cooperation can improve the innovation performance of the cooperating companies, it "does not mean that all collaborations are successful" (Faems et al., 2005: 240). Managing innovation-related cooperation is a complex process that poses some potential drawbacks, such as diverging views and interests (e.g., Larson, 1992), a lack of adaptability (e.g., Ring & Van de Ven, 1994), knowledge spillovers and appropriation issues (e.g., Tether, 2002).

The importance of cooperation in innovative activities is stressed in the case of new ventures. For example, prior research has provided empirical evidence of the positive effect of cooperation and networking on new ventures' patent rates (Baum, Calabrese, & Silverman, 2000; Shan, Walker, & Kogut, 1994) and product innovation development (George, Zahra, & Wood, 2002; Marion & Fixson, 2014; Zhang & Li, 2010). The main reason for this is that innovation can be particularly complex for new ventures because it increasingly requires a broad variety of internal resources and capabilities (Marion & Fixson, 2014) and being up-to-date in diverse and complex technologies and knowledge typologies, which new ventures rarely possess (Arthurs & Busenitz, 2006).

However, current knowledge about how different types of cooperation differentially affect product innovation in new ventures is incomplete. The scarce existing articles on the topic usually address only one type of cooperation partner. For example, Zhang and Li (2010) and Koch, Kautonen, and Grünhagen (2006) focus on service intermediaries, Song and Di Benedetto (2008) focus on supplier involvement, or Piva, Rentocchini, and Rossi-Lamastra (2012) study collaboration with open source software companies. Moreover, these studies do not compare the same relations among

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established firms. Therefore, although these studies illustrate widespread interest in understanding the cooperation process in new ventures to develop product innovation, their ability to predict the differentiated impact that a particular type of cooperation partner may have on the innovation results of new ventures and established companies is limited. In addition, scholars have not fully detailed the distinctiveness of the circumstances that drive new ventures to cooperate in product innovation, and a relevant research gap persists.

A suitable innovation partner should possess – or help to develop – the resources and capabilities sought by the focal firm (Marion & Fixson, 2014; Miotti & Sachwald, 2003; Piva et al., 2012; Un et al., 2010). Therefore, the effectiveness of the type of cooperation will depend on how the partners respond to the needs of new ventures and established companies.

Drawing on Hagedoorn (2002) classification of R&D collaboration motives and the Resource-Based View (RBV), we argue that new ventures are more likely to collaborate under a cost-economizing and risk-sharing rationale because they face severe resource limitations when developing their ideas for new products, i.e., the "liability of newness" (Stinchcombe, 1965). Conversely, established companies generally enjoy a broader resource pool and more strategic options; consequently, we posit that they are more motivated to enter into innovation partnerships due to more strategic rationales. Applying this rationale, we theorize that other new ventures, small and medium enterprises (SMEs), universities/research centers and financial institutions are more suitable partners for new ventures to develop product innovation, whereas cooperating with other large, established companies and public administrations develops more effective innovation partnerships for established companies.

The goal of this study is to advance knowledge on the selection of suitable cooperation partners for new ventures to develop product innovations. This study contributes to this research stream by examining the differential impact of six types of cooperation partners on product innovation development among new ventures compared with established firms. Extending current knowledge on the suitability of potential innovation partners in the case of new ventures is important because it may assist scholars, public administrations, and managers to better predict the success or failure of cooperation for product innovation development in new ventures. There is evidence that the specific characteristics and objectives of new ventures significantly affect the results of the collaboration (Kang & Kang, 2010; Miotti & Sachwald, 2003; Nieto & Santamaria, 2007; Un et al., 2010). It might be the case that R&D collaborations between new ventures and specific types of partners (e.g. large corporations) tend to result in failure, while other types of partners (e.g. universities) most frequently drive to success. Predicting the innovation outcomes of new venture collaborations is of paramount importance, given the prominent role of new ventures in the "creative destruction" process (Schumpeter, 1942).

The paper proceeds as follows. The first section presents the theoretical background that led to the establishment of hypotheses related to the differential effect of a number of R&D cooperation partners in the case of new ventures and established companies. Then, we empirically analyze these relationships using a cross-national sample of 2473 firms (new ventures and established companies) operating in innovation-intensive sectors in geographic clusters from 32 European countries. The results provide support for our hypotheses using two different types of proxies for product innovation (product innovation development and patent applications). Finally, the discussion presents findings and further conclusions, contributions, limitations and ideas for future research avenues.

2. Theoretical framework

2.1. The logic behind new ventures' and incumbents' cooperation in product innovation development

Scholars have long debated the motivations that lead companies to cooperate in innovation activities (e.g., Bayona, Garcia-Marco, & Huerta, 2001; Hagedoorn, 2002; Miotti & Sachwald, 2003; Tether, 2002). However, the extant research has mostly overlooked the differences between new ventures and established companies. According to the RBV, a firm may be conceptualized as a heterogeneous bundle of resources and capabilities. However, competitive advantage is obtained not only from the resources owned by a company but also from its potential to access strategic resources or to develop critical capabilities through cooperation (e.g., Baum et al., 2000; Miotti & Sachwald, 2003). Cooperation allows companies to improve their ability to innovate because it supplements their initial resource endowments and enables them to share costs and risks (Eisenhardt & Schoonhoven, 1996; Faems et al., 2005). The logic that leads companies to collaborate for innovation is determined by the resources and capabilities they need to access or develop through collaboration and their own organizational characteristics. Based on the different internal endowments of resources and capabilities that characterize new ventures and established companies, it can be expected that the logic that leads them to cooperate in product innovation development will also differ. New ventures and established companies enter into innovation partnerships to achieve different goals and/or benefits.

Our proposition that the different logics that lead new ventures and established companies to cooperate in product innovation development is in line with Hagedoorn's (2002) dynamic view of cooperation rationales. The author explains that the reasons or motivations that lead a company to collaborate for innovation purposes change over time due to the development of the company itself, its strategic position and its environment. Hagedoorn (2002) grouped the motivations for entering into innovation partnerships into two primary rationales: (1) cost-economizing and (2) strategic. First, the underlying logic of the cost-economizing rationale is to share the costs of capital investments such as technology, equipment, personnel or laboratories or to obtain these resources at a lower cost; this logic helps to diversify the risks of uncertain innovation projects (Marion & Fixson, 2014; Sakakibara, 1997). This motivation appears to be particularly important for companies that pursue ambitious innovation projects that are beyond their reach. This rationale will push a company to establish collaborations that allow it to achieve economies of scale in R&D or to obtain resources at a lower cost. For example, cooperating with a research center or university can be a low-cost means to access expensive research facilities and equipment (Tether, 2002).

Previous studies have found that although new ventures typically possess relevant capabilities, such as flexibility, creativity, alertness and the ability to recognize opportunities (e.g., Audretsch, Segarra, & Teruel, 2014; Marion, Friar, & Simpson, 2012), they frequently lack the internal assets necessary to develop new products (Piva et al., 2012; Zhang & Li, 2010). New ventures also frequently lack experienced personnel (e.g., Schoonhoven, Eisenhardt, & Lyman, 1990), market experience (e.g., Stuart, Hoang, & Hybeles, 1999); marketing skills (e.g., Marion et al., 2012), social capital (e.g., Aspelund, Berg-Utby, & Skjevdal, 2005), technological equipment (e.g., Schoonhoven et al., 1990) and funding (e.g., Marion et al., 2012; Piva et al., 2012). In addition, new ventures cannot afford to experiment with a variety of new ideas to the same extent as established companies because they do not possess sufficient resources to absorb product failure (Marion & Fixson, 2014; Marion et al., 2012). Indeed, although all types of