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Ownership concentration and innovativeness of corporate ventures

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ABSTRACT

Corporate venture investments are an established means for incumbent firms to access radical innovation. Drawing from a behavioural agency framework, we distinguish two mechanisms that govern the relationship between corporate venture investment and radical innovation, the safety net that corporate sponsors provide and control incentives. While the safety net induces a gap between the radical innovation success of corporate ventures (CVs) and ventures without a corporate sponsor, the superior radical innovation success of CVs decreases with the corporate sponsor's incentives to control the venture. The impact of the safety net and control incentives further depends on the corporate sponsor's position vis-à-vis her aspiration level.

1. Introduction

Industry incumbents often fail to develop and adapt radical new technologies due to their reliance on existing technologies, well established value networks and distinct, but rigid routines (Henderson, 1993; Dougherty and Hardy, 1996; Henderson and Clark, 1990; Tushman and Anderson, 1986; Tripsas and Gavetti, 2000; Sull, 1999; Ahuja and Lampert, 2001). Free from such constraints, industry entrants often succeed at exploiting radically new technologies and gain market power, setting forth the process of creative destruction (Henderson, 1993; Christensen and Bower, 1996).

Instead of accepting their fate, incumbent firms can take measures against their difficulties to adopt and commercialize radically new technologies. Next to accessing radical innovation from third parties through licensing agreements, strategic alliances or the acquisition of innovative start-up firms (Rothaermel, 2001; Hagedoorn and Schakenraad, 1994; Cohen et al., 2002), the investment in ideas that are developed in independent start-up firms is a prominent alternative route (Covin and Miles, 2007; Narayanan et al., 2009; Corbett et al., 2013).[3] Ventures nurtured by a corporate sponsor have been shown to be able to develop radically new technologies that also benefit the corporate sponsor (Day, 1994; Kanter et al., 1990; Christensen, 1997; Stringer, 2000; Hill and Rothaermel, 2003; Vanhaverbeke and Peeters, 2005; Dushnitsky and Lenox, 2005, 2006; Covin and Miles, 2007; Wadhwa and Kotha, 2006; Naranayan et al., 2009).

One often cited reason that explains why investments in ventures are better able to create radical innovation than internally pursued projects of incumbent firms is the possibility of operational independence of external ventures. An important constraint for incumbent firms is that they have a system of internal control mechanisms and processes in place which is conducive to short-term profitability and the development of a comparative advantage, but counterproductive with regard to radical innovation (Ahuja and Lampert, 2001; Levinthal and March, 1981). In addition, incumbents often have a preference for low risk innovation leaving high risk innovation to small innovators (Baumol, 2003). The operational independence from their incumbent investor allows independent corporate ventures (CVs) – which constitute legally independent entities – to take their own

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[3] The investment of incumbent firms in ideas developed by start-ups is one form of corporate venturing, next to the creation of new, explorative projects within the incumbents' organizational domain at the other end of the independence spectrum and forms of engagement in between (Sharma and Chrisman, 1999). Prominent examples of incumbent firms that have been known for creating corporate ventures include 3 M, General Electric, Hewlett Packard, DuPont, Unilever, Procter and Gamble, British Telecom or the Degussa AG, which is one of the world's largest chemical firms (Block and MacMillan, 1993; Miles and Covin, 2002; Maine, 2008). This study focuses only on corporate venturing activities defined as investments in legally independent corporate ventures (CVs) from the time of their foundation onwards. The definition includes corporate spin-offs by former employees' as well as externally generated ventures.

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strategic decisions without being constrained by 'inertial forces' stemming from corporate investor (Hill and Rothaermel, 2003; Fast, 1979; Biggadike, 1979; Von Hippel, 1977; Sharma and Chrisman, 1999; Burgelman, 1983). In response, CVs are faster and more flexible in their response to emerging radical technological opportunities and freer for experimentation than industry incumbents while benefiting from their financial support[4] at the same time (Thornhill and Amit, 2001). The latter also grants them an advantage over independent ventures without a corporate sponsor (IVs) so that corporate venturing combines the better of two worlds: operational independence and the safety net provided by the corporate sponsor.

The success of CVs in terms of radical innovation can, however, not be taken for granted. Corporate venture investments mirror a principal-agent situation with the venture manager being the agent who is supposed to produce radical innovation on behalf of the corporate investor being the principal (Dushnitsky and Shapira, 2010; Witt, 2002; Elfring and Foss, 2000). The high degree of asymmetric information, the often substantial size of the investment and the sponsor's appetite for radical innovation create incentives for the corporate sponsor to monitor the venture tightly. While monitoring can be beneficial in other situations (Burkart et al., 1997; Aghion and Tirole, 1997), in case of corporate venture investments where the aim is radical innovation, a lack of operational independence and too much oversight is counterproductive since the ventures' ambition and freedom for experimentation is diminished (Burgelman, 1983; Burkart et al., 1997; Aghion and Tirole, 1997; Levinthal and March, 1981; Grossman and Shapiro, 1987; Zaja et al., 1991; Zahra, 1996).

Our analysis responds to the call by recent surveys that conclude that, in particular, the relationship between the ventures' innovativeness and governance choices so far lacks a thorough, theory-grounded empirical investigation (Corbett et al., 2013; Naranayan et al., 2009). Corporate governance is an important factor for corporate investors since it is one of the means by which they can influence their venturing successes. While some efforts have been spent on suggesting specific managerial decision frameworks for corporate venturing (e.g. Ginsberg and Hay, 1994, Sykes, 1986, Galbraith, 1982, Siegel et al., 1988) it is essential to understand the mechanisms underlying the relationship between corporate governance and innovation.

We draw on a behavioral agency framework (Wisemans and Gomez-Meija, 1998; Chrisman and Patel, 2012) combining agency theory (Berle and Means, 1932; Baumol, 1962; Marris, 1964; Williamson, 1964) and prospect theory (Kahneman and Tversky, 1974; Kahneman et al., 1991). The behavioral agency model allows clarifying the mechanisms behind corporate investments in ventures for radical innovation and of the effect of control incentives of the corporate investor. We derive predictions that we test for a large sample of CVs and IVs.

Our study makes several contributions to the existing literature. First, we contribute to one of the key challenges in corporate entrepreneurship research by providing a theory-grounded study of the relationship between venture innovativeness and control incentives of the corporate sponsor (Corbett et al., 2013). Second, by applying a behavioral agency model (Wisemans and Gomez-Meija, 1998; Chrisman and Patel, 2012) our study is based on a solid framework allowing a nuanced perspective on the mechanisms behind corporate venturing, radical innovation and corporate control. We distinguish two distinct mechanisms that govern the relationship between corporate venture investments and radical innovation. The first mechanism is the safety net that a corporate sponsor provides the venture in terms of superior access to financial and managerial resources. The presence of such a safety net affects the risk attitude of venture managers and changes venture operations in favor of radical innovation. The second mechanism is the corporate investor's incentive to control the venture which has a countervailing effect on the venture's radical innovation as it restricts the venture's freedom for experimentation and discretion. Interesting predictions arise when relaxing the assumption of stable risk preferences of the corporate investor which can explain heterogeneity of CVs' success in terms of radical innovation.

The empirical contribution of our study is that we analyze the effect of corporate control incentives (see also Hill and Snell, 1988; Schulze et al., 2003; Ortega-Argiles et al., 2005; Garcia-Marco and Robles-Fernandes, 2008; Czarnitzki and Kraft, 2009) on radical versus incremental innovation for a large sample of CVs. We confirm that, conditional on believing in the statistical assumptions of the instrumental variables and matching models, the involvement of a corporate sponsor leads to a greater success in terms of radical innovation while there is no such effect in terms of incremental innovation. Regarding the main hypotheses of the paper, we show that a concentrated ownership structure which proxies a high level of control reduces the radical innovation success of CVs so that it almost reaches the lower radical innovation level of IVs. We also find that both the positive resource effect of the presence of a corporate investor and the negative effect of ownership concentration are stronger for corporate investors that perform below their aspiration level. These corporate investors are, on the one hand, willing to take risks leading to more successful radical innovation of their ventures. While, on the other hand, they face stronger control incentives which reduce the radical innovation success of the ventures.

The remainder of the paper is organized as follows. The next section develops our theoretical framework. Section three introduces our data and the fourth section presents the estimation results. Section five concludes.

2. Theoretical framework

We employ a behavioral agency model (Wisemans and Gomez-Meija, 1998; Chrisman and Patel, 2012) that draws from agency theory and prospect theory (Kahneman and Tversky, 1979; Kahneman et al., 1991; Tversky and Kahneman, 1991) in order to provide a framework that is better suited for explaining the effectiveness of a corporate sponsor for ventures' radical innovation than classical agency theory (Berle and Means, 1932; Baumol, 1962; Marris, 1964; Williamson, 1964).[5]

As a combination of classical agency theory and prospect theory, the behavioral agency model adapts the principal-agent setting of a corporate investment in a new venture, but shifts the focus from the individual to the firm (Holmes et al., 2011). It extents prospect theory to include organizational constructs such as slack and routines that do not have direct counterparts in prospect theory (Holmes et al., 2011), but are central to radical innovation. Furthermore, the behavioral agency model provides concrete definitions of the organizational aspiration level (Cyert and March, 1963). At the same time, the behavioral agency model follows prospect theory and allows a flexible treatment of the risk attitudes of decision makers (Wiseman and Gomez-Meija, 1998).

Prospect theory differs from classical agency theory in the two central assumptions: first, it assumes that agents, i.e. the venture managers, are loss averse rather than risk averse. Loss aversion is defined as the attitude to be more concerned with avoiding losses than with obtaining gains (Kahneman et al., 1991). Behavioral agency models treat risk aversion and loss aversion as distinct concepts. For our application, this implies that venture managers as well as corporate

[4] Innovative small, young ventures often have to be open to external sponsors in order to mitigate financial constraints that hamper their innovation activities (Himmelberg and Peterson 1994; Petersen and Rajan, 1995; Berger and Udell, 2002; Hottenrott and Peters, 2011; Hall and Lerner, 2010, for a recent survey). Financial constraints have been shown to be more crucial for radical innovation projects than for incremental innovation projects (Kamien and Schwartz, 1978; Czarnitzki and Hottenrott, 2011).

[5] Prior applications of prospect theory and the behavioral agency model in the field of management science are surveyed by Holmes et al. (2011).