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Exploring the innovation strategies of young firms: Corporate venture capital and venture capital impact on alliance innovation strategy☆

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ABSTRACT

We investigate how governance structure and power influence alliance exploration strategy. Adopting a real options perspective and the agency view, we suggest that innovation strategies differ based on the firm's governance authority. We find that the motivations of corporate venture capitalist firms, venture capitalists, and firm founders may have an impact on the formation of exploratory alliances among adolescent firms. Using a sample of 122 adolescent firms, we examine the influence that governance structure has on the firm's alliance portfolio and innovation potential. While the influence of corporate venture capitalist firms alone do affect alliance formation strategy, corporate venture-backed firms with founders having high influence (knowledge or ownership in the firm) are more likely to form innovation-focused alliances. In contrast, venture capitalist-backed firms tend to avoid innovation-focused alliances, preferring more exploitive ones, even when founders have high influence within the firm.

1. Introduction

Innovative startups are key drivers of new and novel products, services, and ideas in existing industries (Dushnitsky & Lenox, 2005; Schumpeter, 1934). The pursuit of innovation is often characterized as highly uncertain compared with implementing previously developed competencies or investing in known technology (Beckman, 2006; McGrath & Nerkar, 2004). While innovations originating from internal markets relate positively to long-term performance, a firm's innovation strategy may weaken as a result of governance changes that occur during the growth stages of a firm (Bernstein, 2012; Guo, Lev, & Shi, 2006; Wu, 2012). When seeking support from outside corporate investors, entrepreneurial firms face a tradeoff between satisfying the need for capital and disclosing private information about their innovation capabilities. Young firms may be able to create immediate value when they disclose information that might appropriate their novel technologies (Dushnitsky & Lenox, 2005). Ownership dilution and governance changes following acceptance of outside investment are also likely to affect firm-level strategy, particularly as it relates to innovation (Bernstein, 2012; Jiménez-Jiménez & Sanz-Valle, 2011; Kaplan & Strömberg, 2003; Wu, 2012).

This situation presents a critical question: which circumstances will allow greater pursuit of innovation following equity exchange? Recent studies identify the setting of initial public offerings (IPO) as a specific context influencing firm-level decision making, and find that the process of equity exchange may have a negative impact on firm innovation strategy (Bernstein, 2012). We contribute to literature examining how and why firm innovate through the use of exploratory relationships; in addition, we examine how these firms can reap the greatest benefit from different investor relationships. This paper contributes to the growing stream of literature investigating the innovation performance effects of different governance structures (Colombo & Murtinu, 2016; Dushnitsky & Lenox, 2005; Park & Steensma, 2013; Van de Vrande & Vanhaverbeke, 2013; Wadhwa, Phelps, & Kotha, 2016; Yoo & Sung, 2015).

We propose that a young firm's innovation strategy will impact the governance structure following an equity exchange. The governance structure that emerges will determine whether a firm utilizes an exploration or exploitation alliance framework (March, 1991; Rothaermel & Deeds, 2004). Extensive research explores the performance implications of exploration versus exploitation, yet few studies focus on how

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young ventures are organized to pursue innovation, despite increased pressure from equity partners. Specifically, little is known about how differences in governance structure and organization may change a young venture's pursuit of innovation over exploitation (Gulati & Higgins, 2003; Park & Steensma, 2013; Rothaermel & Deeds, 2004; Tidd, 2001).

We suggest that strategic investment and governance influences from different institutional investors (e.g., venture capital) may influence the propensity toward establishing innovation-focused alliances which have long-term effects on innovation performance of entrepreneurial firms. This study examines the innovative practices of private and corporate venture capital firms, and identifies how these practices influence alliance formation strategy among young firms (we consider pre-IPO firms to be in the young or adolescent stage of development, and use these terms interchangeably throughout).

While the top management team of a young firm's primary concern is maintaining a long-term innovation strategy, management is not the only voice influencing its strategic direction. Much research focuses on the detrimental effects of corporate venture capital "sharks," as these firms may stall innovation while expropriating knowledge and technology from young firms (Katila, Rosenberger, & Eisenhardt, 2008). While some research calls into question whether "all sharks are dangerous" (Diestre & Rajagopalan, 2012), less research focuses on the governance structure needed to assuage the overbearing influence of corporate venture capital (CVC) firms. Whether a firm falls victim to CVC firms may depend on its internal governance structure, for example, when founders retain power within the firm.

Venture capitalists (VCs) are highly influential in shaping a young firm's strategies. VCs proactively assess growth strategies and the development of organizational structure designed to ensure superior returns (Hellmann & Puri, 2002; Hsu, 2006; Kaplan & Strömberg, 2003; Strömsten & Waluszewski, 2012). We find that VC influence on alliance innovation strategy is often uncompromised by the entrepreneurial firm's internal governance structure. However, when other governance actors also have authority, VCs do allow for some exceptions.

Finally, founders have a direct impact on the organizational blueprint of the firm and may influence its organizational strategy and managerial practices, including exploratory alliance formation when they maintain an influential position in the firm (Baron, Burton, & Hannan, 1999, p. 3). We suggest that the presence of founders acting in the firm's best interest may counterbalance any potential negative influence of CVC investors. When founders have greater authority, IPO firms not only influence the decisions of VCs, but may lessen the risk of expropriation by CVCs.

We investigate the governance ownership structures that can influence an exploratory alliance formation strategy, including whether venture capitalists and founders mitigate or enhance this effect. This study complements a growing body of literature exploring the impact of external investors on new ventures' outcomes (e.g., Hellmann & Puri, 2002; Hsu, 2006; Katila et al., 2008; Park & Steensma, 2013). This study focuses on the developmental consequences of CVC and VC funding on founder-led new ventures. By taking the perspective of new ventures, we contribute to the literature in corporate governance, illustrating how early governance structures may influence the strategy and outcomes of young or adolescent private firms.

We examine firms during the IPO process since recent research suggests that following an IPO, ownership dilution and changes in governance can have an impact on firm-level decisions, often resulting in decreased focus on innovation strategies (Bernstein, 2012; Wu, 2012). Using a sample of 122 adolescent firms, we examine situations where CVC investors, venture capitalists, and founders have high equity, and founders have greater control over the organizational structure and strategy of the firm. We then theorize that such actors may influence the exploratory alliances formed by new entrants.

2. Theoretical framework

2.1. Exploitation versus exploration

The exploration-exploitation framework (March, 1991) distinguishes two broad patterns of behavior and provides a framework for understanding the different needs of ventures at various stages in the product development process. Levinthal and March (1993), characterize exploration as opportunity seeking and "the pursuit of knowledge, of things that might come to be known" (p. 105). In contrast, exploitation is "the use and development of things already known" (p. 105) and focuses on short-term economic returns from existing products or knowledge.

While exploitation and exploration are antecedents to innovation and new product development (Hoang & Rothaermel, 2010; Lavie, 2007; Rothaermel & Deeds, 2004), they may encompass a certain level of uncertainty and risk. Exploration is often characterized by a high risk of failure, while exploitation involves uncertainty, such as government approval for new products, weak sales, or difficult marketing campaigns. Industry incumbents often prefer a cooperation strategy over internalization, as this maximizes real options and takes advantage of external knowledge resources (Folta, 1998; Jiang, Tao, & Santoro, 2010; Van de Vrande & Vanhaverbeke, 2013; Wadhwa & Kotha, 2006).

For young firms, any increase of risk may be particularly prohibitive. Following equity capitalization, investors tend to focus less on innovation, particularly new and unfamiliar knowledge pursuits (Bernstein, 2012; Wu, 2012), as managers' stakes in innovations lessen and incentives to cash out increase. Additionally, career concerns and threats of takeover may pressure managers to pursue safer investment options. While these firms may be less apt to take on risk, they face other risks by not being innovative. As result, firms may be more likely to leverage their risk by pursuing collaborative exploration strategies.

2.2. The influence of institutional investors

CVC firms often see young firms as a source of new technology or innovation (Benson & Ziedonis, 2009; Katila et al., 2008; Wadhwa et al., 2016). In May of 2010, Toyota announced a $50 million stake in Tesla Motors. This afforded Toyota access to Tesla's superior battery control systems which the company then used to develop better electric model vehicles. For its part, Tesla Motors gained both credibility and access to Toyota's manufacturing and sales process (France-Presse, 2010).

Once CVC firms hold equity in a firm, they become principals of the ventures in which they invest; however, they are also agents of the parent firm making the venture investments. This can create a multiple-agency issue for the CVC firm (Arthurs, Hoskisson, Busenitz, & Johnson, 2008), especially if conflicts of interest arise due to competing products. While the CVC firm is vested in the performance of its portfolio firm, it has the power, via equity and voting rights, to exploit the smaller firm for the benefit of the CVC firm. CVC affiliation is thus likely to influence the corporate governance of portfolio firms, as CVC-backed firms have been found to have more independent boards, fewer insiders on compensation committees, and fewer primary shares sold to preserve CVC voting rights when a portfolio firm goes public (Ivanov & Masulis, 2008; Park & Steensma, 2013). As a result, external investors tend to play larger roles in overseeing private investments in comparison with public investments (Lerner, 1995).

Since most CVCs invest for strategic reasons and for longer periods of time (in comparison to VCs), they may have a greater incentive to maintain tighter control of rights (Ivanov & Masulis, 2008). Equity ownership and associated control rights can be used to mitigate potential problems between strategic alliances. In instances where CVCs act as both alliance partner and equity owner of an entrepreneurial firm, the CVC can "force" the entrepreneurial firm to accommodate to the strategic plans of the CVC firm, even if those are contrary to the strategy of the younger firm. Additionally, CVCs are active investors and collaborators, which may facilitate the transfer of knowledge and resources between the two firms. As such,

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