KAUFFMAN
The Foundation of Entrepreneurship

KAUFFMAN DISSERTATION EXECUTIVE SUMMARY

Part of the Ewing Marion Kauffman Foundation's Emerging Scholars initiative, the Kauffman Dissertation Fellowship Program recognizes exceptional doctoral students and their universities. The annual program awards up to fifteen Dissertation Fellowship grants of $20,000 each to Ph.D., D.B.A., or other doctoral students at accredited U.S. universities to support dissertations in the area of entrepreneurship.

Since its establishment in 2002, this program has helped to launch world-class scholars into the exciting and emerging field of entrepreneurship research, thus laying a foundation for future scientific advancement. The findings generated by this effort will be translated into knowledge with immediate application for policymakers, educators, service providers, and entrepreneurs as well as high-quality academic research.

Kauffman Dissertation Fellowship Program KDFP Kauffman Dissertation Fellowship Program KDFP

www.kauffman.org/kdfp

ABSTRACT

Corporate Venture Capital: Towards Understanding Who Does It, Why and How

Doctoral Dissertation of:

Sandip Basu

University of Washington Business School
Seattle, WA 98195

August 2007

Corporate Venture Capital (CVC) investments by established firms in entrepreneurial ventures are used to explore for new competences. I examine the question: *Under what conditions do established firms engage in CVC?* Conducting a field study and a quantitative study, I propose hypotheses about the influence of industry- and firm-level conditions on firms' CVC activity. I test these hypotheses by observing a sample of Fortune 500 firms longitudinally from 1990-2000. I also examine how CVC units enable exploratory learning in parent firms by inductively analyzing my field data. I discuss implications for corporate entrepreneurship, real options, organizational ambidexterity and dynamic capabilities.

EXECUTIVE SUMMARY

Corporate Venture Capital: Towards Understanding Who Does It, Why and How

Doctoral Dissertation of:

Sandip Basu

University of Washington Business School
Seattle, WA 98195

August 2007

There is increasing evidence that adaptation and innovation is central to the existence and survival of incumbent firms in several industries where technological discontinuities and environmental turbulence exist. Incumbent firms effectively adapt and innovate by establishing entrepreneurial processes in a corporate setting, thereby engaging in *Corporate Entrepreneurship*. Although established firms may recognize the long-term benefits of corporate entrepreneurship, entrepreneurial processes are different to implant in firms because they are often counter to corporate practices that enhance efficiencies, satisfy important customers, and leverage existing competences.

Corporate entrepreneurship (CE) involves processes where individuals or groups within an existing organization, work with the organization's goals, policies and resources, to create new organizations, instigate renewal, or generate innovation within that organization. According to this conceptualization, CE within a firm is typically manifest along two distinct dimensions. The first dimension is *corporate venturing*, which involves generating innovations that enable the firm to enter new businesses, either by targeting existing markets or creating new ones. Corporate venturing activities can further be classified into internal and external depending how a particular firm locates a corporate venture initiated by it, relative to its own organization. Ventures supported through internal corporate venturing processes are located within the existing organization whereas ventures supported through external corporate venturing processes are located outside the focal organization. Typically, internal corporate venturing depends on venture ideas generated within the parent firm, whereas external venturing could be stimulated by ideas that originate both inside and outside the focal firm.

The second distinct dimension of CE is *strategic renewal*, which involves changes in existing ways that the firm competes, as embodied in its strategies and structures. Strategic renewal enables firms to respond to environmental changes that threaten their long-term viability or generate new product-market opportunities for them. Through renewal, firms overcome inertial forces embodied in their established strategies, structures and routines. In dynamic environments, renewal often involves morphing both organizational form and function. Thus, strategic renewal is often a process of adaptive change.

In my dissertation, I focus on a particular type of external venturing activity: *Corporate Venture Capital* investment. Corporate venture capital (CVC) is the term used to indicate equity investments in entrepreneurial ventures by established corporations. The academic literature typically defines CVC as direct (excluding investments as a limited partner in independent VC funds), and minority (excluding acquisitions) investments. Consistent with the conceptualization of external corporate venturing, ventures funded through a CVC program are nurtured external to firm's boundaries, without the existence of a hierarchical relationship. Typically, a CVC program is established to fund ventures in a firm's external environment. Some firms similarly support promising ideas generated internally by employees, either through the same program searching for external investments, or through a separate program dedicated to internal ideas.

CVC is an important source of funding for young firms. Although corporate investing patterns have been cyclical, established firms have been a significant source of venture financing since the inception of the first formal CVC programs in the mid-1960s. Over the past decade, CVC investments accounted for 12% of all VC funding in the United States. Corporate venture capital activity grew dramatically in the nineties to a volume of over $18 billion in 2000, which was around 15% of the value of all VC investments in the same year. Although there was an understandable drop in CVC activity following the dot com bust, the level of investment was still higher than it had been in the early 1990s.

Although the extant literature explicitly links CVC activity to the external venturing dimension of CE, in my dissertation I primarily relate CVC to firms' needs for strategic renewal. Firms require new knowledge to undergo adaptive organizational change that provides the impetus for strategic renewal. From an organizational learning perspective, effective strategic renewal requires that organizations explore, learn, and create novel knowledge while concurrently exploiting existing competences. With its focus on adaptation via learning from novel initiatives, exploration is often at the heart of strategic renewal. Despite its importance, exploration is often suppressed by the exploitation of existing competences. The necessity, yet difficulty, of engaging in exploration make the study of how organizations explore particularly important to understanding the origins of strategic renewal.

A fundamental means by which firms explore and pursue strategic renewal is through external initiatives such as corporate venture capital (CVC) investing, strategic alliances, and acquisitions. While acquisitions and strategic alliances have received substantial scholarly attention, research on CVC investing has been sporadic and has only recently experienced renewed interest. I examine CVC investing by considering it as an important mode of exploration and strategic renewal.

Motivations and Research Questions

A distinguishing feature of CVC is that companies typically accord greater importance to strategic objectives rather than financial returns when making such investments. Investors' strategic objectives typically represent organizational exploration since investors establish boundary-spanning relationships with extramural sources of knowledge. Strategic objectives also involve technological exploration initiatives because new ventures often pursue novel technologies relative to investing firms. Research shows that CVC investing can improve the inventiveness of the investing firm and its market value, in addition to producing attractive financial returns.

Entrepreneurial firms also have incentives for seeking CVC investments. In addition to being a significant source of financial capital, CVC investments provide strategic benefits to young ventures. A corporate investor can provide complementary assets that would be costly and time-consuming for new ventures to build and can send a positive signal of the venture's quality to other stakeholders. Due to these strategic benefits that they offer to ventures, corporate investors can have a positive impact on new venture financial performance.

Despite its potential importance to both established firms and young ventures, we know little about the antecedents of CVC. Evidence suggests the number of corporations engaging in CVC, even during the height of its popularity, was lower than might be expected given its potential benefits: among all Fortune 500 companies in 1990, only 83 engaged in CVC during the decade 1991-2000. While the identification of investor strategic and financial objectives has been the subject of substantial study, few studies have translated these motives into antecedent conditions that empirically discriminate between firms that make CVC investments and those that don't. Research on CVC objectives consists mainly of case studies, descriptive surveys, or cross-sectional multivariate analyses. None of these approaches provide for causal inferences since they do not control for unobserved heterogeneity or temporal precedence.

The purpose of my research is to identify and empirically test the industry- and firm-level antecedents to CVC investing. I specifically focus on investor-side industry factors because these have not been examined in existing research. I also examine incumbent firm-level factors that prior research has not studied. My primary research question therefore is: *Under what conditions do established firms engage in CVC?* For reasons described above, I specifically focus on antecedent industry- and firm-level factors of established firms that influence them to make CVC investments.

Given the lack of theory development about the antecedents of CVC, I carried out a field study and conducted extensive interviews with senior managers of U.S.-based CVC groups and senior corporate development managers of non-investors. Analysis of these interviews provided empirical grounding for my theory development and subsequent analyses. Based on my interview data and prior CVC research, I conceptualize CVC investments as real options. This conceptualization highlights the uncertain and exploratory nature of CVC investments and the consequent need to reduce outright commitment to a particular opportunity and preserve flexibility. My interview subjects revealed that their companies' use of CVC as a flexible mode of exploration was particularly sensitive to the industry conditions of their core businesses and the competences they possessed to attract and leverage such investments.

I integrate insights from real options research with an inducements and opportunities perspective of interfirm relationship formation to explain CVC participation. I argue that certain industry conditions will induce incumbent firms to make CVC investments. Moreover, certain firm-specific competences will increase both opportunities and inducements. The quality of these competences will increase a firm's attractiveness to young ventures and will enhance the firm's ability to benefit from such investments, increasing its incentives to invest.

I test these predictions using longitudinal data on 477 firms from the 1990 Fortune 500 list for the period 1990-2000. My dataset covers a large cross-section of industries, which allows me to examine industry characteristics that induce incumbent CVC participation. The sample period is important because both the number of firms making CVC investments and the average investor's volume of CVC activity grew during this period, providing significant cross-sectional and within-firm variation in CVC activity. By examining panel data in a dynamic longitudinal context, I am able to control for unobserved sources of heterogeneity and temporal precedence of industry and firm-level factors leading to CVC investing.

Since the theoretical perspective I employ is based on the premise that CVC is important for organizational exploration, I was motivated to examine in further detail, processes through which firms manage their exploration efforts using CVC investment. By focusing on CVC units as the unit of analysis, I address an additional question: *How do CVC units enable exploratory learning in parent firms?* The role of the CVC unit, my unit of analysis, is critical in the parent firms' exploration initiatives. If a CVC unit can effectively deliver exploratory learning to the parent organization, it helps the parent firm develop "ambidexterity", that is, balance exploitation and exploration. Ambidextrous organizations tend to outperform firms that focus on either exploration or exploitation, adapt better to changing environmental conditions, and encounter lower variation in performance.

To achieve ambidexterity and consequently superior performance in the long-run, established firms need to persist with exploration in the face of greater short-term incentives to focus on exploitation. Established firms often execute this objective by setting up dedicated groups within the organization that concentrate their efforts exclusively on exploration. These groups are able to overcome exploitative pressures of the parent firm through mechanisms such as, structural separation from the parent, incentives to group members based on explorative activity, greater autonomy of goals and supervision, and recruiting members with varying past affiliations.

For a group engaged in exploration, the critical challenges are not only to generate novel knowledge but also to ensure that this knowledge is useful to the parent firm. In other words, the group needs to help its parent absorb the knowledge it generates and derive learning that will impact the parent's future operations. If the parent does not obtain any learning from the exploratory efforts of the group, the group's effectiveness is reduced and its continuance is at risk. Enabling exploratory learning at the parent level is not an easy task because operating personnel often do not have explicit or implicit incentives to work with new ideas generated by the exploratory group. Therefore, exploratory groups are often required to carry out contrasting activities, to both *search* for knowledge novel to the parent firm as well as to *integrate* this knowledge into the parent firm. Extant literature also emphasizes the dual concerns of search and integration that exploratory groups face.

Hence, to understand how established firms manage to remain ambidextrous, it is necessary to study groups within a firm that focus on exploration and help balance the natural tendency of the established firm to emphasize exploitation over exploration. However, extant research does not fully uncover the processes through which these groups enable exploratory learning in their parents. While research has argued that exploratory groups need to search for novel knowledge and help integrate this novel knowledge, greater understanding of the processes that underlie these contrasting aspects of exploration is needed. Field research that closely examines the disparate processes instituted by multiple exploratory groups would be useful in this regard.

Since the CVC unit of a firm is a group actively involved in exploration, it similarly needs to overcome pressures for exploitation within the parent organization. However, there is limited theory development in the extant literature on how CVC units can concurrently initiate exploratory searches for novel knowledge, *and* attempt to integrate this knowledge into the organization. Given the relatively sparse literature on managing exploration in groups and specifically CVC units, I adopted inductive, qualitative methods to examine the CVC units of 13 large U.S. firms in different industries that are all significant CVC investors. My primary data sources were the interviews conducted with investment managers for these units as part of the field study mentioned earlier. I analyzed these data using open-coding initially and aggregation of categories subsequently. To examine distinct dimensions of exploration, I looked for data that addressed two broad questions: 1) How do corporate investment groups search for novel knowledge from ventures? 2) How do they attempt to integrate this knowledge within the organization?

Contributions

In the large-sample, quantitative study, I find that both industry and firm-specific factors affect the extent to which incumbents participate in CVC. In terms of external inducements, I find that firms in industries with rapid technological change, high competitive intensity and weak appropriability engage in greater CVC activity. While not part of my theoretical framework, I find evidence of a mimetic effect in that the number of other CVC investors in a firm’s primary industry increases its likelihood of CVC investing. To my knowledge, this study is the first to examine the influence of an incumbent firm’s primary industry conditions on its degree of CVC activity. In terms of firm-level inducements and opportunities, I find the stock of a firm’s technological resources and the strength of its complementary marketing capabilities increase its subsequent CVC activity. I also show the extent to which a firm has previously invested in ventures from diverse industries increases its subsequent CVC activity. This finding represents a novel contribution to the CVC literature since it suggests that heterogeneous, rather than homogenous experience in external venturing provides further inducements and opportunities for subsequent CVC investments. Therefore, my findings expand understanding of the conditions under which established firms participate in CVC and complement and extend existing research.

This study makes additional contributions. My research is the first to use the inducements-opportunities perspective to explain CVC participation. I extend the explanatory utility of this framework to the CVC context by integrating insights from real options research. I use evidence from a field study of CVC and non-CVC investors to empirically ground my theory development, and construct a novel panel dataset to test my predictions. This is only the second study I am aware of that uses large sample panel data to examine the antecedents of incumbent CVC participation, and the first such study to combine qualitative data from field research with longitudinal archival data to explore this domain. My results indicate that while environmental factors induce firms to explore via CVC investing, their opportunities to do so are constrained by the competences they can exploit in the process. Thus, CVC investing combines both exploration and exploitation, which is critical for effective strategic renewal. My results also have substantive implications for research into corporate entrepreneurship, dynamic capabilities, and real options.

In the follow-up qualitative study, my findings indicated that the CVC units had instituted processes in three broad activity areas to search for novel knowledge: framing the intent of the program, selecting new technology areas to invest in, and identifying appropriate profiles of ventures to consider investment in. Within each area, I found considerable variation in the processes employed by individual CVC units. The component processes supported each other and directly resulted in the access to knowledge that was novel for the parent. My findings also indicated processes in three activity areas to integrate novel knowledge: strengthening internal relationships with personnel in business-units, involving individuals from other sub-units with the ventures, and mitigating the potential resistance of powerful actors. There was variation again, in the processes employed by individual units in each area. The integration processes complemented the search processes, to concurrently enable exploratory learning in the parent firm. Additionally, I found three activity areas that contributed to the generation of further search opportunities as a result of effective integration from previous investments. These areas were: developing a reputation as a reliable investor, building external networks, and retaining support of the firm's management for the program. The diverse processes in these areas helped sustain and propagate exploration through the CVC program by generating more investment opportunities. These results provide an evolutionary perspective of CVC units' explorative activity where effective integration of knowledge begets effective search subsequently.

The qualitative study makes substantive contributions to the organizational ambidexterity literature. My evolutionary model suggests how CVC units enable greater amounts of exploratory learning in the parent firm over time and enable the parent retain ambidexterity by balancing its exploitative processes. Additionally, my data suggests the existence of a degree of ambidexterity even *within* an effective CVC unit, embodied in its contrasting search and integration processes. I also contribute to research on CVC by uncovering processes that lead to more effective search and integration. To my knowledge, this is the first inductive study of the practices of multiple U.S. CVC investors in diverse industries. The study also has implications for research on organizational ambidexterity, corporate entrepreneurship and dynamic capabilities.