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DO ASPIRATIONS INFLUENCE COMMITMENT TO EXTERNAL VENTURING?
A BEHAVIORAL THEORY APPROACH

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Abstract

External corporate venturing has received significant attention in both scholarly journals and business press articles. However, there has been little investigation regarding behavioral elements that motivate firms to commit to a venturing portfolio. We utilize the behavioral theory of the firm literature to hypothesize that aspiration-relative performance influences commitment to an external venturing portfolio, such that performance above aspirations leads to decreased commitment, and performance below aspirations leads to increased commitment. We then incorporate the threat-rigidity literature and propose that managerial risk-taking proclivity and environmental dynamism moderate these relationships. We find support for most of our hypotheses.

Introduction

Popular press and academic literatures both discuss the need for established firms to form ties with external entrepreneurial start-ups, referred to as external corporate venturing (ECV) (Keil, 2004). Though there is ample discussion regarding the need for established firms to form ties with ventures, we know little about what drives firms to either increase or decrease their commitment to ECV activities. We address this gap in the literature by drawing on two distinct theoretical perspectives—the behavioral theory of the firm (BTOF) and the threat rigidity perspective—to construct arguments about how performance relative to aspirations drives commitment to ECV activity. The BTOF posits that decision makers evaluate organizational performance relative to an aspirational level (Greve, 2003). Performance above aspiration levels decreases the likelihood of risky innovative activities and organizational change, as the need for change is less clear, and the opportunity cost of change is more salient (Greve, 1998). The influence of performance below aspiration levels has different implications in the two theoretical perspectives mentioned earlier. According to the BTOF, performance below aspiration levels spurs risky “problemistic search,” intended to repair the unfavorable gap between current performance and aspirations (Audia & Greve, 2006). However, the threat rigidity perspective posits that low performance constrains organizational action and restricts the number of alternatives that organizational decision makers consider (Staw, Sandelands, & Dutton, 1981). As such, decision makers are less likely to engage in risky innovative activities, such as ECV.

We extend the BTOF to the external venturing context and posit that, consistent with the BTOF, firms performing below aspiration levels will increase their commitment to ECV, and firms performing above aspiration levels will decrease their commitment to ECV. We then propose two variables that moderate this relationship. We argue that threat rigidity will govern commitment decisions after below-aspiration performance if either managerial risk-taking proclivity is low, or if a firm operates in an unstable and unpredictable environment. That is, the firm will decrease its commitment to ECV activities when faced with a performance threat if either internal risk-
taking orientation or external circumstances induce such a threat rigidity response. We test our hypotheses on a sample of firms engaged in at least one of the three most common forms of equity-based ECV: corporate venture capital (CVC) investment, the creation of an equity joint venture, or the acquisition of a young venture.

Our research makes three principal contributions. First, we contribute to the BTOF literature by exploring conditions under which BTOF predictions manifest, and when the competing predictions of the threat rigidity literature manifest. We also contribute to the BTOF literature by investigating the influence of risk taking proclivity, which the BTOF literature implicitly presumes is equal across firms, as well as the contextual element of environmental dynamism, which is relatively unexplored within the BTOF literature (Shinkle, 2012). Our third contribution is to the corporate venturing literature, in which we extend the nascent discussion on how aspiration-relative performance influences external venturing (Gaba & Bhattacharya, 2012).

**Hypotheses Development**

Despite the potential learning benefits of ECV (Schildt, Maula, & Keil, 2005), external venturing is fraught with risks. Acquisitions often fail to create the learning and financial benefits anticipated (King, Slotegraaf, & Kesner, 2008); JVs may be subject to noncooperative behaviors that lead to unintended knowledge spillovers or other forms of value misappropriation (Kumar, 2010; Lavie, 2006); and CVC investments may not provide value if they are not strategically relevant to the parent firm (G. Dushnitsky & Lenox, 2006).

Our research model is predicated upon the notion that firms vary in their overall commitment to their ECV portfolios, but that little is known about what drives those differences in commitment levels. “Commitment” reflects both the form (what kind) and intensity (how much) of venturing a firm engages in. The simple premise is that different forms of external venturing entail different levels of commitment (Tong & Li, 2011): CVC requires less commitment than a joint venture, which itself requires less commitment than an acquisition. As employed in the current research, the phrase “commitment to” an ECV portfolio is intended to communicate the overall level of commitment across the firm’s collective venturing activities—i.e., all acquisitions, JVs, and CVC investments—that comprise the ECV portfolio.

According to the BTOF, organizations are goal directed, and decision makers utilize heuristics to make behavioral adjustments in the face of performance feedback (Iyer & Miller, 2008). Accordingly, a vein of BTOF research is the aspirational performance perspective (Bromiley & Harris, 2014). A fundamental premise in this vein is that the discrepancy between a firm’s performance aspirations and its actual performance is a key impetus for organizational action (Shinkle, 2012). Performance below aspirations prompts a change in firm behavior via problemistic search, which typically entails the assumption of new (or more) risk. Conversely, performance above aspirations tends to produce a “status quo effect,” whereby firms are unlikely to engage in risky change (Greve, 1998).

We investigate the influence of aspiration-relative performance on an organization's change in commitment to its ECV portfolio. We first propose that firms performing below their aspirations will be more likely to increase their level of commitment to their external venturing portfolio. For firms performing below their aspirations, greater commitment to ECV may be pursued as a way to move incrementally toward remedying the problem of underperformance. We therefore hypothesize the following:
Hypothesis 1a. There is a positive relationship between performance below aspirations and change in commitment to ECV activities, such that firms performing below aspirations will increase their level of commitment to ECV.

Just as prior research has demonstrated that performance above aspirations tends to decrease risky behaviors such as R&D intensity and launching new innovations (Greve, 2003), we argue that above-aspiration performance encourages a decrease in risky external venturing, or more specifically, a reduction in ECV commitment. Given the uncertainty often ascribed to ECV activities, performance above the threshold of aspirational performance may prompt firms to reduce the riskiness associated with any existing external venturing efforts.

Hypothesis 1b. There is a negative relationship between performance above aspirations and change in commitment to ECV activities, such that firms performing above aspirations will decrease their level of commitment to ECV.

The Moderating Role of Risk-Taking

The BTOF literature emphasizes contextual considerations that influence engagement in risky activity. However, an assumption undergirding these relationships is that decision makers are comparable in their risk-taking proclivity—yet it is apparent that managerial attitudes towards risk are heterogeneous and vary across individuals and organizations (March & Shapira, 1987). Thus, while BTOF literature emphasizes the influence of organizational circumstance on risky activities, the literature lacks consideration of management's underlying orientation toward risk-taking. Our first set of hypotheses aligns with the received wisdom from extant behavioral theory research. However, the threat rigidity perspective provides a contrasting set of predictions: when the organization faces an exigent threat—such as the prospect of persistently low performance—managers' responses will be risk-averse, in an attempt to minimize the damage of further poor performance (Staw et al., 1981). Along these lines, decision makers may view performance below aspirations as a threat to organizational survival. We propose that the managerial response to below-aspiration performance is governed by the firm's risk-taking orientation. When decision makers with a low propensity for risk-taking are faced with performance below aspirations, the threat rigidity response is more likely to govern commitment decisions, since these decision makers are less likely to stretch existing resources to pursue high risk, high return opportunities developing in the market (Lumpkin & Dess, 1996). By contrast, when risk-taking proclivity is high, managers will see below-aspiration performance as a repairable gap, and will respond accordingly by increasing the firm's commitment to ECV activities.

Hypothesis 2a. Risk-taking orientation positively moderates the relationship between below-aspiration performance and change in commitment to ECV activities, such that the relationship becomes more positive as risk-taking increases, and less positive as risk-taking decreases.

From the BTOF perspective, once performance aspirations are already met, there is no exigent problem of underperformance to address, and therefore very little performance-based motivation to pursue further search activities. As we outlined earlier, the assumption underlying this proposition is that decision makers of organizations performing above aspirations have similar risk-taking proclivities. If risk-taking proclivity is indeed low, thereby reflecting risk aversion, then commitment to an ECV portfolio will decrease when firms perform above aspirations. However, if risk-taking proclivity is high, then the firm will increase its commitment to ECV activities. We therefore hypothesize the following:
Hypothesis 2b. Risk-taking orientation positively moderates the relationship between above-aspiration performance and change in commitment to ECV activities, such that the relationship becomes more positive as risk-taking increases, and less positive as risk-taking decreases.

The Moderating Role of Dynamism

While environmental context is an important contingency to the BTOF literature, it is relatively unexamined (Shinkle, 2012). We suggest that industry dynamism is a salient consideration in the relationship between aspirational performance and firm action, because of its potential to alter the veracity of the fundamental assumptions of the behavioral theory of the firm. Dynamism refers to the volatility of an environment and its rate of change. Due to the inability to predict high potential opportunities and revenue sources, overall risk faced by industry incumbents is greater in dynamic industries. We propose that performance below aspirations in dynamic environments engenders a threat rigidity response, for multiple reasons. First, the risk associated with performing below aspirations is compounded by the risk associated with investing while in an unstable environment, increasing the overall level of risk-threat managers must face. Second, managerial control is constrained in dynamic environments due to the rapid changes occurring that are outside of the organization’s direct control. Such a loss of control may limit the efficacy of managerial intervention, further increasing the attractiveness of contraction in commitment to ECV activity, particularly if the firm’s recent performance is already unfavorable. Both of these dynamism-specific factors steer managers toward a lesser degree of ECV commitment when performance falls below aspirations in a dynamic environment.

On the other hand, environmental stability encourages further commitment to an ECV portfolio, because the risks associated with performing below aspirations are attenuated by the stability—and therefore predictability—of the firm’s operating environment. The easier it is to predict what resources and capabilities will be beneficial in the future, and the easier it is to control firm outcomes, the more attractive problemistic search becomes (Garg, Walters, & Priem, 2003). As such, below-aspiration performance should be associated with less ECV commitment in dynamic environments, and more ECV commitment in dynamic environments.

Hypothesis 3b. Industry dynamism negatively moderates the relationship between below-aspiration performance and change in commitment to ECV activities, such that the relationship becomes less positive as dynamism increases, and more positive as dynamism decreases.

Above-aspiration performance in dynamic environments motivates an increase in ECV commitment. That is, the main effect discussed in Hypothesis 1b is magnified in stable industries, and attenuated in dynamic industries. Environmental exigencies manifested in dynamism emphasize an orientation toward aggressive opportunity search (Uotila, Maula, Keil, & Zahra, 2009). The need to innovate and pursue risky opportunity search processes is particularly pronounced in dynamic environments, thereby spurring firms that are performing above their aspirations to increase commitment to a portfolio of ECV activities. The opposite is true for above-aspiration performance in stable environments, since the motivation to incur new risk by engaging in problemistic search is reduced by both (1) strong aspiration-relative performance, and (2) the ease with which a firm can predict future changes, thereby facilitating the effectiveness of traditional internal R&D. Firms derive greater financial benefit from focusing their efforts on existing routines and capabilities in stable industries (Wang & Li, 2008). On the other hand,
performance above aspirations in dynamic environments induces an increase in commitment to ECV activities. We therefore hypothesize the following:

Hypothesis 3b. Industry dynamism positively moderates the relationship between above-aspiration performance and change in commitment to ECV activities, such that the relationship becomes more positive as dynamism increases, and less positive as dynamism decreases.

**Method**

We constructed a panel of publicly traded U.S. firms engaged in equity-based external venturing between 2000-2008 in three industries: information and communication technologies, chemicals, and medical and laboratory equipment. We utilize the SDC Platinum and VentureXpert databases to collect data on ECV activities, and COMPUSTAT to gather financial and industry-level data. We also collect data from firm 10-K reports. The final sample contained 1,340 firm-year observations from 279 companies.

Our dependent variable is change in commitment to ECV. To measure commitment to ECV, we counted each time a firm engaged in either a CVC investment, a JV, or an acquisition each year. We then scored each CVC investments as “1,” each JV as “2,” and each acquisition as “3,” to reflect the different levels of commitment required for each ECV mode. We then derive a change score from time \( t-1 \) to time \( t \) to assess a firm's change in commitment to ECV. Following prior research (e.g., Greve, 2003), we calculate aspiration-relative performance as performance in time \( t-1 \) minus aspirations, which are calculated as a weighted combination of historical aspirations (within-firm performance in time \( t-2 \) and \( t-3 \)) and social aspirations (all peer-firms' performances in time \( t-2 \)). We measure environmental dynamism following the Keats and Hitt (1988) method. We measure risk taking by content analyzing firm 10-K documents utilizing a dictionary established and validated by Short, Broberg, Cogliser, and Brigham (2010). We control for numerous variables that could influence a firm's engagement in ECV activities. The controls include: firm size, financial slack, human resource slack, industry munificence, industry R&D intensity, firm R&D intensity, sales growth rate, and total size of the 10-K document.

**Results**

We utilize a firm and year fixed-effect specification. All variables were standardized prior to entering into the regression equations, and we clustered standard errors on the firm. Hypothesis 1a is not supported, though hypothesis 1b is supported \((p < .01)\). Both hypotheses relating to the moderating effect of risk-taking are supported \((H2a at p < .001, and H2b at p < .05)\). Both hypotheses relating to the moderating effect of dynamism are supported \((H3a at p < .05, and H3b at p < .1)\). Results are largely robust to the presence of outliers, different weightings of the aspirational performance measure, and accounting for potential sample self-selection bias by constructing an inverse Mills ratio.

**Discussion and Implications**

While the BTOF and threat rigidity literatures propose contrasting perspectives on how firms respond to performance below aspirations, our findings indicate that consideration of the risk-taking proclivity of decision makers and the riskiness inherent in the firm's operating environment (i.e., environmental dynamism) partially reconcile the two views. Firms performing below aspiration levels tend to exhibit a threat rigidity response when the decision makers have low risk-
taking proclivity, or when the environment itself is uncertain and changing. On the other hand, firms performing below aspiration levels tend to exhibit a response consistent with the BTOF literature when managerial risk-taking proclivity is high, or when the operating environment is stable and easier to predict.

Several theoretical implications can be inferred from the current study. First, in contrast to prior work that compares the behavioral theory of the firm against the threat rigidity perspective (Ketchen & Palmer, 1999), our work shows that managerial risk-taking propensity is a critical mechanism that influences how firms will respond when faced with unfavorable performance outcomes. The extent to which managers have a proclivity for risk-taking sets the stage for how they will respond under various circumstances, consistent with work highlighting the importance of considering idiosyncratic propensities of the managerial team before making predictions about how they will act in certain situations (Anderson, Kreiser, Kuratko, Hornsby, & Eshima, forthcoming). Second, while prior research has argued that firms engage in corporate venturing activities for reasons pertaining to their resource slack levels (Burgelman & Valikangas, 2005), the attractiveness of their current industry environments (Miles & Covin, 2002), and overall macroeconomic conditions (Gary Dushnitsky, 2006), the current research suggests that a firm’s comparative financial performance can also drive observed changes in commitment to ECV activity.

Third, our empirical results suggest that above-aspiration performance has a stronger, more consistent influence on the extent of change in a firm’s commitment to ECV. This finding is consistent with Greve (2003), who found that while performance was negatively related to R&D intensity for firms performing above aspirations, there was no statistically significant effect for firms performing below aspiration levels. Firms realizing above-aspiration performance may not need to assume the risks entailed by exhibiting greater commitment to ECV. By contrast, firms realizing below-aspiration performance may need to assume greater risk in order to rectify their performance deficiencies, but there may also be a greater appreciation among such firms of the need to balance risk taking with avoiding further jeopardizing the firm’s welfare through such risky endeavors. Finally, environmental dynamism appears to exacerbate the inherent riskiness of both the aforementioned elements of entrepreneurial risk, which is why we see a decreased commitment to ECV among such firms when dynamism levels are high. Dynamism also appears to exacerbate the riskiness of “missing the boat” (Dickson & Giglierano, 1986) by not engaging in ECV among above-aspirations performance firms, and this is why we see an increased commitment to ECV among such firms when dynamism levels are high.

Our study challenges an assumption undergirding the BTOF literature—that decision makers are fundamentally similar in their risk-taking proclivities—by examining the influence of both risk-taking proclivity and environmental dynamism on responses to aspiration-relative performance. By taking this approach, we have helped elucidate the contextual applicability of both the BTOF and threat rigidity perspectives. Whether decision making constricts in the face of threat, or expands in search of hopeful new opportunities, behavioral motivations play a critical role in influencing the strategic actions of firms.

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