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# Reconsidering the venture capitalists' "value added" proposition: An interorganizational learning perspective

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## Abstract

This study examines the interorganizational relationships among venture capitalists (VCs) and new venture teams (NVTs) for their contribution to long-term improvement in the performance of a venture. Research in (1) learning assistance, (2) NVT dismissal and (3) procedural justice provide important insights into the unique interorganizational relationship that exists among VCs and the NVTs they fund. We found the following: (1) no statistically significant support for strategic information, (2) a negative association for dismissals and (3) positive support for procedurally just interventions. These longitudinal findings suggest important future research on interorganizational relationships.

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*Keywords:* Venture capital; Venture exits; Interorganizational relationships

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## 1. Executive summary

A feature of the relationship among venture capitalists (VCs) and new venture team (NVT) members is that VCs commonly provide information that is intended to improve venture

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performance. VC information can consist of many forms of influence including (1) attempts to accelerate NVT learning about market discoveries and strategy implementation, (2) incentives and penalties to improve performance and (3) the fairness with which VCs impart their advice as well as their receptivity to NVT insights. A widely held assumption in this literature is that VCs add value by providing information, in addition to the capital they invest. However, the question of adding value through VC information remains unresolved. For example, previous researchers have only used case studies and cross-sectional data to examine the value-added by VCs, which has limited potential for drawing causal inferences. In fact, no known research has tracked the longitudinal performance of VC-backed ventures. In this research, we derive a theoretical foundation for hypothesis testing from learning assistance, dismissal and the procedural justice literature. The hypotheses test the relationships among VCs and NVTs for positive venture outcomes.

In late 1989 and early 1990, we mailed surveys to collect information from VC-funded NVTs. The survey examined learning assistance received from VCs, NVT dismissals and perceptions of procedural justice. In early 2000, we perused various sources to secure information about the eventual status of these VC-funded ventures. We found outcomes for 183 ventures: 36 ventures had gone out of business, 44 were still private, 36 had been merged or acquired and 67 had gone through an IPO. Because the information about venture status was collected retrospectively, in effect we were able to collect data on each funded venture for each of the ensuing 10 years. This longitudinal examination enabled us to determine a hazard rate for each venture. Thus, these results provide an ongoing examination and determination of the eventual status of most of the VC-funded ventures in this study.

The findings draw attention to the social processes within the VC–NVT relationship. When NVTs were treated in a procedurally fair manner, the chances for venture success improved. Consequently, we concur with [Steier \(1998\)](#) who argued that the social dimension of interorganizational relationships needs closer examination. On the other hand, the offering of advice and information on strategic issues by VCs did not improve the chances for venture success. Because several researchers have found that VC information adds value to their portfolio ventures, it is noteworthy that this research found no such support. To our knowledge, this is the only study that has attempted to track the long-term effects of VC assistance across a large sample of ventures. Nor are we aware of any other study that has tracked funded ventures throughout their expected life, which may last up to 10 years.

## **2. Introduction**

A unique feature of venture capital financing compared with other forms of investment is that VCs often play an ongoing role in helping to manage the ventures in which they invest ([Steier, 1998](#)). The cooperative arrangements among VCs and NVTs allow VCs to intervene in various capacities to enhance and protect an entrepreneurial venture. Some of the more common forms of VC intervention include (1) acting as a sounding board to a NVT, (2) serving on a new venture's board of directors, (3) making customer and supplier introductions, (4) monitoring operating performance and (5) assisting with strategic issues ([Timmons](#)

and Bygrave, 1986; MacMillan et al., 1989; Fried and Hisrich, 1995). However, VCs can also hinder venture growth if they offer the wrong strategic input or impose ill-advised constraints (Steier and Greenwood, 1995; Gomez-Mejia et al., 1990). In addition, VCs sometimes dismiss team members (Rosenstein et al., 1993), which can be disruptive to a VC–NVT relationship (Fiet et al., 1997).

One impetus for the emergence of the VC–NVT relationship is that it may enable firms to create value by cooperating in the sharing of knowledge, combining or gaining access to critical resources and decreasing the time required for a new venture to market its products (Doz and Hamel, 1998; Spekman et al., 1998). Venture capitalists spend approximately one half of their time monitoring an average of nine funded ventures, which requires about 110 hours per firm per year (Barry, 1994; Gorman and Sahlman, 1989). A VC's ongoing involvement with NVT members may endow the relationship with special attributes that could impact a venture's long-term performance. Some research has found support for a VC's nonfinancial input adding value (Sapienza, 1992; MacMillan et al., 1989), whereas other research suggests that VCs do not add value (Manigart et al., 2002; Steier and Greenwood, 1995; Gomez-Mejia et al., 1990). This research poses the following question: Do VCs add value to the firms in which they invest? Perhaps one of the reasons for the variation in past research is that many studies examining VC impact have a survival bias (Manigart et al., 2002). As nonsurviving companies disappear, samples tend to contain higher percentages of surviving firms. Consequently, this research begins with a large group of VC-funded ventures and tracks them for 10 years. The purpose of this tracking is to examine three areas of VC involvement and the possible value that the VCs may be able to add.

We used learning, agency and procedural justice literatures to explore the proposition that mutual cooperation between VCs and NVTs may add value and be positively associated with venture exits. *Mutual cooperation* refers to the willing efforts of NVTs and VCs to further their common interests in a venture. We begin by examining the *informational* value that could be added to a venture through mutual cooperation. *Information* is any element in a system that provides understanding of an observed relationship. We propose hypotheses based on learning arrangements, agency relations and procedurally cooperative relations. Finally, we discuss how we derive and analyze statistical results, as well as their implications.

Although cooperation can have many positive benefits, it can also produce the potential for conflict. Factors that can prevent VC and NVT cooperation include the lack of moral support or friendship; moral hazard, suspicion; and infrequent communication; incompatible channels of communication, differences in planning horizons, power, technical complexity, asymmetric information and conflicts of interest; all of which previous researchers have identified as being intriguing aspects of the VC–NVT relationship (e.g., Fried and Hisrich, 1995; Sapienza, 1992; Timmons and Bygrave, 1986; Sweeting and Wong, 1997). Although they are intriguing, we know little about their long-term outcomes.

### 2.1. The informational value added by mutual cooperation

Incomplete or inaccurate information can adversely affect the value that a venture can create. Unfortunately, the lack of an efficient informational market for VCs and NVTs

limits their access to signals (Fiet, 1996; Fiet et al., 1997; Cable and Shane, 1997), which leads to decisions with less certainty about the consequences. This informational inefficiency increases the cost of acquiring the specific information that is necessary to evaluate and improve venture performance (Hayek, 1945). One way to reduce the cost of acquiring specific information for VCs and NVTs is to specialize in acquiring particular types of information (Fiet, 1996). Based on prisoner's dilemma reasoning (cf., Cable and Shane, 1997; Luce and Raiffa, 1957), VCs and NVTs can capitalize on the reduced cost of specialization in different types of specific information by sharing what they have each acquired separately. Cable and Shane (1997) argue that a prisoner's dilemma model is a more appropriate conceptual lens for understanding the VC–NVT relationship than agency theory, which emphasizes their potentially competing interests and monitoring costs. A cooperative rather than a competitive approach could reduce costs for a principal by substituting mutual cooperation for monitoring. This relationship is modeled as reciprocal in Fig. 1. Line “A” represents VC input offered to the NVT. Line “B” represents NVT information offered to VCs and the NVT's sense of VC fairness. The VC effect on venture performance may not be direct as some previous research has assumed (e.g., Megginson and Weiss, 1991) and as indicated by the dotted line in Fig. 1. Rather, we are suggesting that VCs primarily add value when there is a mutual exchange of information within the VC–NVT relationship.

Mutual cooperation can be beneficial for both VCs and NVTs because the replacement market for each of them is inefficient (Cable and Shane, 1997). It is usually more costly to attempt to switch partners than to work together because of the inefficiency of the

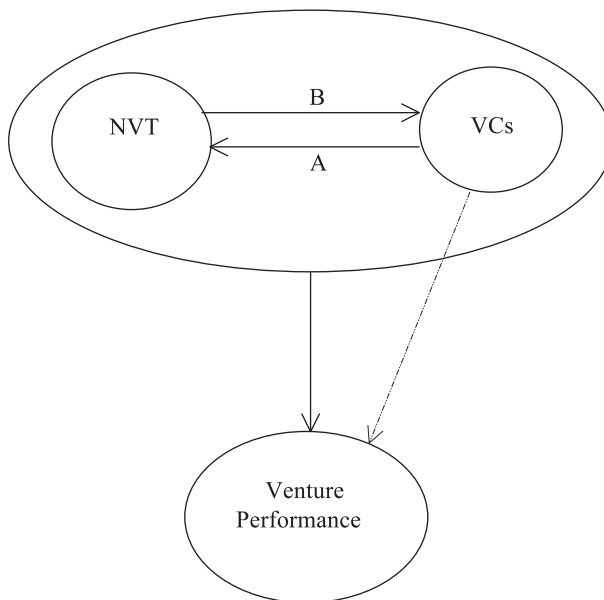


Fig. 1. A model of the VC–NVT relationship and venture performance.

replacement market for venture managers. Once the parties consummate a binding contract that specifies their obligations to each other and to the venture, in effect they create a bilateral monopoly in which there are uneconomical switching costs (cf., Williamson, 1985). VCs and NVTs must engage in an ongoing process of cooperation if they expect to maximize their joint returns. A general assumption underlying our cooperation perspective is that VCs are concerned more with value creation (De Clercq and Sapienza, 2001) than with protecting their investments (Amit et al., 1990). Furthermore, this study assumes that VCs are capable of and seek to add value to the ventures in which they invest.

Previous work on VC–NVT relationships essentially falls into three categories: (1) theoretically motivated work (e.g., Cable and Shane, 1997; Low and Macmillan, 1988), (2) case-based investigations (e.g., Fried and Hisrich, 1995; Steier and Greenwood, 1995) and (3) cross-sectional surveys (e.g., MacMillan et al., 1989; Sapienza, 1992; Bruton et al., 1997; 2000). Missing from this research stream are longitudinal investigations into the effects of VC information and VC–NVT cooperation on venture outcomes. We now develop hypotheses regarding learning assistance, NVT dismissal and procedural justice.<sup>3</sup>

### 3. Learning and VC information

Entrepreneurs competing in emerging industries are usually agile learners who successfully manage the invention process, production problems, market changes and new competitors (Dean and Meyer, 1996; Mullins, 1996). Arrangements are often made with VCs to assist them, not only financially, but also by sharing their experience and knowledge from prior ventures (Perry, 1988; Fried and Hisrich, 1995). A fundamental assumption of virtually all organizational learning models is that learning and interorganizational relationships should result in long-term positive performance implications (cf., Hagedoorn, 1995; Mezas and Glynn, 1993).

An assumption in much of the research on VCs is that their information improves a venture's performance (Rosenstein et al., 1993), in part by accelerating a management team's learning (Perry, 1988; Fried and Hisrich, 1995). VC information may be valuable to NVT managers because VCs bring a variety of experiences with them from earlier investments. A VC investor who has been involved with both successes and failures is likely to have gained some insights into how new ventures can be developed. VC input may encourage NVTs to give more thought to their options before acting (Bygrave and Timmons, 1992). Occasionally, VCs may even serve as intermediaries on behalf of essential factor providers (cf., Barney, 1986). VC-provided contacts have the potential to provide NVTs with a more informed view of their business options (represented by line "A" in Fig. 1).

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<sup>3</sup> We measured these independent variables shortly after the receipt of first round funding. As with most studies of the VC–NVT relationship, we assumed that the measures collected at the beginning of the study would remain relatively stable for the duration of the VC funding period.

MacMillan et al. (1989) identified operational and strategic information as the two most common types of VC input. Ehrlich et al. (1994) and Sapienza (1992) also noted that VCs commonly cooperate by offering various types of information although VCs seem particularly concerned with strategic issues (MacMillan et al., 1989). Consequently, we focus on strategic information and the ultimate effect it may have on a venture's value when a VC exits.

After funding, VCs typically maintain close contact with the managers of their portfolio ventures, offering information on a variety of venture issues, often particularly those that have strategic implications (MacMillan et al., 1989; Ehrlich et al., 1994). *Strategic information* offered by VCs consists of information and input received by the entrepreneurs on a venture's approach to its business (Perry, 1988; Ehrlich et al., 1994) as well as input on how to resolve organizational issues and how to compete in the marketplace based on its unique resources (Barney, 1991).

New venture managers also often rely on VCs as sounding boards when making important decisions (Fried and Hisrich, 1995; Sapienza, 1992). VC investor who choose to become active are likely to get closer to the NVT and develop a deep understanding of the venture, which allows them to offer more constructive information (Perry, 1988). Theoretically, input from VCs on strategic issues should lead to decisions that are better than those that a NVT could have generated otherwise (De Clercq and Sapienza, 2001). Thus, to the extent that VCs provide information to NVTs on strategic issues, we would expect that it would be related positively to improvements in venture performance.

**Hypothesis 1:** VC-provided strategic information to the managers of their portfolio ventures will be positively related to the performance of venture exits.

#### 4. New venture team dismissals

Maintaining a viable working relationship at a distance requires at least some governance from VCs (Barney et al., 1994; Gorman and Sahlman, 1989; Barry et al., 1990). A primary governance device used by VCs for monitoring performance is a venture's board of directors (MacMillan et al., 1989; Sapienza, 1992). Venture capitalists are more active on boards than their counterparts on the boards of more established firms (Rosenstein et al., 1993). In fact, their high level of activity may at times make their management agreement appear somewhat like a partnership in which they share control of a venture. VCs' close participation with the ventures that they fund helps them reduce any information asymmetry that may exist with the NVT. One disadvantage of a VC's active participation is that it can make differences among VCs and NVTs appear to be more salient as they struggle to share control of a venture (Bruton et al., 1997). Sometimes these conflicts and their attendant causes lead to the dismissal of one or more NVT members (Rosenstein et al., 1993; Bruton et al., 1997; Schefczyk and Gerpott, 2001). When dismissal occurs, it is highly likely that information asymmetry will increase until more of a partnership relationship can be reestablished (represented by a break in line "B" of Fig. 1).

Agency theory, which is widely used to explain managerial behavior when there is a separation between ownership and management (principals and agents) (Eisenhardt, 1989; Jensen, 1994), has recently been applied to the VC–NVT relationship to help explain (1) the purpose and structure of contractual covenants in venture capital funding (Barney et al., 1994), (2) the frequency of face-to-face communication between entrepreneurs and their VCs (Gorman and Sahlman, 1989), (3) good faith disagreements between a principal (VC) and an agent (an entrepreneur or NVT) (Sapienza and Gupta, 1994) and (4) new team dismissal (Bruton et al., 2000; Fiet et al., 1997).

From an agency perspective, boards of directors are the primary means of monitoring principal–agent relationships (Oviatt, 1988; Walsh and Seward, 1990). The dismissal of nonperforming NVT members (agents) is one of the most drastic types of monitoring that VC boards can use. Poor performance, opportunism and the values and expectations of a VC board are the most common explanations for managerial dismissal (Fredrickson et al., 1988; Jensen, 1994). Amit et al. (1990) also argue that VCs must to confront an adverse selection problem in the funding of entrepreneurial ventures. In their study of VC-backed ventures, Bruton et al. (2000) used agency theory to support the existence of managerial opportunism; however, a lack of managerial ability and good faith disagreements between the principal (VCs) and agents (NVTs) were more common. Bruton et al. (1997) also found that the replacement of a venture's CEO improved a venture's performance. Thus, following traditional agency theory logic, one would expect the dismissal of NVT members to be due to selecting an entrepreneur(s) that does not have the necessary skill set (adverse selection) or because one or more members of the NVT acted opportunistically or violated a contractual covenant (moral hazard). Whereas a dismissal is highly likely to be linked to negative venture performance in the near term, the replacement of NVT members would diminish any current agency problems and increase the probability of a successful exit. These arguments lead to the following hypothesis:

**Hypothesis 2a:** The dismissal of an NVT member by a VC will be positively related to the performance of venture exits.

A more extreme case of an agency problem related to dismissal could occur when two or more members of the NVT merit dismissal. Such a case would not be an example of bad behavior, but could indicate a deliberate pattern of misbehavior with wider consequences. The severity of the consequences would likely increase because the required corrective action would be greater. It is quite likely that team members could have been conspiring in a plan to disadvantage the venture and its investor-owners in order to enrich themselves. Alternatively, it is possible that they could share a conflict of interest with a third team member who deserved to be dismissed but who was spared due to misplaced personal loyalties. The result of these self-interested actions would be to multiply the negative consequences due to the termination of two or more NVT members.

**Hypothesis 2b:** The dismissal of two or more NVT members by a VC will be positively related to the performance of venture exits.

## 5. Procedural justice

Procedural justice research indicates that the reaction of individuals to the decision process tends to be more important than the decision outcome itself (Thibaut and Walker, 1975; Korsgaard et al., 1995). Individuals tie their satisfaction with relationships more closely to processes than to outcomes or final decisions. We use the term *subjective procedural justice* (Lind and Tyler, 1988) to understand the capacity of formal and informal procedures to improve judgments of fairness (Thibaut and Walker, 1975). We expect to find that subjective procedural justice is manifest in the reciprocal interdependence that characterizes VC–NVT relationships. (Folger and Konovsky, 1989; Gilliland, 1993). Although both VCs and NVTs hold an equity stake in the new venture, it is the VC investor who is usually seen as having more power (Cable and Shane, 1997) and can sometimes appear heavy-handed. This can be at least partially linked to the staging of the funding process by VCs and the repeated evaluations for future rounds of funding (Steier and Greenwood, 1995). If this is true, NVT fairness perceptions in the face of such potential dominance are important in determining whether cooperative behavior will ensue voluntarily.

The *relational model* has emerged as an important explanation of the effects of subjectively just procedures on performance (Lind and Tyler, 1988; Tyler and Lind, 1992).<sup>4</sup> This model focuses on affective group identification processes, particularly the psychic benefits gained by individuals as they affiliate themselves with value-creating groups.<sup>5</sup> Tyler (1989) describes three factors that determine subjective procedural justice judgments: (1) standing, (2) neutrality and (3) trust. Although each one is theoretically distinct, they all influence perceptions of fairness (Tyler and Lind, 1992). *Standing*, one's status in a relationship, provides an opportunity to speak forthrightly. Standing also provides an opportunity to refute the views of others, and can be central to perceptions of fairness (Kim and Mauborgne, 1998). It seems clear that NVTs relish standing with their VCs. When VC investors treat NVT members with dignity and respect, they signal that NVT members are valuable contributors. When VCs attempt to force their views on NVT members, they may undermine a sense of fairness in the VC–NVT relationship. In sum, status perceptions appear to be a major factor in fairness in the VC–NVT relationship.

*Neutrality*, another key factor in procedural justice, implies impartial treatment with respect to other ventures in a VC's portfolio (Kim and Mauborgne, 1995). Central to fairness perceptions is that VCs seek the best information before making decisions that affect NVTs. To act neutrally, VCs should adjust their views in response to contextual changes and NVT input. Impartial VCs will combine the best NVT ideas with their own. VCs signal their neutrality by their willingness to alter their views in response to new NVT-provided information. Any lack of neutrality on the part of VCs is likely to compromise their ability

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<sup>4</sup> Another approach is the informed self-interest model (Thibaut and Walker, 1975) or instrumental model (Tyler and Lind, 1992). It asserts that people attempt to maximize their control over the procedures involved in exchange to maximize personal gains.

<sup>5</sup> In 1988, Lind and Tyler relabeled the “relational model” the “group-value model.” This update reflects not only the importance of status but also neutrality and trust as suggested by Tyler (1989).



to acquire venture-specific information, which can diminish venture results. In addition, a lack of neutrality could lead to a negative NVT attitude with its attendant problems for reciprocity and cooperation.

The third relational factor, *trust*, can alleviate threats of exploitation. It reflects an assurance of the predictability of someone else's actions, usually someone with whom one enjoys an ongoing relationship. Research indicates that group members are keenly interested in information concerning the intentions of others in a group (Tyler and Lind, 1992), including managers (Kim and Mauborgne, 1995, 1998). Because VCs have a fiduciary responsibility to their investors that often predates and may supercede their obligations to the venture team, NVTs may question a VC's motivation for not supporting some tactical decisions such as the development of a new product. Such nonsupportive actions may frustrate NVTs and cause mistrust. Without trust, NVTs are unlikely to support a VC's venture preferences. In sum, VCs and NVTs have many opportunities to exchange information and to develop a fair relationship (Sapienza and Korsgaard, 1996).

Together, the above arguments suggest that the perceptions of procedural fairness can affect the willingness of partners to cooperate in bearing the short-term costs of adaptation (represented by line "B" in Fig. 1). If the parties view their relationship as being characterized by a high level of procedural fairness, this would suggest that they are willing to be adaptive in the near term with the adjustments having long-term payoffs in the form of positive venture outcomes. NVT members are likely to be more willing to cooperate with future VC requests and advice when they perceive that they are receiving fair treatment (Busenitz et al., 1997). If a VC–NVT relationship were not procedurally fair, we suspect that it would be a rare NVT that would be willing to implement innovative adjustments requested by its VC. When VCs provide disagreeable pressure to NVTs, procedural justice theory suggests negative performance implications because adaptations and innovations are less likely to be made that would help the venture adjust to the changing market. Conversely, when VCs and NVTs sincerely consider each other's views and are willing to make fair compromises, we suspect that less time will be spent resolving communication problems due to standing, neutrality and trust issues; more innovations will be conceived and implemented and better decisions will result from the depth and quality of the interaction between VCs and NVTs. These arguments lead to the following hypothesis:

**Hypothesis 3:** Procedural fairness between VCs and NVT members will be positively related to venture performance.

## 6. Methods

We identified ventures that received venture capital financing in the 1987–1989 editions of the *Venture Capital Journal*. We collected the initial data using mailed surveys in 1989 and early 1990. Then we followed these ventures through early 2000 collecting data on the eventual status of the ventures that had been funded by VCs at least 10 years earlier.

### 6.1. Dependent variable

The collection of information on the dependent variable involved checking for a potential change in status over a 10-year period. Thus, this longitudinal data captured 10 annual periods noting the specific year that a venture's status changed. Because the value of VC-backed ventures remains largely unrealized until a VC exits, this study categorized venture exits to reflect their value. Based on previous research (Ruhnka et al., 1992; Manigart et al., 2002), we categorized the exits of VC-funded ventures in the following manner: (1) those that fail and go out of business (*out of business*), (2) those that neither earn or lose much money, but which somehow stay in business (*still private*), (3) those that are merged or acquired by another firm (*merged or acquired*), and (4) those that sell stock in an initial public offering (*IPO*). These four categories of eventual dispositions are indicators of venture performance. The types of exits are listed in order of their value, with IPOs, on average, having the highest value (Bygrave and Timmons, 1992).

Because most VC-funded ventures remain privately held, tracking them becomes a challenge that few researchers have attempted. Most researchers have either collected perceptual data from VCs and/or entrepreneurs (e.g., MacMillan et al., 1989; Rosenstein et al., 1993; Sapienza, 1992) or focus on a smaller set of firms that have been successful enough to go through an IPO. However, these approaches are limited by perceptual measures of performance or in the case of IPO firms, a selection bias that omits most VC-backed ventures that have gone out of business, remained private or that have been merged or acquired.

Several VCs indicated that their goal was to exit their portfolio ventures within 6 years. However, because market swings delayed public stock offerings for many of them, the status of some ventures was not be resolved within 6 years. Consequently, we allowed for up to 10 years for a funded venture to change its status. After 10 years, VCs will face pressure from their own limited partner investors to liquidate investment funds, which will give limited partners the option of either using their money for another purpose or for reinvesting in the next fund.

To determine a venture's exit status, we searched the LexisNexis business database, specifically the *business news* and *company financial* sections. LexisNexis catalogues stories about both publicly and privately held ventures from such sources as news articles, wire and transcript articles, magazines and trade magazines, newsletters, journals, disclosure reports, Standard and Poor's, Hoover's and bankruptcy reports. We classified a firm as out of business if a report/article indexed by LexisNexis explicitly stated this to be the case or if they disappeared from directories including [www.switchboard.com](http://www.switchboard.com) and no information was found on the specified firm for at least 2 years. In other words, if early information was found on a firm and then no information was found for at least 2 years through the end of 1999, it was assumed that the venture had gone out of business. We also recorded the year that the change in the status of the venture occurred.<sup>6</sup>

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<sup>6</sup> For almost all of the firms classified as out of business, no information was found after 1995.

## 6.2. Independent variables

We collected data on independent variables from surveys that we mailed to the leading member of a venture's top management team in late 1989 and early 1990. Between 1987 and 1988, the *Venture Capital Journal* reported that VCs funded 837 ventures. Using Dillman's total design method (Dillman, 1978), which is an approach that incorporates four rounds of mailings, we contacted each of these 837 ventures. We received responses from 235 ventures, for a response rate of 28%. Thirty of these ventures indicated that they had not obtained first round funding.<sup>7</sup> We excluded these 30 ventures from this research to preserve the homogeneity of the respondents. These procedures yielded a sample of 205 ventures. However, for some ventures we had some missing variables or were unable to determine if or when a change in status occurred, resulting in a final usable sample of 183 ventures and an effective response rate of 22%.

We collected additional data from the *Venture Capital Journal* to check for a possible response bias; however, we were unable to find significant differences between respondents and nonrespondents with regard to the amount of funding [ $F(1,688)=1.53$ ;  $P=.22$ ] or the stage of funding [ $\chi^2(5, N=779)=7.672$ ;  $P=.17$ ]. We also evaluated a respondent's representativeness by contrasting the lead VCs in this study with the VCs examined by Gupta and Sapienza (1992). There were no significant differences in industry investment preferences ( $t_{351}=1.58$ ,  $P>.05$ ), or geographic preferences ( $t_{351}=0.61$ ,  $P>.05$ ). The respondents in our study received equity investments from VCs whose syndicate size averaged 3.1 ventures. The average amount of first round funding was just over \$3 million (S.D. = 2.87).

The *strategic information* measure came from a set of questions that asked entrepreneurs about their VC relationships. We recorded responses for each of these variables on a 5-point Likert scale ranging from *strongly disagree* (1) to *disagree* (2) to *neutral* (3) to *agree* (4) to *strongly agree* (5). We measured the strategic information construct using the following indicators: (1) "... give sound business advice?" (2) "... provide excellent financial advice?" and (3) "... provide sound management advice?" ( $\alpha=.88$ ).

For the dismissal variable, we asked respondents, "How many employees in your firm have VCs played a major role in dismissing?" We found 69 cases of dismissal. We created two dummy variables. The one dismissal variable was coded as "1" for ventures that had one dismissal with all other observations coded as "0." The *two-plus dismissals* was coded "1" when there had been two or more dismissals with all other observations coded as "0."

The procedural justice construct taps the main dimensions of this theory as indicated by an NVT's overall perception of fairness in the VC–NVT relationship (cf., Gilliland, 1993). To examine the importance of relational fairness elements in the VC–NVT relationship, we created a three-item measure of each of the three types of relational factors identified by Tyler (1989). Each of the items was measured on a 5 point Likert-type scale ranging from (1) *strongly disagree* to (5) *strongly agree*. The statements used included (a) "Our VCFIRMS

<sup>7</sup> Alternative forms of funding include leveraged buy-outs and seed capital.

(venture capital firms) force us to accept their business views” (reverse coded to measure the standing relational factor), (b) “Our VCFIRMS are willing to compromise with us” (to measure the neutrality relational factor), and (c) “Our VCFIRMS have hampered development of new ideas” (reverse coded to measure the trust relational factor) ( $\alpha=.71$ ). Tyler and Lind (1992) argued that these elements combine to form a relational process judgment that is the primary determinant of overall procedural justice perceptions.

Numerous extraneous factors may influence long-term venture status. We controlled for VC involvement, firm-level factors, NVT’s human capital, cooperation and industry factors with the following variables: first round funding era (the year of first round funding), VC firm size (total amount of capital under management), VC board seat, technological differentiation (three dimensions using a 5-point Likert scale;  $\alpha=.725$ ), early venture performance (subtracting the annual sales for the year of first round funding from sales for the year following funding), firm age, firm size, founding experience (the percentage of key managers who had experience with one or more previous business start-ups), NVT skills, NVT experience with VCs, NVT continuity (average number of years NVT members had worked together in the current venture), industry concentration (total size of the market for a venture’s primary products by the number of ventures in its industry) and for *biotech ventures* (SIC codes in the 2800s and 7830s).

### 6.3. Data analysis

As previously noted, we collected data for 10 years regarding a change in venture status. Because some ventures that were still private in 1999 might later change their status to out of business, to merged or to IPO, it was possible that the data might be right censored. In addition, a firm that achieved an IPO after only 2 years was more likely to be profitable than one that took 9 years, which would have disproportionately influenced profitability. We used an event history analysis proportional hazards model to control for these likely biases (Allison, 1995; Yamaguchi, 1991).

In event history analysis, the dependent variable is the hazard rate, which is a function of the probability that a firm in the risk set will have a particular outcome during a particular time interval. For this study, we calculated the hazard rate by multiplying a venture’s status by the number of years from the beginning of the study to the year of change.

## 7. Results

Table 1 reports the Spearman correlations, means and standard deviations for all variables. Although there are some high correlations among several control variables, none of the control variables correlates with the independent variables more than .27. Table 2 contains the overall means and standard deviations for the independent variables across the four types of eventual venture status: (1) out of business, (2) still private, (3) merged or acquired and (4) IPO. The procedural justice and dismissal variables are associated with the most noticeable differences in venture status.

Table 1  
Means, standard deviations, and correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Venture exits																			
2. Procedural justice	.17*																		
3. Strategic information	.14	.47**																	
4. One dismissal	-.07	-.10	-.10																
5. Two-plus dismissals	-.18**	-.19**	-.11	-.20**															
6. First round funding era	-.15*	-.03	.10	.10	-.04														
7. VC firm size (log)	.26**	-.01	.03	-.09	.06	-.12													
8. VC board seats	.08	-.12	-.01	.07	.18	.08	.26**												
9. Technological differentiation	.18*	-.01	.15*	-.06	.06	.11	-.01	.05											
10. Early venture performance	.05	-.01	.02	-.08	-.10	-.06	.20**	.04	-.29**										
11. Firm age	.01	.07	.14	.10	-.11	.48**	.01	.25	.19	-.14*									
12. Firm size	.16*	.12	-.07	-.12	-.01	-.42**	.34**	-.01	-.33**	.35**	-.44**								
13. Founding experience	.07	.15*	-.02	.13	-.02	-.02	.05	-.01	.14*	-.02	.07	-.09							
14. NVT skills	-.15*	.05	-.04	-.03	-.08	-.02	-.10	-.10	-.13	.06	-.06	-.03	-.13						
15. NVT experience with VCs	.10	-.01	-.02	.24**	.01	.01	.15*	.02	.12	.04	.04	.03	.53**	-.03					
16. NVT continuity	-.03	.01	-.08	-.07	.01	-.27*	.03	-.24**	-.19**	.16*	-.51**	.43**	-.05	-.6	-.03				
17. Industry concentration	.05	.02	.07	-.03	-.05	.05	.01	.04	.24**	-.25**	.07	-.11	.16	-.01	.08	-.12			
18. Biotech ventures	.17*	-.05	.02	.04	-.06	-.05	.08	-.04	.22**	.05	.01	-.10	.05	.01	.14*	.04	.14		
Means	2.73	3.59	3.52	0.79	0.87	0.47	4.62	0.47	3.92	3.11	85.1	141.8	0.21	1.81	0.44	3.14	690.1	0.09	
S.D.s	1.14	0.74	0.81	0.41	0.34	0.50	1.08	0.18	0.97	9.53	3.28	378.7	0.30	0.63	0.50	2.63	2133	0.29	

\* $P = .05$ .

\*\* $P = .01$ .

Table 2  
Bivariate analysis of VC interventions on venture exits

	(1) Out of business	(2) Still private	(3) Merged or acquired	(4) IPO
Hypothesis 1: strategic information	3.28 (1.01)	3.49 (0.78)	3.49 (0.72)	3.67 (0.72)
Hypothesis 2a: dismissal—one dismissal	0.27 (0.45)	0.26 (0.44)	0.18 (0.39)	0.19 (0.39)
Hypothesis 2b: two-plus dismissals	0.21 (0.41)	0.11 (0.31)	0.15 (0.37)	0.09 (0.28)
Hypothesis 3: procedural justice	3.32 (0.98)	3.58 (0.64)	3.54 (0.80)	3.77 (0.61)

<sup>a</sup> The number of observations in each category are as follows: out of business = 36; still private = 44; merged or acquired = 36; IPO = 67.

<sup>b</sup> The standard deviations are in parentheses.

We used Cox regression for the event history analysis of venture exits. This semi-parametric method is quite robust in its accommodation of nonproportional hazards, which it does by including time as part of the interaction term in the dependent variable (Years  $\times$  Venture exits). Cox regression also uses a maximum partial likelihood approach, enabling the estimation of  $\beta$  coefficients. Because we had numerous ties among cases of the

Table 3  
Cox regression analysis testing VC intervention on venture exits

Parameter	Model 1		Model 2	
	$\beta$	S.E.	$\beta$	S.E.
Hypothesis 1: strategic information	.22	.15		
Hypotheses 2a and 2b: dismissal (failure of cooperation)				
Hypothesis 2a: one dismissal	-.31	.27	-.18	.28
Hypothesis 2b: two-plus dismissals	-.74*	.37	-.68 <sup>+</sup>	.38
Hypothesis 3: procedural justice			.34*	.17
Control variables				
First round funding era	-.85**	.24	-.90**	.24
VC firm size	.36**	.12	.37**	.12
VC board seats	.86	.65	1.11 <sup>+</sup>	.67
Technological differentiation	.33**	.12	.34**	.12
Early venture performance	.01	.02	.01	.02
Firm age	-.11*	.05	-.10*	.05
Firm size	.01 <sup>+</sup>	.01	.01 <sup>+</sup>	.01
Founding experience	.62	.40	.56	.42
NVT skills	-.20	.17	-.24	.17
NVT experience with VCs	.28	.23	.27	.23
NVT continuity	-.22**	.07	-.22**	.07
Industry concentration	.01 <sup>+</sup>	.01	.01*	.01
Biotech ventures	-.12	.31	-.01	.32
Model chi-square for covariates	58.1***		61.8***	

\* $P < .05$ .

\*\* $P < .01$ .

\*\*\* $P < .001$ .

<sup>+</sup>  $P < .10$ .

dependent variable (e.g., ventures in our sample having an IPO in the same year), we invoked the “exact” SAS option as suggested by Allison (1995).

Table 3 reports the results of the event history analysis. Because of the substantial correlation between strategic information and procedural justice along with some suppression, we used separate models for hypothesis testing. Testing Hypothesis 1 (Model 1) yielded a nonsignificant result for the effects of strategic information on venture exits. Both models supported the negative relationship between two-plus dismissals and a favorable venture exit, although none of the models supported a single dismissal having an effect. Both models testing cases with two-plus dismissals had chi-square statistics ranging between  $P > .04$  and  $P < .08$  with a risk ratio in the area of 0.5, which means that the hazard of going out of business as a result of two-plus dismissals is about twice as great as having no dismissals.

Model 2 in Table 3 supports the effect tested by Hypothesis 3 that procedural justice will positively affect venture exit (risk ratio = 1.4). The greater the perception of procedural justice, the more likely there will be a favorable venture exit. For each one-unit increase in procedural justice, there is a 40% increase in the probability of a successful venture exit. We checked for possible interaction effects among strategic information, procedural justice, and dismissal. However, none of the interactions were significant.

## 8. Discussion

In this research, we examined whether VC information to the managers of their portfolio firms is positively related to profitable venture exits. Earlier research on learning assistance, dismissals and procedural justice offers insights on how VCs guide NVTs. The current study is different from these earlier efforts in two important ways. First, it examines variables that reflect both sides of the VC–NVT relationship as represented by lines “A” and “B” in Fig. 1. Second, this study incorporates a design that involves long-term venture outcomes. The results of this study fail to support the long-term positive influence of strategic information from VCs on venture exits. VC-initiated dismissals of two or more entrepreneurial team members negatively affect venture outcomes and VC–NVT relationships characterized as being procedurally fair are positively related to long-term venture outcomes.

It is conceivable that during this 10-year examination that unknown extraneous effects might have confounded the results. We controlled for first round funding era, firm-level factors, NVT human capital, cooperation and industry factors. Furthermore, this research used a U.S.-based sample, so its generalizability beyond the U.S. boundaries should be viewed with caution. Despite these limitations, this study makes several contributions to our understanding of venture outcomes, which we discuss in the next section.

The potential benefits of cooperative relationships are increasingly being discussed (Doz and Hamel, 1998) as a strategy for meeting the demands of the current business environment. Unfortunately, interorganizational relationships often fall short of expectations. These failures may stem from the complexity of managing interorganizational relationships as well as difficulties related to the melding of the potentially different cultures of two or more organizations (Spekman et al., 1998). This study’s longitudinal findings suggest new insights

regarding the value of the VC–NVT relationship. Although the complementary nature of such relationships are often considered to be of central importance, the findings of this study draw attention to social processes within interorganizational relationships. Rather than just providing NVT managers with information on strategic issues, this study indicates that it may be much more effective to view the relationship as two way as modeled in Fig. 1. When the reciprocal VC–NVT relationship is truncated by a dismissal of a NVT member, our findings suggest that negative implications on long-term venture performance tend to follow. When NVTs evaluate their relationship with VCs as being procedurally fair, a strong signal that the two-way VC–NVT relationship is intact, positive performance followed. Thus, we concur with Steier (1998) that the social dimension of interorganizational relationships, in this case among VCs and NVTs, indicates much promise for further research.

### 8.1. Strategic information

The concept of strategic information is common if not central to research seeking to determine if VCs actually add value to their portfolio ventures (e.g., MacMillan et al., 1989; Sapienza, 1992; Steier and Greenwood, 1995). This study adds to the growing debate about whether VCs add value to VC-backed firms. It is appropriate to discuss why we failed to find support for strategic information in Hypothesis 1. First, this is the first known, large-sample study that has examined VC assistance early in the funding process and examined its long-term effect as an antecedent to venture outcomes.<sup>8</sup> Previous research has tended to base its findings on case or cross-sectional data, and with the exception of the recent study by Manigart et al. (2002), long-term venture outcomes have not been examined. Thus, the longitudinal design involving the dependent variable of this study differs substantially from what previous studies have used. Although this longitudinal design represents an important advance, future studies should take this type of design further by examining strategic information longitudinally because it is quite likely that it may vary across time.

Second, although the findings of this study failed to support the idea that VCs, on average, do add value by providing strategic information, this does not prove that all VC information fails to add value. Even though this study used a large sample, nonsignificant findings do not prove the null hypothesis. Furthermore, it may be that some VCs do indeed add value in the ways suggested by Rosenstein et al. (1993). Some VCs may possess keen insights and perhaps some unique business experiences that enable them to add value to at least some of the ventures in which they invest. It is also likely that some ventures will hire consultants to the board of directors as advisors because of their strategic capabilities. In such cases, a VC may not seek to add value. A limitation of this study is that non-VC sources of advice were not considered.

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<sup>8</sup> The recent article by Manigart et al. (2002) employs a similar longitudinal design to examine the survival of VC versus non-VC-backed firms as well as types of VC firms. However, they do not consider strategic information issues.



Third, this study treated strategic information as a one-dimensional construct, however, this may be an oversimplification, which future studies could address. Future studies could consider the following aspects of strategic information to add greater dimensionality to their results: 1) strategies related to the launching of new products and encountering competitors; 2) the development of interorganizational arrangements such as alliances; and 3) because entrepreneurial firms usually have few slack resources, financial strategies.

### 8.2. Dismissal

The dismissal findings add a cautionary note to the standard monitoring story propounded by agency theory for which support has been found in larger, more established firms. Agency theory typically assumes that monitoring can effectively align NVT (agent) interests with those of their VCs, regardless of their separate and possibly divergent self-interests. However, considering the recent findings of Bruton et al. (2000), it may be that disagreements among VCs and NVTs or political issues can also play a role in VC-backed ventures in addition to agency explanations. Furthermore, because the information that a dismissed manager possesses could be both private and specific, it is very possible that finding replacement managers who can quickly add value to an ongoing venture may be problematic.

Private NVT information could not exist in an efficient market, as suggested by Cable and Shane (1997). However, they argue that the market for NVT replacement managers is inefficient. Given market inefficiency, it is not surprising that NVT dismissals were negatively related to long-term venture performance. Another way to interpret these results is to conclude that venture failure was set in motion by earlier causes, before the dismissals. However, we have attempted to control for the effects of these potential causes, so we favor the modified agency theory interpretation of market failure due to inefficient information transfer.

Another interesting result involves the dismissal of NVT members. If a venture were failing, dismissing two or more members of the NVT actually was associated with the least favorable venture outcomes. However, future research could more closely examine the antecedents and outcomes of VC initiated dismissals. It could be that those who were dismissed were collaborators in a failed policy or malfeasance, which would be more detrimental than a single case of poor conduct. Alternatively, it could be that dismissing multiple team members was a failed attempt to resuscitate a venture that was already terminally ill. If this latter scenario were valid, it could be that it was not the dismissals that were causing venture failure, which might appear to be a mild repudiation of agency theory, but indecision about taking actions sooner that could have improved venture performance.

### 8.3. Procedural justice

This study found that procedural justice is positively associated with long-term venture performance, which suggests that VCs and NVTs may be well served by establishing procedures to ensure fairness and efficient information exchange. Apparently, exchangers who are skeptical of someone else's intentions could view procedurally unjust actions as

signals of problems in their relationship. If VCs were perceived as treating NVTs unfairly, that perception alone could preclude NVTs from sharing their most critical insights as a covert way of negotiating for fairer treatment. These explanations support Sapienza's (1992) earlier argument that the nature and manner of the VC–NVT relationship has a significant impact on the venture.

Much has been made in the VC literature about the need for a quality management team (e.g., Bygrave and Timmons, 1992). Proponents of this perspective seem to suggest that the quality of the management or NVT is the most important element leading to venture success. If a given VC is consistently able to fund superior management teams with solid cognitive capabilities and diversity, then perhaps VCs need to be particularly careful about how they interact with NVTs. We suspect that when VCs too frequently volunteer ideas learned from earlier venture investments in ways that are perceived as personal criticisms; they are likely to be seen as meddling by the NVT, or worse still, attempting to rule with a heavy hand. Clearly, VCs have the right to be demanding based on the typical terms and conditions of most VC contracts. However, asking questions and playing the devil's advocate while simultaneously maintaining respect for the quality of the NVT managers appears to have positive ramifications. The challenge for VCs may be to continue to express confidence in NVTs, assuming the NVT results are praiseworthy.

Although procedural justice theory predicts performance improvement, virtually all of the supportive empirical work emerges from laboratory studies of individuals. These findings offer important long-term organizational-level support for procedural justice theory. They also suggest that social processes are important within interorganizational relationships and deserve closer examination. The results of this research are consistent with the conclusion reached by Sweeting and Wong (1997) that a more intense "hands-on" approach by VCs does not always lead to superior returns. Future research could further examine procedural justice theory in interorganizational relationships as a way of integrating different organizational cultures. In addition, it would add to our theoretical understanding of interorganizational cooperation if we were to examine how perceptions of fairness change as a VC–NVT relationship and an entrepreneurial venture evolve, if they do, over time. Finally, it would be interesting to examine perceptions of procedural justice from the perspective of both the VC and the NVT. Although this study assumes that VCs tend to possess greater bargaining power, an examination of their separate perspectives could offer other important insights.

Future research could focus on identifying procedures that most clearly signal fair intentions. We suspect that future research will find that the ability to signal fairness is at least as important as the information that is communicated. In other words, it is not just what information is communicated but how it is communicated that is at least equally important. A VC may have some excellent insights into the venture, but these insights may not be received if the NVT feels that the information is being forced on them or that the views and issues relevant to the NVT are unimportant. Future researchers may also want to examine how devious intentions affect the capacity of either a VC or NVT to mislead another party procedurally. Finally, the significance level of the control variable "VC firm size" indicates that there may be some important differences among VCs, which future research should examine.

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## References

- Allison, P.D., 1995. *Survival Analysis Using the SAS system* SAS Institute, Cary, NC.
- Amit, R., Glosten, L., Muller, E., 1990. Entrepreneurial ability, venture investments, and risk sharing. *Manage. Sci.* 36 (10), 1232–1245.
- Barney, J.B., 1986. Strategic factor markets: expectations, luck and business strategy. *Manage. Sci.* 32, 1231–1241.
- Barney, J.B., 1991. Firm resources and sustained competitive advantage. *J. Manage.* 17, 99–120.
- Barney, J.B., Busenitz, L., Fiet, J.O., Moesel, D., 1994. The relationship between venture capitalists and managers in new firms: determinants of contractual covenants. *Manage. Finance* 20 (1), 19–30.
- Barry, C.B., 1994. New directions in research on venture capital finance. *Financ. Manage.* 23 (3), 3–15.
- Barry, C.B., Muscarella, C.J., Peavy, J.W., Vetsuypens, M.R., 1990. The role of venture capital in the creation of public companies. *J. Financ. Econ.* 27, 447–471.
- Bruton, G., Fried, V., Hisrich, R.D., 1997. Venture capitalist and CEO dismissal. *Entrep. Theory Pract.* 21 (3), 41–54.
- Bruton, G., Fried, V., Hisrich, R.D., 2000. CEO dismissal in venture capital-backed firms, further evidence from an agency perspective. *Entrep. Theory Pract.* 24 (4), 69–77.
- Busenitz, L., Moesel, D., Fiet, J.O., Barney, J.B., 1997. The framing of perceptions of fairness in the relationship between venture capitalists and new venture teams. *Entrep. Theory Pract.* 21, 5–21.
- Bygrave, W.D., Timmons, J.A., 1992. *Venture Capital at the Crossroads* Harvard Business School Press, Cambridge, MA.
- Cable, D.M., Shane, S., 1997. A prisoner's dilemma approach to entrepreneur–venture capitalist relationships. *Acad. Manage. Rev.* 22, 142–176.
- Dean, T., Meyer, D., 1996. Industry environments and new venture formations in U.S. manufacturing: a conceptual and empirical analysis of demand determinants. *J. Bus. Venturing* 11, 107–132.
- De Clercq, D., Sapienza, H.J., 2001. The creation of relational rents in venture capitalist–entrepreneur dyads. *Venture Cap.* 3 (2), 107–127.
- Dillman, D.A., 1978. *Mail and Telephone Surveys: The Total Design Method* Wiley-Interscience, New York.
- Doz, Y.L., Hamel, G., 1998. *Alliance Advantage* Harvard Business School Press, Boston, MA.
- Ehrlich, S., De Noble, A., Weaver, R., 1994. After the cash arrives: a comparative study of venture capital and private investor involvement in entrepreneurial ventures. *J. Bus. Venturing* 9, 67–82.
- Eisenhardt, K., 1989. Agency theory: an assessment and review. *Acad. Manage. Rev.* 14, 57–74.
- Fiet, J.O., 1996. The informational basis of entrepreneurial discovery. *Small Bus. Econ.* 8, 419–430.
- Fiet, J.O., Busenitz, L.W., Moesel, D.D., Barney, J.B., 1997. Complementary theoretical perspectives on the dismissal of new venture team members. *J. Bus. Venturing* 11, 347–366.
- Folger, R., Konovsky, M., 1989. Effects of procedural and distributive justice on reactions to pay raise decisions. *Acad. Manage. J.* 32, 115–130.
- Fredrickson, J.W., Hambrick, D.C., Baumrin, S., 1988. A model of CEO dismissal. *Acad. Manage. Rev.* 13, 255–270.
- Fried, V.H., Hisrich, R.D., 1995. The venture capitalist: a relationship investor. *Calif. Manage. Rev.* 37, 101–113.
- Gilliland, S.W., 1993. The perceived fairness of selection systems: an organizational justice perspective. *Acad. Manage. Rev.* 18, 694–734.
- Gomez-Mejia, L.R., Balkin, D.B., Welbourne, T.M., 1990. Influence on venture capitalists on high tech management. *J. High Technol. Managem. Res.* 1, 103–118.

- Gorman, M., Sahlman, W.A., 1989. What do venture capitalists do? *J. Bus. Venturing* 4, 231–248.
- Gupta, A.K., Sapienza, H.J., 1992. Determinants of venture capital firms' preferences regarding the industry diversity and geographic scope of their investments. *J. Bus. Venturing* 7, 347–362.
- Hagedoorn, J., 1995. A note on international market leaders and networks of strategic technology partnering. *Strateg. Manage. J.* 16, 241–250.
- Hayek, F.A., 1945. The use of knowledge in society. *Am. Econ. Rev.* 35, 519–530.
- Jensen, M.C., 1994. Self-interest, altruism, and agency theory. *J. Appl. Corp. Finance* 7, 40–45.
- Kim, W.C., Mauborgne, R.A., 1995. A procedural justice model of strategic decision making: strategy content implications in the multinational. *Organ. Sci.* 6, 44–62.
- Kim, W.C., Mauborgne, R.A., 1998. Procedural justice, strategic decision making, and the knowledge economy. *Strateg. Manage. J.* 19, 323–338.
- Korsgaard, M.A., Schweiger, D., Sapienza, H., 1995. Building commitment, attachment, and trust in strategic decision-making teams: the role of procedural justice. *Acad. Manage. J.* 38, 60–84.
- Lind, E.A., Tyler, T., 1988. *The Social Psychology of Procedural Justice* Plenum, New York.
- Low, M.B., Macmillan, I.C., 1988. Entrepreneurship: past research and future challenges. *J. Manage.* 14, 139–161.
- Luce, R., Raiffa, H., 1957. *Games and Decisions* Wiley, New York.
- Macmillan, I.C., Kulow, D.M., Khojlian, R., 1989. Venture capitalists' involvement in their investments: extent and performance. *J. Bus. Venturing* 4, 27–47.
- Manigart, S., Baeyens, K., Van Hyfte, W., 2002. The survival of venture capital backed companies. *Venture Cap.* 4 (2), 103–124.
- Meggison, W., Weiss, K., 1991. Venture capitalist certification in initial public offerings. *J. Finance* 46, 879–903.
- Mezias, S.J., Glynn, M.A., 1993. The three faces of corporate renewal: institution, revolution, and evolution. *Strateg. Manage. J.* 14, 77–101.
- Mullins, J.W., 1996. Early growth decisions of entrepreneurs: the influence of competency and prior performance under changing market conditions. *J. Bus. Venturing* 11, 89–106.
- Oviatt, B.M., 1988. Agency and transaction costs perspectives on the manager–shareholder relationship: incentives for congruent interests. *Acad. Manage. Rev.* 13, 214–225.
- Perry, L.T., 1988. Venture capital connection: how relationships between founders and venture capitalists affect innovation in new ventures. *Acad. Manage. Exec.* 2, 205–212.
- Rosenstein, J., Bruno, A.V., Bygrave, W.D., Taylor, N., 1993. The CEO, venture capitalists, and the board. *J. Bus. Venturing* 8, 99–113.
- Ruhnka, J.C., Feldman, H.D., Dean, T.J., 1992. The 'living dead' phenomenon in venture capital investments. *J. Bus. Venturing* 7, 137–155.
- Sapienza, H.J., 1992. Who do venture capitalists add value? *J. Bus. Venturing* 7, 9–27.
- Sapienza, H.J., Gupta, A., 1994. Impact of agency risks and task uncertainty on venture capitalists–CEO interaction. *Acad. Manage. J.* 37, 1618–1632.
- Sapienza, H.J., Korsgaard, A., 1996. Procedural justice in entrepreneur–investor relations. *Acad. Manage. J.* 39, 544–574.
- Schefczyk, M., Gerpott, T.J., 2001. Qualification and turnover of managers and venture capital-financed firm performance. *J. Bus. Venturing* 16, 145–163.
- Spekman, R.E., Forbes, T.M., Isabella, L.A., MacAvoy, T.C., 1998. Alliance management: a view from the past and look to the future. *J. Manage. Stud.* 35, 747–772.
- Steier, L., 1998. Confounding market and hierarchy in venture capital governance: the Canadian immigrant investor program. *J. Manage. Stud.* 35, 511–535.
- Steier, L., Greenwood, R., 1995. Venture capitalist relationships in the venture structuring and post-investment stages of new firm creation. *J. Manage. Stud.* 32, 337–357.
- Sweeting, R.C., Wong, C.F., 1997. A UK "hands-off" venture capital firm and the handling of post-investment investor–investee relationships. *J. Manage. Stud.* 34, 125–152.
- Thibaut, J., Walker, J., 1975. *Procedural Justice: A Psychological Analysis* Erlbaum, Hillsdale, NJ.

- Timmons, J., Bygrave, W., 1986. Venture capital's role in financing innovation for economic growth. *J. Bus. Venturing* 1, 161–176.
- Tyler, T.R., 1989. Using procedural justice to justify outcomes: managing conflict and allocating resources in work organizations. Working paper, Northwestern University, Chicago, IL.
- Tyler, T.R., Lind, E.A., 1992. A relational model of authority in groups. In: Zanna, M.P. (Ed.), *Advances in Experimental Social Psychology*, vol. 25, 115–191.
- Walsh, J.P., Seward, J.K., 1990. On the efficiency of internal and external corporate control mechanisms. *Acad. Manage. Rev.* 15, 421–458.
- Williamson, O.E., 1985. *Economic Institutions of Capitalism* Free Press, New York.
- Yamaguchi, K., 1991. *Event History Analysis* Sage, Newbury Park, CA.